FINAL

2021 Annual Long-Term Monitoring Report

for the

LO-58 Former Nike Battery Launch Site
Caribou, Maine

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Acronyms and Abbreviations

ADR	automated data review
AFNS	Acid Fueling/Neutralization Station
AMAC	Adult Multiple Alternative Center
amsl	above mean sea level
ARARs	Applicable or Relevant and Appropriate Requirements
AST	above ground storage tank
bgs	below ground surface
BMP	below measurement point
btoc	below top of casing
CENAE	Corps of Engineers, North Atlantic Division, New England District
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
cis-1,2-DCE	cis-1,2-dichloroethylene
COC	contaminant of concern
COLOG	Layne Christensen Company
CSM	conceptual site model
CVOC	chlorinated volatile organic compound
°C	degrees Celsius
1,2-DCA	1,2-dichloroethane
DD	Decision Document
DERP	Defense Environmental Restoration Program
DO	dissolved oxygen
DoD	Department of Defense
DRO	diesel range organics
EB	equipment blank
EDD	electronic data deliverable
EPA	United States Environmental Protection Agency
eQAPP	electronic quality assurance project plan
FD	field duplicate
ft	feet
ft^3	cubic feet
FUDS	Formerly Used Defense Site
FUDSChem	Formerly Used Defense Site Chemical Database
GAC	granular activated carbon
GPR	ground penetrating radar
GRO	gasoline range organics
HI	hazard index
HTRW	Hazardous, Toxic, and Radioactive Waste
ICP/MS	inductively coupled plasma mass spectrometry

JCI	Johnson Companies, Inc.
JP-4	jet propellant-4
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
LLC	Limited Liability Corporation
LOD	limit of detection
LTM	long-term monitoring
LTMP	Long-Term Monitoring Plan
MassDEP	Massachusetts Department of Environmental Protection
MCL	maximum contaminant level
MEDEP	Maine Department of Environmental Protection
MEFUDS	Maine Formerly Used Defense Site
MEG	maximum exposure guideline
mg/L	milligrams per liter
µg/L	micrograms per liter
µg/m^3	microgram per cubic meter
MIBK	4-methyl-2-pentanone
mL	milliliter
MNA	monitored natural attenuation
MPE	measurement point elevation
MS	matrix spike
MSD	matrix spike duplicate
µS/cm	microsiemens per centimeter
mV	millivolts
NTU	nephelometric turbidity unit
ORP	oxidation reduction potential
OTV	optical televiewer
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PID	photoionization detector
POET	point-of-entry treatment
PP	Priority Pollutant
ppm	parts per million
ppmv	parts per million by volume
PSI	preliminary site investigation
PVC	polyvinyl chloride
QAPP	Quality Assurance Project Plan
QC	quality control
RAGs	remedial action guidelines
RAO	remedial action objective
RG	remediation goal
RI/FS	Remedial Investigation/Feasibility Study

RPD	relative percent difference
RSL	Regional Screening Level
SAP	sampling and analysis plan
SIM	selective ion monitoring
SOP	standard operating procedure
SVP	soil vapor point
SWL	static water level
TBC	to-be-considered
TCE	trichloroethylene
TPH	total petroleum hydrocarbons
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
VEM	Validation Electronic and Manual
VFW	Veterans of Foreign Wars
VI	vapor intrusion
VIMS	vapor intrusion mitigation system
VOC	volatile organic compound
VPH	volatile petroleum hydrocarbon

1.0 Introduction

This 2021 Annual Long-Term Monitoring (LTM) Report has been prepared by the G2S Limited Liability Corporation (LLC) (G2S) on behalf the United States Army Corps of Engineers (USACE), North Atlantic Division, New England District (CENAE) for the Former LO-58 Nike Missile Battery Launch Site Caribou in Caribou, Maine (herein referred to as "the LO-58 Site"). The work detailed in this report was completed under the Defense Environmental Restoration Program (DERP) for Formerly Used Defense Sites (FUDS) for Hazardous, Toxic, and Radioactive Waste (HTRW), Project Number D01ME0077 02. Work conducted under the DERP FUDS Program is compliant with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process, as amended by the Superfund Amendments and Reauthorization Act of 1986. The work described in this report was conducted pursuant to the Final Decision Document (DD) for the LO-58 Site (USACE, 2019).

1.1 Purpose and Goals

This report summarizes the annual LTM activities performed in 2021 at the LO-58 Site to monitor performance of the selected remedy and ensure the protection of receptors. One field event was conducted that is addressed in this report, consisting of groundwater and drinking water sampling performed from 20 to 22 July 2021. The Final DD (USACE, 2019) selected the following remedies for groundwater and vapor intrusion (VI), the performance of which are being evaluated using the LTM data:

- Groundwater – continued point-of-entry treatment (POET) for onsite drinking water well DW-01, institutional controls (annual notifications to landowner), monitored natural attenuation (MNA), and LTM.
- Vapor intrusion – active sub-slab vapor intrusion mitigation system (VIMS), institutional controls, and LTM.

2.0 Site Background and Current Conceptual Site Model

2.1 Site Location and Features

The LO-58 Site is a 17-acre parcel of land located at 253 Van Buren Road (Route 1) in Caribou, Maine. The Site is owned by the Lister- Knowlton Veterans of Foreign Wars (VFW) Post 9389 and is identified by the City of Caribou Assessor's Office as Map 14/Lot 50. The entrance to the LO-58 Site from Van Buren Road is located at latitude 46º 52′ 55″ North and longitude 68º 0′ 38″ West. A Site location map showing the topography in the area is presented as Figure 1.

Unpaved areas of the LO-58 Site consist of grassland and shrub-scrub habitat, as early forest succession takes place in formerly mowed areas. There are no surface water bodies or wetlands present on the LO-58 Site. The nearest wetlands are located 0.18 mile to the northeast, within the floodplain of Hardwood Brook (United States Fish and Wildlife Service [USFWS], 2021).

The LO-58 Site consists of the former Nike missile Launcher Area, the former Engine, Generator, & Frequency Changer Building (Generator Building), the former Missile Assembly & Test Building (Test Building), the Acid Fueling/Neutralization Station (AFNS) and the former Barracks Building. The former Generator Building has been expanded and is used by the Adult Multiple Alternative Center (AMAC) as an adult learning center. The former Barracks Building has been repurposed as the Lister-Knowlton VFW Building. Aside from the former sentry station, the only other building that remains standing is the former Test Building, behind which an abandoned 500-gallon fuel oil above ground storage tank (AST) is located. A concrete block building was demolished and a new storage building for AMAC was constructed west of the Test Building (USACE, 2011).

Municipal water supply and sanitary sewer utilities are not available to any properties in the vicinity of the LO-58 Site, and all of these properties are served by private drinking water wells and private septic systems. There are two drinking water supply wells on the LO-58 Site: wells DW-01 and DW-02R. Well DW-01 services the AMAC Building and well DW-02R services the VFW Building. DW-02R was installed in June 2017 as a replacement well for DW-02 (which is still in place but not used) reportedly due to concerns associated with runoff from the parking lot that DW-02 is in and was initially sampled in June 2020. The nearest offsite drinking water well, DW-03, is located at the Morin's Auto Detailing property, which is adjacent to the LO-58 Site to the southwest. The drinking water well for this property is located approximately 750 ft west of the former Launcher Area (Weston, 2007a). An additional offsite drinking water well, DW-04, is located on a private residence at 271 Van Buren Road and is located approximately 1,000 ft northwest of the former Launcher Area.

There are five bedrock monitoring wells (MW-01 through MW-05) and one overburden monitoring well (MW-06) located throughout the LO-58 Site. The monitoring well network and drinking water wells associated with the LO-58 Site are depicted on Figure 2.

2.2 Site History

The LO-58 Site property was acquired from the Town of Caribou in 1955 by the United States Government for the construction of a Nike missile launching facility. The LO-58 Site was deactivated by the United States Department of Defense (DoD) in 1966. Following its decommissioning as a military facility in 1969, the LO-58 Site was conveyed to the City of Caribou and used for storage of municipal property. In 1970, the property was purchased by the current owner, the Lister- Knowlton VFW Post 9389.

Between 1955 and 1957, the LO-58 Launch Area was constructed as part of the LO-58 Site facility. The Launch Area originally consisted of the former Nike missile Launcher Area, the former Generator Building,

the former Test Building, the Warhead Building, the AFNS, and the former Barracks Building. The LO-58 Site began operations in 1957. The launcher facility was originally designed to carry and deploy the Ajax-type guided missile. The Ajax missile used a blend of jet propellant-4 (JP-4), inhibited red fuming nitric acid, and approximately one pint of unsymmetrical dimethylhydrazine to make the mixture hyperbolic; hence, it was capable of spontaneous ignition without the need for an additional ignition source. Reportedly, the missiles were periodically de-fueled at the AFNS so maintenance checks could be performed. There were reportedly ten Ajax missiles within each of the three missile magazines.

In 1960, the LO-58 Site operations converted to the Hercules missile. Several changes occurred at Nike missile launching sites because of the conversion from Nike Ajax to Nike Hercules missiles (Bender, 2004). Some of these changes included the construction of the Warhead Building within the AFNS area, the construction of a larger Test Building, and an upgrade to the launchers, missile elevators, motors, and related power elements associated with the three onsite missile magazines. Each magazine contained six Hercules missiles. Nike Hercules missile propellants contained polysulfide-ammonium perchlorate; however, contamination resulting from the Hercules missiles is unlikely since the solid rocket fuel arrived onsite already incorporated into the missile boosters and maintenance and/or replacement of the fuel was not performed. In addition, the missiles were never fired and there is no evidence to suggest that the propellant was disposed of at the LO-58 Site.

In 1966, the LO-58 Site was deactivated. In 1969, the LO-58 Site was decommissioned as a military facility and the property was transferred back to the Town of Caribou, which used the area for storing municipal property. In 1970, the LO-58 Site was purchased by the current owner, Lister- Knowlton VFW Post 9389.

The former Generator Building (AMAC Building) has had two or three additions built by AMAC over the life of their lease. Prior to May 2010, AMAC had a new storage building constructed west of the Test Building at the location of a block shed which was removed, the septic system serving AMAC had some improvements made, and the drain field was relocated across the driveway/road from the AMAC Building. The former Warhead Building was present at the LO-58 Site until the summer of 2006 when it was destroyed by fire; currently only the concrete foundation slab remains (USACE, 2010). In addition, a small farm machinery repair facility operated for less than a year in the former Test Building following decommissioning.

2.3 Previous Investigations

According to available documents for the LO-58 Site, including an Inventory Project Report (USACE, 1993), at least three Site visits were performed between the mid-1980s and 1993 for the purpose of identifying environmental hazards associated with the former defense Site. Plans for the LO-58 Site indicated that three fuel storage tanks were originally at the facility and included:

- A 2,000-gallon underground storage tank (UST) associated with the former Barracks Building.
- A 500-gallon fuel oil AST located outside the former Test Building.
- A 4,000-gallon fuel oil UST located adjacent to the southwest corner of the former Generator Building.

Records indicated that the 2,000-gallon UST had been removed. The 500-gallon AST had been utilized by a previous tenant at the property, and therefore was not eligible for removal under the DERP FUDS Program. There was no indication that the 4,000-gallon UST was still present at the property, and it was assumed to have been removed (USACE, 2017). Inspections also noted that the AFNS area was still in place but indicated that it posed no threat to the environment and required no further action.

The three missile magazines at the LO-58 Site were closed by Mason and Maine Environmental Engineering Co. between August and October 1994. The closure activities of each missile magazine included: the sampling of infiltrated water in the three magazines and the laboratory analysis for polychlorinated biphenyls (PCBs) and flashpoint; removal and disposal of the water within the magazines; removal and disposal of hydraulic systems; and capping the three magazines with concrete planks as they were left in place. Topside magazine closure demolition work consisted of removing several vent pipes, manholes, and bulkhead doors (Weston, 2007a).

USACE has conducted a series of site investigations at the LO-58 Site to characterize soil and groundwater impacts. The narrative below describes the history of investigations after closure activities, including lists of the corresponding investigation reports and work plans.

In the fall of 1996, Maine Department of Environmental Protection (MEDEP) responded to a complaint made by the current owner concerning odors in the water from the well serving the AMAC Building. Two rounds of DW sampling and analysis for VOCs, using United States Environmental Protection Agency (EPA) Method 8260, of well DW-01 by MEDEP documented and confirmed the presence of trichloroethylene (TCE) in the well water. Thereafter, MEDEP immediately installed a POET system (i.e., where the waterlines would enter the building) consisting of a dual granular activated carbon (GAC) filtering system to remove organic contaminants in the DW and initiated a quarterly monitoring program. USACE took over the maintenance and monitoring of the POET system at the AMAC Building in 2009. This POET system remains in use by the AMAC Building and filter changes in the POET system are completed every five (5) years based on a conservative estimate of 300,000 gallons of water usage by the facility per year, calculated using the United States Geological Survey (USGS) estimates for domestic water use in Maine, and the manufacturer's suggestion for the carbon change-out interval for Calgon Carbon Centaur 12x40 catalytic GAC used in the 2 cubic feet (ft^3) Pentair CH30546 filter used at the LO-58 Site. Filter changes are also conducted upon contaminant exceedances detected in the mid-filter sample (USACE, 2017).

During a Site visit by MEDEP on 21 May 1998, MEDEP staff investigated an area located southwest of the former Generator Building, where the 4,000-gallon UST was previously located during the time the LO-58 Site was in operation by the government. Although this tank had reportedly been removed, a magnetometer survey of the area detected a significant anomaly located approximately 3 ft east and 9 ft south of the southwest corner of the building. This magnetometer detection suggested that a large metallic object may still exist in this portion of the property (USACE, 2017).

Following the 21 May 1998 Site visit by MEDEP, the DW well which services the VFW Building, well DW-02, was added to the ongoing quarterly monitoring program. Because this well is located topographically downhill from well DW-01, the area of known TCE contamination, it was added to the program as a precautionary measure. During the summer of 1998, a DW sample was collected from DW-02 and analyzed for VOCs by EPA Method 8260 (USACE, 2011). Analytical results of the sample indicated all analyzed compounds were not detectable at laboratory reporting limits.

In October 1998, representatives of Weston and MEDEP performed a site walk at the LO-58 Site to identify potential areas of concern regarding the release of process-related substances to the subsurface. During the Site walk, several areas were identified as potential sources of contamination, including the former Launcher Area, the former AFNS, and the former Test Building.

A preliminary site investigation (PSI) was performed at the property in the summer of 1999 to evaluate subsurface conditions at the LO-58 Site. Passive soil gas and geophysical surveys, as well as a Geoprobe® soil boring and soil sampling program were conducted. The objective was to assess if the source of the TCE contamination detected in the onsite bedrock water supply well DW-01 servicing the AMAC facility was due to former DoD activities during its operation of the property, and to assess if additional investigations were warranted (Weston, 2000a).

The PSI passive soil gas survey was initiated at the LO-58 Site on 22 June 1999. A total of 75 EMFLUX® soil gas probes were installed on the LO-58 Site. The geophysical survey was performed near the former Generator Building on 23 June 1999. The geophysical survey consisted of two phases of investigation: 1) a preliminary metal detection survey to identify the location of medium to large, buried metal objects, and 2) a more sensitive ground penetrating radar (GPR) survey to identify physical characteristics of those objects. The results of the GPR survey indicated that the metallic response observed during the prior magnetometer survey by representatives of MEDEP was not due to the presence of a UST in the area. The GPR profiles in this area showed strong but narrow hyperbolic reflectors that are indicative of a small diameter metal pipe extending outwards from the corner of the former Generator Building. In October 1999, the Geoprobe® soil boring and soil sampling investigation was performed to characterize the LO-58 Site soils, determine the depth of the overburden groundwater table (if present), explore the depth to bedrock, and sample potentially contaminated soil zones identified by the passive soil gas survey. A total of 40 soil borings were advanced in the overburden at the LO-58 Site (Weston, 2000b).

A supplemental site investigation was conducted between October 2000 and May 2001 to supplement the information obtained during the 1999 PSI. In addition to the information obtained during the PSI, MEDEP performed an investigation at the LO-58 Site in the spring of 2000 that indicated the presence of fuel-impacted soils in the vicinity of a former UST, which was reportedly removed in 1994. The objectives of the supplemental site investigation activities were to further evaluate the source of TCE in the onsite DW well DW-01; to obtain further information regarding hydrogeologic conditions in bedrock; and to fill data gaps caused by the premature removal of soil gas probes by third parties during the PSI. The supplemental site investigation activities included: a Geoprobe® soil boring and soil sampling program; the installation of five bedrock groundwater monitoring wells; and the collection of soil, groundwater, and DW samples for laboratory analysis of volatile organic compounds (VOCs), total petroleum hydrocarbons (TPH)-diesel-range organics (DRO), and TPH-gasoline-range organics (GRO) (USACE, 2011).

Following these site investigations, a LTMP for the Maine FUDS (MEFUDS) program was developed. This monitoring program included not only the LO-58 Site but also four additional MEFUDS locations. For the LO-58 Site, the MEFUDS LTMP included monitoring the two DW supply wells as well as the five newly installed bedrock monitoring wells on a semi-annual basis for a period of at least 2 years to investigate whether a remedial action was required in accordance with MEDEP regulations (Weston, 2004; Weston, 2005; Weston, 2006; Weston, 2007c; Weston, 2008a; Weston, 2008b) (Johnson Companies, Inc. [JCI], 2010a; JCI, 2010b; JCI, 2010c; JCI, 2011).

Geologic, geophysical, and hydrophysical investigations were conducted at the LO-58 Site in May 2008 by Layne Christensen Company (COLOG). The purpose of the investigation was to gather additional site-specific hydrogeologic information to further refine the conceptual site model (CSM) related to groundwater flow (COLOG, 2009) (USACE, 2010).

Overburden monitoring well MW-06 was installed along the northwestern property boundary in the fall of 2012 to determine whether shallow groundwater was discharging to the swale between the former Barracks

Building and the former Launcher Area. However, the monitoring well was consistently dry, indicating that at the time of this monitoring, groundwater at the Site was not being discharged to the swale (USACE, 2017).

A Remedial Investigation/Feasibility Study (RI/FS) was conducted for the LO-58 Site from 2011 to 2017. The overall objectives of the RI/FS were: 1) to characterize the nature and extent of contamination; 2) to evaluate the environmental fate and transport of Site-related contamination; 3) to assess the potential risks to human health and the environment posed by contamination at the LO-58 Site; and 4) to use this information in the FS to support the evaluation and development of potential remedial alternatives for the Site. The RI/FS Report was finalized in February 2017 (USACE, 2017).

In June 2017, drinking water well DW-02 at the VFW was taken out of service. A replacement drinking water well (DW-02R) was installed and connected to the existing POET system at the VFW on 12 June 2017.

In June 2018, a Proposed Plan for cleanup was published by USACE to summarize and document the RI/FS, as well as to present the rationale for the selected remedies for groundwater and VI (USACE, 2018). The preferred alternative selected by USACE was presented in the Proposed Plan and at a public meeting held on 18 July 2018 to solicit input from the community and MEDEP on behalf of the State of the Maine. The public comment period was held between 22 June and 30 July 2018.

The final remedy to address groundwater and VI risks to human health was documented in the LO-58 Site DD in February 2019 (USACE, 2019). In groundwater, the only identified contaminant of concern (COC) was TCE. In indoor air, the COCs identified in the DD included chloroform, naphthalene, and TCE. The selected remedy for groundwater was continued POET for onsite drinking water well DW-01, institutional controls (annual notifications to landowner), MNA, and LTM. The selected remedy for VI included active sub-slab vapor mitigation, institutional controls, and LTM.

Pre-remedial action activities were initiated in August 2019. A well inspection was completed for all five bedrock monitoring wells, MW-01 through MW-05, and one overburden monitoring well, MW-06. The bedrock monitoring wells were redeveloped in November 2019. Redevelopment of MW-06 was not completed due to the absence of water in the well.

2.4 Conceptual Site Model

The following sections provide a summary of the CSM for the LO-58 Site. More detailed information describing the full CSM for the LO-58 Site is contained in the combined RI/FS Report (USACE, 2017) and the CSM Report (USACE, 2011).

2.4.1 Surface Topography

The LO-58 Site is located on an area topographic high, east of Van Buren Road. Elevations at the LO-58 Site vary by approximately 60 ft, from approximately 540 ft above mean sea level (amsl) at the former Barracks Building, which is located at the bottom of the hill near Van Buren Road, to approximately 600 ft amsl at the former Launcher Area, which is situated at the topographic high for the LO-58 Site (see Figure 1).

Stormwater and snowmelt on the LO-58 Site either infiltrates into the subsurface in unpaved portions or flows overland into catch basins and drainage swales. Following the topography at the LO-58 Site, surface water runoff flows generally north and northwest except from the former Barracks Building area where runoff flows downslope and eastward to a drainage swale behind the building. Catch basins and drainage

swales direct surface water runoff from the LO-58 Site to a natural valley located between the former Barracks Building and the base of the hill below the former Test Building and Launcher Area, which directs surface water off -property to the north (Weston, 2007a).

2.4.2 Overburden Geology

Based on regional mapping, overburden soils underlying the LO-58 Site is primarily glacial till consisting of a heterogeneous mix of sand, silt, clay, and stones, with local occurrences of boulders, and was deposited directly by glacial ice. The till is generally massive and may contain beds and lenses of variably washed and stratified sediments (Maine Geologic Society, 1985a). Subsurface investigations at the LO-58 Site have generally confirmed these mapped subsurface conditions, although no inclusions of washed or stratified sediments have been noted (USACE, 2011). Site-specific observations document that overburden thickness at the LO-58 Site varies depending on location and ranges from 0 ft below ground surface (bgs) at the former Launcher Area to approximately 16 ft bgs near the former Test Building. Bedrock outcrops are present along the southern edge of the former Launcher Area (Weston, 2007b).

2.4.3 Overburden Hydrogeology

Subsurface investigations into overburden groundwater at the LO-58 Site have indicated that there is little or no saturated thickness in the overburden. Surface water that infiltrates the overburden percolates downward to the bedrock surface. At the bedrock surface, groundwater flows along the surface of the bedrock beneath the LO-58 Site until reaching a point of infiltration, such as a fracture or a weathered bedrock zone (USACE, 2011). These characteristics of overburden hydrology at the LO-58 Site result in very little overburden groundwater being present at the bedrock surface.

2.4.4 Bedrock Geology

Based on the *Final Conceptual Site Model* (USACE, 2011) and the *Final Borehole Hydrophysics and Borehole Geophysics Report* (USACE, 2010), the LO-58 Site is located within the greater Chapman Synclinorium and consists of generally competent, Silurian-aged interbedded pelitic limestone and dolostone. The *Geologic Map of the Caribou and Northern Presque Isle Quadrangles, Maine* identifies the bedrock bedding at the LO-58 Site as striking North 70º East and dipping 12º East, as well as a foliation striking North 5º West and dipping 78º West (Maine Geologic Society, 1985b). Site-specific observations, from both bedrock outcrops and optical televiewer (OTV) logs, indicate that the local bedrock is folded in two directions: the major folds are broad to tight with axes oriented North 30º East, parallel to the axis of the Chapman Synclinorium; the fold axes are also folded broadly on North 20º West axes (USACE, 2017).

As noted above, the depth to bedrock at the LO-58 Site varies depending on location ranging from 0 ft bgs at the former Launcher Area to approximately 16 ft bgs near the former Test Building (Weston, 2007b), with bedrock elevations in the existing bedrock monitoring wells ranging from 558 to 599.4 ft amsl. Observation of the bedrock surface can be made in the vicinity of the former Launcher Area, and previous soil boring records indicate that there is little or no weathered bedrock at the overburden-bedrock interface (USACE, 2010). This condition is to be expected on the northwest face of a rock-cored drumlin which was subject to glacial action approximately 12,000 years ago. Vertical seismic profiling did not identify acoustically incompetent bedrock at the LO-58 Site.

Based on the site-specific hydrophysical and geophysical investigations performed, there are generally three major secondary porosity features present at the LO-58 Site (USACE, 2010; USACE, 2011; USACE, 2017):

- Joint Set 1 (J1): near-vertical set striking North 45º East and dipping 80º West.

- Joint Set 2 (J2): steeply-dipping striking North 45º East and dipping 85º East (roughly perpendicular to the first).
- Joint Set 3 (J3): a shallow-dipping set of sheeting joints that is roughly parallel to the ground surface and bedding, and decreases in frequency with depth, related to the relief of downward pressure due to erosion and glacial unloading (USACE, 2017).

The near-vertical sets of joints, particularly the set striking North 45º East and dipping 85º East, are often filled with calcite.

The planar features in bedrock that are intercepted by DW-01 and DW-02 were measured during geophysical investigations conducted by COLOG, and plotted as tadpoles on the geophysical logs, as well as plotted onto Schmidt stereonets obtained during the 2009 Geophysical Investigation in support of the 2011 CSM (USACE, 2017).

The stereonet plots for DW-01 showed two clusters of data; one for the low-angle features (near-horizontal joints and bedding) which has about 90º of variability from North 45º West to North 45º East, dipping West, and a second pair of steeply-dipping features (near-vertical joints) which are further grouped in two clusters, one at North 25º West and a smaller cluster at North 65º West, both dipping East (USACE, 2017).

The feature ranks shown in the stereonet plots (ranked from 0 for fractures with minimum flow capacity to 5 for fractures with maximum flow capacity) indicate that both the low-angle and steeply-dipping features contain members where significant flow is present (COLOG, 2009) (USACE, 2017). The stereonet plots for DW-02 are more complicated, in as much as they represent a greater length of bedrock borehole data. The primary data cluster for DW-02 is centered on steeply-dipping features (near-vertical joints) oriented North 45º East and dipping East which has approximately 45º of lateral spread. The feature rank plot reveals that there are a small number of features which do not appear on the contour plot due to low frequency. Within these data are a set of steeply-dipping features (North 45º West to North 45º East, with a slight concentration around North 45º East, dipping West); there are relatively few low-angle features in this dataset (USACE, 2010).

Thus, the results indicate that the upper 60 ft of bedrock have similar fracturing characteristics at DW-01 and DW-02 (USACE, 2017). However, the deeper bedrock (below approximately 70 ft) surrounding DW-02 contains very few sheeting fractures, and the aperture and water-bearing potential of the steeper fractures are not as significant, this pattern does not appear in the bedrock surrounding DW-01 because the well is not deep enough. Thus, the difference noted in relative fracture density and orientations are artifacts of the different borehole depths (58 ft versus 283 ft), not differences in the nature of the shallow (i.e., <58 ft) bedrock at the two well locations (USACE, 2017).

A notable linear depression in the bedrock surface is present between locations SB-22 and SB-43 which may be indicative of a fracture zone as shown in the *Final Borehole Hydrophysics and Borehole Geophysics Report* (USACE, 2010). The orientation of the linear depression is approximately North 70º West, is near-coincident with the North 65º West cluster of joints noted in the geophysical log of well DW-1, described above, supporting the hypothesis that the feature is surficial expression of a fracture zone.

2.4.5 Bedrock Hydrogeology

There are no significant deposits of weathered bedrock at the LO-58 Site, and overburden groundwater is assumed to discharge directly from the glacial till overburden to competent bedrock (USACE, 2010). Groundwater flow through bedrock at the LO-58 Site is solely via secondary porosity features (i.e., fracture-controlled flow). Flow through primary porosity features (i.e., interconnected interstitial pores) within the

bedrock are marginal relative to flow through secondary porosity features (USACE, 2010). In addition, although solution cavities can develop in limestone formations, neither the available geologic literature nor site-specific data indicate that the bedrock subjacent to the Site is subject to karst formation (Maine Geologic Society, 1985c). Thus, it may be concluded that the orientation, length, width, and interconnectedness of joints in the bedrock exert significant control over both groundwater flow direction and contaminant distribution within groundwater (Freeze & Cherry, 1979). Bedrock potentiometric surface data indicates that flow is generally to the northwest.

Borehole hydrophysics and geophysical testing was performed in 2008. DW-01 and DW-02, which are open boreholes, were generally analyzed for lithologic structure, conductance, and flow. MW-01 through MW-05, 2-inch polyvinyl chloride (PVC) wells with 10-foot screen intervals, were generally analyzed for clay-filled voids (i.e., gamma) and fluid conductivity. The hydrophysical logs for DW-01 indicate ambient groundwater flow within the borehole is horizontal. The hydrophysical logs for well DW-02 indicate ambient vertical flow occurring within the borehole. Formation water migrates downward within the fluid column beginning near the base of casing and at 31 ft bgs (USACE, 2010). Based on numerical modeling performed using the hydrophysical and geophysical data, groundwater exits the borehole at depths of 96.4 to 97.0 and 189.5 to 191.0 ft bgs (USACE, 2011).

Historically (both prior to and following the RI) synoptic static water level (SWL) monitoring events typically indicate that the well screen intervals are fully saturated for bedrock monitoring wells MW-01 though MW-05.

Municipal water supply and sanitary sewer utilities are not available to any properties in the vicinity of the LO-58 Site, and all properties are served by private DW wells and septic systems. Municipal water supply in the area terminates at the Cary Medical Center, approximately 2,300 feet to the south of the Site along US Route 1.

2.4.6 Sources and Nature and Extent of Contaminants of Concern

Soil, groundwater, soil vapor, and indoor air have been impacted by releases of petroleum hydrocarbons and chlorinated solvents related to the historical operations of the LO-58 Site. Low levels of chemicals originating from these sources have been identified in soil samples collected from across the LO-58 Site. No widespread source of chlorinated volatile organic compounds (CVOC) soil contamination has been identified at the LO-58 Site, but two localized sources of CVOC contamination in soil have been identified: one located west of the AMAC Building and a second, broader source, located near the former Launcher Area and former Fueling Platform at the LO-58 Site.

Groundwater contamination consisting of both petroleum compounds and CVOCs has been observed at the Site and is assumed to the result of the migration of these contaminants from vadose zone sources to the groundwater table via dissolution, caused by the infiltration and percolation of water through the vadose zone contaminated soils/overburden sources to the groundwater table.

The CVOC groundwater impacts at the former Generator Building (AMAC Building) are attributed to periodic cleaning of the missiles with TCE-based solvents that could have run into the nearby catch basins, which then discharge to the drainage swales near DW-01, the bedrock water supply well for the AMAC Building.

The petroleum compound and CVOC groundwater impacts noted at the north end of the former Launcher Area are likely from either parts cleaning/degreasing activities which took place in the vicinity of this area, or that this area received runoff containing this material from the paved areas surrounding the Site

magazines. The petroleum compound groundwater impacts noted at the area to the north of the former Test Building are presumed to be from a combination of surficial spills and discharges from the AST that is located behind that building.

CVOCs and petroleum compounds have also been detected in pre-treatment samples collected from the AMAC Building drinking water supply well (DW-01). Depth profiling of groundwater entering DW-01 indicates petroleum hydrocarbons and CVOCs infiltrate into the well at multiple depths through fractures observed in the well boring. Additionally, during packer testing at DW-02 in 2008, a trace concentration of cis-1,2-dichloroethylene (cis-1,2-DCE) below the Maine Maximum Exposure Guideline (MEG) was detected in a groundwater sample from a single, intermediate-depth fracture interval. Toluene was also detected from several fracture intervals at concentrations below the Maine MEG, and DRO was detected from two intervals (the shallowest and the deepest) at concentrations above the Maine MEG (USACE, 2011). Aside from the 2008 packer test sampling, no other drinking water samples collected from DW-02/DW-02R have identified evidence of site-specific contamination. No evidence of site-specific contamination has been identified at the two other sampled drinking water supply wells on adjacent properties (DW-03 and DW-04 at 271 and 241 Van Buren Road, respectively). However, limited data are available for DW-03 (one sample from 2012) and DW-04 (two samples from 2012 and 2020) due to the inability to obtain access agreements from the private property owners.

VI of contaminants in soil has been identified as a concern at the AMAC Building as early as 1999 (USACE, 2011). Migration of contaminants present in the soil from the former septic system and/or other nearby contaminated soil may occur to soil vapor and the atmosphere via volatilization. Indoor air and sub-slab soil vapor samples from the AMAC Building indicate air-phase petroleum hydrocarbons and CVOCs are present at concentrations exceeding regional screening levels (RSLs).

2.4.7 Release and Transport Mechanisms

There are four mechanisms that can release and transport COCs at the Site: erosion and surface runoff; wind erosion/volatilization; leaching to and migration of contaminants in groundwater; and migration of volatile COCs through the vadose zone into buildings. Surface water runoff occurs during rainfall and snowmelt when COCs in the soil are released through soil erosion and transported to other areas on site via site drainage.

Wind erosion of soils can also play a role in releasing COCs from soil. This holds true where activities such as heavy truck traffic on unpaved roads and other construction-related activity is occurring. Dust emissions may be an important route of exposure if future construction activities occur. Moreover, VOCs present in the soil can volatilize and be inhaled during outdoor activities.

The third release and transport mechanism is leaching to groundwater. Following release to the ground surface, infiltration would transport COCs through the soil column to the groundwater and they would migrate laterally depending on the flow gradient. VOCs present in the soil and groundwater can migrate through the vadose zone and potentially infiltrate buildings located above the contamination as vapor (USACE, 2019).

2.4.8 Receptors

The LO-58 RI evaluated risk for both human and ecological receptors (USACE, 2017). Human receptors evaluated in the RI included:

AMAC Building Area – Current Users

- AMAC Building Staff

- AMAC Building Clients
- Site Worker

Launcher Area – Current Users

- AMAC Building Staff
- AMAC Building Clients
- Trespasser
- Site Worker

Entire Site Area – Future Users

- Future Construction Worker
- Future Commercial/Industrial
- Hypothetical Future Resident

The staff and clients would have the most potential for exposure to COCs due to their frequency (150 days/year exposure to soils outdoors and 250 days/year exposure to drinking water and indoor air). Construction workers, particularly utility workers that might be required to excavate contaminated soil and work in excavations, would have low-frequency, high-intensity use of the property. Site trespassers have the least potential for exposure to COCs due to their lower-frequency, low-intensity use of the property (estimated at 3 days/month).

The nearest wetlands are located 0.18 mile to the north-northeast of the LO-58 Site, within the floodplain of Hardwood Brook (USFWS, 2021). Information from MEDEP and onsite observations do not indicate the presence of Significant Wildlife Habitat on the LO-58 Site or in its vicinity (MEDEP, 2007). According to the Critical Natural Resources Map for the City of Caribou, Maine, there are no critical natural resource areas on the LO-58 Site. Note that such natural resource areas are reported along Hardwood Brook located approximately 0.5 miles north of the LO-58 Site (City of Caribou, undated). Based on these results, it was concluded that there are no ecological receptors of particular significance on the LO-58 Site. However, there may be ecological receptors of particular significance in areas to the north-northeast of the LO-58 Site (USACE, 2011).

2.4.9 Remedial Action Objectives and Remediation Goals

The LO-58 Site DD (USACE, 2019) presents the remedial action objectives (RAOs) and remediation goals (RGs) for the Site. RAOs are based on human health and environmental risks that drive the formulation and implementation of response actions and Applicable or Relevant and Appropriate Requirements (ARARs). The only groundwater COC identified for the LO-58 Site was TCE. The indoor air COCs identified were chloroform, naphthalene, and TCE. The only ARAR for groundwater identified was chemical-specific for TCE in groundwater (the EPA maximum contaminant level [MCL]). No location- or action-specific ARARs were identified for groundwater, and ARARs and to-be-considered (TBC) guidelines do not exist for indoor air COCs (USACE, 2019).

The RAOs for the LO-58 Site have an overall objective of addressing human health risks associated with groundwater and indoor air/soil vapor. The RAOs for the Site are as follows:

- Prevent ingestion of water containing COCs in excess of EPA MCLs, an unacceptable cumulative cancer risk greater than 1E-04, and cumulative non-cancer hazard index (HI) greater than the threshold level of 1.0.

- Prevent exposure to indoor air COCs in excess of RGs (1E-05 risk-based) that pose cumulative cancer risk greater than 1E-04 or non-carcinogenic HIs greater than the threshold level of 1.0.

The RGs developed to support the RAOs for groundwater and indoor air are summarized in Table 1. The groundwater RG for TCE was established at the EPA MCL of 5 micrograms per liter (µg/L). The indoor air RGs were established using a risk-based approach for chloroform at 1.1 microgram per cubic meter (µg/m^3), naphthalene at 0.7 µg/m^3, and TCE at 2 µg/m^3.

The remedial action guidelines (RAGs) developed by the State of Maine's Bureau of Remediation and Waste Management and outlined in the *Maine Remedial Action Guidelines for Contaminated Sites* (MEDEP, 2021) for the COCs with RGs listed in the LO-58 Site DD are included in Table 2 to facilitate review for the State of Maine.

2.5 Remedial Action Implementation

The selected remedy for groundwater is continued POET system operation for onsite drinking water well DW-01, institutional controls in the form of annual notifications to the landowner, MNA, and LTM. The elements of this selected remedy are either already being implemented, or in the case of MNA, will be started with the sampling event scheduled in December 2022.

The selected remedy for VI is sub-slab vapor mitigation for identified indoor air contaminants at the AMAC Building, institutional controls, and LTM. The sub-slab VIMS was installed in July 2021 to remove contaminated vapors from below the building slab and vent them to the exterior of the building into the atmosphere. The Vapor Mitigation Installation Report (VERINA, 2021) provides a detailed discussion of pre-installation sampling, system design testing and verification, installation, and initiation activities.

3.0 Methodology

This section details the methodology used to conduct LTM activities.

3.1 Long-Term Monitoring Objectives and Summary of Tasks Performed

The objective of LTM data collection at the LO-58 Site is to monitor the effectiveness of the remedies selected in the Final DD (USACE, 2019). The annual LTM tasks described in this report were conducted in July 2021 in accordance with the LO-58 Site Sampling and Analysis Plan (SAP) (VERINA, 2020a) and Quality Assurance Project Plan (QAPP) (VERINA, 2020b). An electronic QAPP (eQAPP) was developed, which included the criteria outlined in the QAPP and was used during electronic data deliverable error checking and the data validation process for project data in the FUDS Chemical Database (FUDSChem). The remedial action operation/LTM tasks that were completed in 2021 and described in this report are summarized below:

- Assessment of the condition of monitoring wells.
- Collection of one round of water level measurements from monitoring wells.
- Collection of groundwater samples from the five existing bedrock monitoring wells via low-flow purging and sampling procedures to determine current groundwater conditions. The overburden monitoring well, MW-06, was excluded from the sampling event due to the absence of sufficient water in the well to collect the required sample volume.
- Collection of drinking water samples from two drinking water wells, including:
    - DW-01 - three samples collected from 1) before the POET system, 2) between the primary and secondary GAC filters, and 3) after the POET system (at the POET system sampling ports located in the utility room).
    - DW-02R – two samples collected from 1) before the POET system, and 2) after the POET system (at the POET system sampling ports located in the utility room).
- Assessment of groundwater COC concentrations in the context of the RAOs for the LO-58 Site (the groundwater RG established for TCE is 5 µg/L based on the EPA MCL, which is the maximum concentration of TCE allowed in drinking water).
- Assessment of any changes to land use within the vicinity of the LO-58 Site.
- VI sampling consisting of two indoor air samples in the AMAC Building, an ambient air sample outside and upwind of the AMAC Building, and four sub-slab soil vapor samples below the AMAC Building prior to VIMS installation and startup in July 2021.

3.2 Monitoring Network and Schedule

LTM of groundwater is being conducted at a frequency sufficient to maintain and assess the performance of the POET system, which is anticipated to be annually for existing monitoring wells for the first five years of LTM sampling. Newly installed wells will be sampled on a semi-annual basis for at least two years after installation to evaluate the variability in concentrations followed by a transition to annual monitoring.

For VI, LTM is being conducted on an annual basis during the winter heating season to capture conservative conditions in indoor air and assess the performance of the sub-slab VIMS as well as changes in VI conditions. The first round of annual VI LTM following VIMS startup was performed in January 2022, and the results will be presented in the 2022 Annual LTM Report.

The Long-Term Monitoring Plan (LTMP) (G2S, 2022a) indicates that the LTM frequency will be evaluated using statistical analysis of concentration trends via the Mann-Kendall trend analysis methodology and

identification of wells with concentrations that are consistently non-detect and/or below RGs. The monitored parameters/constituents, locations, and frequency of sampling events will be optimized based on statistical analyses, while assuring safety of potential receptors. If there are any proposed changes in the sampling frequency, they will be presented and discussed in future annual LTM reports, and further assessed during Five-Year reviews.

3.3 Groundwater Level Measurements and Well Assessments

Prior to conducting sampling, a well assessment was performed on 19 July 2021 for the five bedrock monitoring wells and one overburden monitoring well located onsite. The well assessment included screening with a photoionization detector (PID) at the well opening, collecting a depth to water measurement, and documenting the condition of each well. The well inspection field logs are provided in Appendix A. Total well depth measurements were taken following the groundwater sampling event on 20 and 21 July 2021 to prevent disturbing any potential solid material built up at the bottom of the monitoring wells prior to purging and sampling the wells. The results of the well assessment summary are provided on Table 3. Water level measurements were not performed at drinking water wells due to the potential risk of cross-contamination from the opening of well heads.

3.4 Groundwater Sampling and Analysis

The bedrock monitoring wells were sampled 20 and 21 July 2021 using the low-flow purging and sampling methods consistent with EPA guidance (EPA, 2017) and in accordance with SOP No. SA-003 in the project SAP (VERINA, 2020a). During the low-flow purging of each of the bedrock monitoring wells, water quality parameter readings were collected from the purged groundwater at 5-minute intervals to identify when the groundwater had stabilized prior to sampling. Each well was considered stable after three consecutive readings were recorded that met the acceptance criteria established in EPA guidance (EPA, 2017) and Standard Operating Procedure (SOP) No. SA-003. The low-flow purge logs for the five sampled bedrock monitoring wells are included in Appendix B, and the final of the three consecutive stable readings for each well obtained during the low-flow purging, immediately prior to sampling, are provided on Table 4. Samples were collected from bedrock monitoring wells MW-02 through MW-05 on 20 July 2021 and bedrock monitoring wells MW-01 on 21 July 2021.

Groundwater was purged using a Geotech bladder pump with new Teflon™ bladders and low-density, Teflon™-lined polyethylene tubing. Compressed air was supplied to the bladder pump using a QED™ MP-50 controller and air compressor. A YSI™ 556 multiparameter probe and HACH® 2100Q turbidity meter were used to monitor groundwater parameters. The equipment was calibrated at the start of each sample day per the manufacturer specifications and the calibration was checked at the end of each workday.

Bladder pumps were decontaminated, fitted with new bladders and seals, and reassembled between each well location. Once reassembled, new sampling tubing was attached to the pump immediately prior to the pump being inserted into the next well.

Purged groundwater was initially containerized in 5-gallon buckets and inspected for any visual or olfactory indications of contamination and screened with a PID. In the absence of any indications of groundwater contamination or elevated PID readings, the groundwater was discharged to the ground surface adjacent to the associated monitoring well.

Groundwater samples were submitted for laboratory analysis of VOCs, polycyclic aromatic hydrocarbons (PAHs), volatile petroleum hydrocarbons (VPHs [including target C9-C10 aromatics]), and 13 priority pollutant (PP) metals plus mercury. Additional information on the analytical methods, quality control (QC)

requirements, sample containers and similar sampling details are included in the LO-58 Site SAP (VERINA, 2020a) and QAPP (VERINA, 2020b). Daily notes taken by the sampling contractor are included in Appendix C.

3.5 Drinking Water Well Sampling and Analysis

On 20 and 21 July 2021, drinking water samples were taken from two drinking water supply wells, DW-01 and DW-02R, which are located at the AMAC Building and VFW Building, respectively. These samples were collected as "grab" samples from sampling ports installed as part of the POET systems. Within the AMAC Building, occupants use bottled water for drinking purposes, and tapwater is reserved for washing only. The VFW Building uses DW-02R for potable purposes.

Drinking water samples were collected in accordance with the procedures outlined in SOP SA-012 included in the project SAP (VERINA, 2020a). Each drinking water supply well was purged for at least 20 minutes and the well's pressure tank was monitored (where feasible) to confirm the tank had cycled several times to ensure fresh formation water had entered the POET system prior to sample collection. Once purging was complete, drinking water samples were collected in reverse order of POET system flow to reduce the potential for cross-contamination (i.e., clean to dirty sampling order). Three samples were collected from DW-01 in the following order: post-treatment effluent (EFF) after both GAC filters; mid-treatment (MID) between the primary and secondary GAC filters; and, pre-treatment influent (INF) prior to the drinking water entering the primary GAC filter. The DW-01 samples were collected via dedicated, spigot style, non-screened sampling valves installed at the respective locations on the POET system piping. Two samples were collected from DW-02R (post-treatment effluent [EFF] sample followed by pre-treatment influent [INF] sample) also via dedicated, spigot style, non-screened sampling valves installed at the respective locations on the POET system piping.

The drinking water samples were collected from the existing system sample ports located within each building's respective utility room, with no modifications of the drinking water system infrastructure made to collect the samples. The drinking water samples were submitted for laboratory analysis of VOCs, PAHs, VPHs, and total PP metals plus mercury. Additional information on the analytical methods, QC requirements, sample containers and similar sampling details are included in the LO-58 Site LO-58 Site SAP (VERINA, 2020a) and QAPP (VERINA, 2020b). Daily notes taken by the sampling contractor are included in Appendix C.

3.6 Vapor Intrusion Sampling and Analysis

On 23 and 24 July 2021, two indoor air, one ambient air, and four sub-slab soil vapor samples were collected in accordance with the project SAP (VERINA, 2020a) and QAPP (VERINA, 2020b) from the AMAC Building before installation and startup of the VIMS. Indoor air sampling occurred over a 24-hour period between 23 July 2021 and 24 July 2021. The indoor air and related QC samples were collected using individually certified 6-liter SUMMA® canisters equipped with a single flow regulator set for a 24-hour sampling period. The ambient air sample was collected outside of the building in an upwind location (which was along the western wall of the AMAC Building on the date of sample initiation) to help determine if background contamination affected the indoor air samples. A field duplicate sample was collected by placing a canister adjacent to the primary indoor air sample canister at sample location IA-01. During the indoor air sampling period, all doors and windows remained shut, the air purifiers remained off and all venting systems (bathroom or kitchen exhaust fans) also remained off. Additionally, no window air conditioning units or other cooling features/systems were noted in the AMAC Building.

After the completion of indoor air sampling on 24 July 2021, soil vapor sampling occurred at the four soil vapor points (SVPs) installed within the AMAC Building over an 8-hour period. Prior to connecting the SUMMA® canisters, PID readings were collected from the SVPs and three liters of soil vapor were purged from each SVP. PID readings ranged from 1.5 parts per million by volume (ppmv) at SV-02 to 2.21 ppmv at SV-01. Purging of the SVPs was accomplished using a SKC-brand sample pump set to an approximate flow rate of 200 milliliters (mL) per minutes. Soil vapor samples were then collected using batch certified 6-liter SUMMA® canisters equipped with a single flow regulator set for an 8-hour sampling period and connected to the soil vapor sampling points with Teflon-lined tubing. QC samples collected during the soil vapor sampling event included a field duplicate collected using a "T" splitter to connect two SUMMA® canisters to the single soil vapor sampling point SV-01. Both the primary soil vapor sample and field duplicate were collected simultaneously.

The indoor/ambient air and sub-slab soil vapor samples were submitted for laboratory analysis of VOCs. Additional information on the analytical methods, QC requirements, sample containers and sampling details are included in the LO-58 Site SAP (VERINA, 2020a), QAPP (VERINA, 2020b), and Vapor Mitigation Installation Report (VERINA, 2021). Daily notes taken by the sampling contractor are included in Appendix C.

4.0 Results and Discussion

This section presents the results and evaluation of the LTM activities conducted in July 2021.

4.1 Well Assessment Results

The monitoring well assessment did not indicate any damage or apparent sediment buildup in monitoring wells present at the Site. It was noted that MW-04 was missing a cap on the well inside the standpipe. No changes in Site conditions or use were noted that would affect the selected remedy.

4.2 Bedrock and Overburden Groundwater Level and Flow Direction

Depth to groundwater measurements and groundwater elevations for the July 2021 sampling event are provided in Table 5 along with historical groundwater elevation data for monitoring wells present at the Site. Figure 3 shows groundwater elevations over time in the five existing bedrock wells at the Site, and Figure 4 shows the groundwater flow direction based on groundwater elevation data collected in July 2021. The line graphs and contours shown in Figure 3 and Figure 4, respectively, represent the average head values of transmissive fractures at each monitoring well location. The historical groundwater elevation data presented in Table 5 indicates that elevations in the existing bedrock monitoring wells have ranged from 532.39 to 561.16 ft amsl.

The bedrock groundwater elevation data collected in July 2021 were generally consistent with historical groundwater elevations with the exception of MW-01, which had a groundwater elevation 1.11 ft and 8.64 ft greater than levels measured in December 2020 and June 2021, respectively. It is noted that MW-01 is significantly deeper than the other monitoring wells at the LO-58 Site. As such, this well may intersect additional transmissive fractures and represent different average head values and groundwater flow patterns relative to the shallower wells present at the Site. The geophysical report (USACE, 2010) identified ambient vertical flow at DW-02 but did not evaluate downward flow at MW-01. Therefore, the groundwater elevation contours may vary in wells that are significantly deeper or shallower relative to the other wells at the Site. The average horizontal hydraulic gradient was consistently measured at 0.02 ft/ft in June 2020, December 2020, and July 2021. Vertical hydraulic gradients will be evaluated after additional bedrock monitoring wells are installed and sampled at the Site in 2023, as they will be in close proximity to other wells at the Site.

Water was noted in the six-inch sump below overburden well MW-06 for the first time on record. During four previous gauging events going back to August 2019, MW-06 was found to be dry (see Table 5) indicating the overburden is not saturated throughout the year. However, with groundwater being measured in the sump below overburden well MW-06, there is the potential for the overburden to be saturated during certain seasons of the year. With this development, it is recommended that MW-06 not be abandoned until additional attempts can be made to measure and collect groundwater samples so it can be confirmed that the well is indeed dry.

Figure 3 shows that there are seasonal fluctuations in groundwater elevations at the Site, with there being higher elevations in the winter months and lower elevations in the summer months. Figure 4 shows that the direction of groundwater flow at the Site is to the northwest, which is consistent with historical sampling events. However, the relatively high groundwater elevation measured in MW-01 led the groundwater elevation contours upgradient and downgradient of MW-01 to deviate some compared to past groundwater level maps (i.e., the contours immediately downgradient of MW-01 in July 2021 indicate a groundwater flow direction to the west whereas the groundwater level map in July 2020 showed a flow direction to the northwest in the vicinity of MW-01, consistent with other contours at the Site).

4.3 Groundwater Analytical Results

The analytical results from six groundwater samples collected from bedrock wells MW-01 through MW-05 (including a field duplicate from MW-02) on 20 July and 21 July 2021 are presented in Table 6. Figure 5 shows the bedrock groundwater analytical results for chemicals previously identified to contribute to total risk at the Site over time including TCE, which is the COC identified in groundwater (USACE, 2019). Appendix D includes the laboratory analytical reports for sampling conducted in July 2021 and Appendix E presents a comprehensive summary of historical analytical data for groundwater samples contained in the USACE FUDSChem database.

Organic compounds that fall into the categories of VPHs, VOCs, and PAHs were only detected in MW-04 and MW-05 in July 2021, with eight of the 10 detections of organic compounds being estimated with a "J" qualifier (see Table 6). TCE was only detected in one of the six samples at an estimated concentration of 0.310 µg/L in MW-05 compared to the RG of 5 µg/L (Maine Residential Groundwater RAG 2.8 µg/L). This TCE concentration is consistent with results of 25 historical sampling events conducted at MW-05 from October 2000 through December 2020, over which TCE has ranged from non-detect to a maximum concentration of 0.5 µg/L (see Figure 5). A summary of the groundwater analytical results for the groundwater samples collected in July 2021 are summarized below by chemical class:

<u>VPH</u>

- All results were non-detect with the exception of C9-C10 aromatics detected at an estimated concentration of 76.0 J µg/L and C9-C12 aliphatics detected at an estimated concentration of 82.0 J µg/L in MW-05 with there being no applicable EPA screening limits (MEDEP Residential Groundwater RAGs are 71 and 350 µg/L, respectively).

<u>Metals including mercury</u>

- Cadmium, calcium, and copper were detected in all groundwater samples with concentrations ranging from 0.0390 J to 0.739 J µg/L, 67,500 to 103,000 µg/L, and 3.29 J to 6.26 J µg/L, respectively, all of which were below applicable EPA screening limits (and MEDEP Residential Groundwater RAGs).
- Manganese at 621 J µg/L in MW-05 was the only detected concentration of metals that exceeded a screening limit (i.e., there is no EPA screening limit and the MEDEP Residential Groundwater RAG is 430 µg/L).
- Mercury was detected in one sample (the field duplicate from MW-02) at an estimated concentration of 0.0170 J µg/L compared to the EPA MCL of 2 µg/L (MEDEP Residential Groundwater RAG 0.63 µg/L).
- Selenium, thallium, and zinc were detected at estimated concentrations in one or two wells, all at concentrations below applicable EPA screening limits (and MEDEP Residential Groundwater RAGs).
- Antimony, arsenic, beryllium, chromium, lead, manganese, nickel, and silver were non-detect in all groundwater samples.

<u>PAHs</u>

- No detected concentrations of PAHs exceeded applicable screening limits:
    - 1-Methylnapthalene was detected at an estimated concentration of 0.160 J µg/L compared to the EPA Tapwater RSL of 1.1 µg/L (MEDEP Residential Groundwater RAG 11 µg/L).

- Acenaphthene was detected at an estimated concentration of 0.180 J µg/L compared to the EPA Tapwater RSL of 530 µg/L (MEDEP Residential Groundwater RAG 540 µg/L).
- Anthracene was detected at an estimated concentration of 0.0470 J µg/L compared to the EPA Tapwater RSL of 1,800 µg/L (MEDEP Residential Groundwater RAG 1,800 µg/L).
- Fluorene was detected at a concentration of 0.440 µg/L compared to the EPA Tapwater RSL of 290 µg/L (MEDEP Residential Groundwater RAG 290 µg/L).
- Phenanthrene was detected at a concentration of 0.240 µg/L with no EPA RSL (MEDEP Residential Groundwater RAG 180 µg/L).

VOCs

- No detected concentrations of VOCs exceeded applicable screening limits:
  - 1,2-Dichloroethane (1,2-DCA) was reported at an estimated concentration of 0.270 J µg/L compared to the EPA MCL of 5 µg/L (MEDEP Residential Groundwater RAG of 1.7 µg/L) in MW-04.
  - Chloroethane was reported at an estimated concentration of 0.710 J µg/L with there being no EPA screening limit (MEDEP Residential Groundwater RAG of 21,000 µg/L) in MW-04.
  - TCE at an estimated concentration of 0.310 J µg/L compared to the RG of 5 µg/L (MEDEP Residential Groundwater RAG of 2.8 µg/L) in MW-05.

4.4 Drinking Water Analytical Results

The analytical results from six drinking water samples collected from drinking water wells DW-01 and DW-02R on 20 July and 21 July 2021 are presented in Table 7. Three samples were collected from DW-01: 1) before the POET system (i.e., influent [INF]), 2) between the treatment filters (i.e., mid-filter [MID]), and 3) after the POET system (i.e., effluent [EFF] or at the tap). Two samples were collected from DW-02R: 1) INF before the POET system, and 2) EFF after the POET system. In addition, a field duplicate sample was collected from DW-02R-INF.

Figure 6 shows the drinking water analytical results for chemicals previously identified to contribute to total risk at the Site over time including TCE, which is the COC identified in groundwater (USACE, 2019). Appendix D includes the laboratory analytical reports for sampling conducted in July 2021 and Appendix E presents a comprehensive summary of historical analytical data for drinking water samples contained in the USACE FUDSChem database. Lastly, Appendix F includes time series plots of TCE in samples collected from drinking water well DW-01 at the Site using data contained in the USACE FUDSChem database.

Metals and the VOCs acetone, cis-1,2-dichloroethene, and TCE were the only compounds detected in drinking water samples collected in July 2021. All the detected concentrations were below applicable RGs or EPA screening limits. In influent drinking water sample DW-01-INF, TCE was detected at an estimated concentration of 2.90 J µg/L, which is below the RG of 5 µg/L (Maine Residential Groundwater RAG of 2.8 µg/L). A summary of the analytical results for the drinking water samples collected in July 2021 are summarized below by chemical class:

VPH

- All results were non-detect.

Metals including mercury

- No detected concentrations of metals exceeded applicable screening limits.
- Calcium and copper were detected in all drinking water samples at concentrations ranging from 58,400 to 89,300 µg/L, and 12.2 J to 21.4 µg/L, respectively.
- Cadmium, lead, nickel, selenium, thallium, and zinc were detected in one or more drinking water samples, all at concentrations below applicable screening limits.
- Mercury, antimony, arsenic, beryllium, chromium, manganese, and silver were non-detect in all drinking water samples.

PAHs

- All results were non-detect.

VOCs

- No detected concentrations of VOCs exceeded applicable screening limits:
    - With the exception of acetone (2.40 J µg/L; no EPA screening limit and MEDEP Residential Groundwater RAG of 14,000 µg/L) in DW-01-EFF and cis-1,2-DCE (0.740 J µg/L versus the EPA MCL of 70 µg/L; MEDEP Residential Groundwater RAG of 35 µg/L) and TCE (2.90 J µg/L versus the RG of 5 µg/L; MEDEP Residential Groundwater RAG of 2.8 µg/L) in DW-01-INF, all other VOCs were non-detect.
- As stated above, TCE was detected at an estimated concentration of 2.90 J µg/L (compared to the RG of 5 µg/L) in influent drinking water sample DW-01-INF. Figure 8 presents the results of a Mann-Kendall trend analysis using ProUCL 5.2 (EPA, 2015b) of TCE concentrations over time in DW-01-INF. The results show the Mann-Kendall 'S' statistic is -34 indicating a decreasing trend, but not at a level of statistical significance (with a confidence coefficient of 95% identified) because the approximate p-value is 0.296 (a p-value of 0.05 would represent a statistically significant trend). The Coefficient of Variation is 0.382, which combined with the 'S' statistic and p-value, suggests that TCE concentrations in DW-01-INF are stable over time.

4.5 Baseline Vapor Intrusion Analytical Results

As described in Section 3.6 above and in the Vapor Mitigation Installation Report (VERINA, 2021), prior to the installation of the VIMS in July 2021, baseline VI sampling was conducted. The sampling consisted of the collection of three indoor air samples (IA-01, IA-01 field duplicate, and IA-02), one ambient air sample (AA-01), and five sub-slab soil vapor samples (SV-01, SV-02, SV-02 field duplicate, SV-03, and SV-04). After the samples were collected, they were submitted to the analytical laboratory for analysis of VOCs. Figure 7 shows the VI analytical results for VOCs detected during the baseline sampling event, and Appendix D includes the laboratory analytical reports for sampling conducted in July 2021. The baseline VI analytical results for indoor/ambient air and sub-slab soil vapor are discussed separately in the following subsections.

4.5.1 Baseline Indoor/Ambient Air Analytical Results

Table 8 presents the analytical results for the three indoor air and one ambient air sample collected before the VIMS was installed and initiated in July 2021. The results indicate that 39 individual VOCs were detected in the baseline indoor/ambient air samples. None of the detected concentrations in the ambient air sample exceeded RGs, EPA Resident Air RSLs, or MEDEP Indoor Air Residential RAGs; however, there were some exceedances of screening criteria in the indoor air samples:

- 1,2-DCA was detected in all three indoor air samples at concentrations ranging from 0.223 to 0.271 µg/m^3, which exceeds the EPA Resident Air RSL of 0.11 µg/m^3 (MEDEP Indoor Air Residential RAG 1.1 µg/m^3).
- TCE was detected in all three indoor air samples at concentrations ranging from 3.42 to 4.27 µg/m^3, which exceeds the RG of 2 µg/m^3 (MEDEP Indoor Air Residential RAG of 2.1 µg/m^3).

All other detections of VOCs in indoor/ambient air samples were below the RGs and applicable screening criteria. As stated in Section 2.4.9 and shown in Table 1, the VI COCs at the Site are chloroform, naphthalene, and TCE. Chloroform was detected in the baseline indoor/ambient air at concentrations ranging from 0.142 to 0.776 µg/m^3, which is below the RG of 1.1 µg/m^3, and naphthalene was non-detect.

4.5.2 Baseline Sub-Slab Soil Vapor Analytical Results

Table 9 presents the analytical results for the five sub-slab soil vapor samples collected before the VIMS was installed and initiated. The results indicate that 37 individual VOCs were detected in the sub-slab soil vapor samples. All three VI COCs (chloroform, naphthalene, and TCE) were detected in the sub-slab soil vapor samples, but the concentrations did not exceed the MEDEP Residential Air RAGs after accounting for the attenuation factor of 0.03 between sub-slab vapor and indoor air that is recommended by the MEDEP RAGS (2021). It is noteworthy that 1,2-DCA was not detected in any of the baseline sub-slab soil vapor samples while (as described in Section 4.5.1 above and shown in Table 8) it was detected above the EPA Resident Air RSL in the three indoor three baseline indoor air samples.

4.6 Data Validation and Data Usability Assessment

This section discusses the data review and data validation processes that were applied to the subject data. It also summarizes the analytical data quality and data usability associated with the sampling and analyses in support of the subject LTMP. There were a total of 17 locations sampled (i.e., three indoor/ambient air sampling locations, four sub-slab soil vapor sampling locations, five groundwater sampling locations and five drinking water sampling locations) resulting in a total of nine air samples and 19 water samples including field QC samples (e.g., matrix spike/matrix spike duplicate [MS/MSD] and field duplicate [FD]).

These data were reviewed and validated to Stage 2a Validation Electronic and Manual (VEM) criteria via a combination of Automated Data Review (ADR) and professional judgement. The approach taken in the review of these data are consistent with the requirements contained in the project QAPP (VERINA, 2020b) and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance was not provided, results were evaluated in a conservative manner using professional judgement.

All of the data have been evaluated electronically based on electronic data deliverables (EDDs) submitted by the laboratories and manually through review of the hardcopy data and summary forms provided with the laboratory hardcopy data packages. Hardcopy data forms have also been compared to the electronic ADR output.

All QC elements associated with this data were reviewed by a project chemist in accordance with the requirements defined for the project. Additionally, the results of the ADR processes were reviewed and updated as applicable by the data review chemists. Furthermore, any QC elements that were not included in the electronic deliverable were reviewed manually. These reviews are documented in the respective data validation reports provided in Appendix G.

Sample collection was managed and directed by Verina Consulting Group, LLC, Bridgewater, NJ. Sample analyses were performed by Katahdin Analytical Services, Scarborough, ME, and Alpha Analytical,

Mansfield, MA. A review of the sample chain-of-custody forms and laboratory reports indicates that chain-of-custody was appropriately established, documented and maintained from sample collection through data reporting.

In addition, sample handling and preservation, sample condition upon receipt, and analytical hold time performance was acceptable for all samples.

4.6.1 Precision

Precision is measured through analysis of field and laboratory QC sample pairs, primarily field duplicates, MS/MSD pairs, and laboratory control sample/laboratory control sample duplicate (LCS/LCSD) pairs. Field sampling and laboratory precision were evaluated by calculating the RPD for target compounds spiked and/or detected in a parent sample and its duplicate. The resulting RPDs were evaluated against the measurement performance criteria presented on Worksheet #12 in the project QAPP (VERINA, 2020b) and documented in the respective data validation report(s) along with any limitations on the use of the data.

Field Sampling Precision

Groundwater Sampling – There were no data qualifications due to field sampling precision indicators. The field sampling precision for the groundwater sampling was within acceptable limits. It should be noted that the ADR process initially rejected (i.e., "X" qualified) the 36 analytes/results from the VOC analysis of the groundwater FD sample collected from MW-02 (sample ID MW-FD-SUMMER2021). However, during the data validation process, professional judgement was used to modify these X-qualified data to "J" qualified for positive results and "UJ" qualified for non-detected analytes. This decision was made due to the minor nature of the technical holding time performance deficiency. A "J" qualifier indicates that the analyte was detected and that the reported value should be considered estimated. A "UJ" qualifier indicates that the analyte was not detected and that the reported Limit of Detection (LOD) should be considered estimated.

Drinking Water Sampling – Although QC outliers for FD RPD (metals by inductively coupled plasma mass spectrometry [ICP/MS]) performance did result in some qualification of data, primarily as "J" qualified for positive results and "UJ" qualified for non-detected analytes, the field sampling precision for the drinking water sampling was within acceptable limits. It should be noted that the ADR process initially rejected (i.e., "X" qualified) 21 VOCs (three analytes/results in each of the seven samples) due to LCS and surrogate standard performance deficiencies. However, during the data validation process, professional judgement was used to modify these X-qualified data to "J" qualified for positive results and "UJ" qualified for non-detected analytes. This decision was made due to the minor nature of the LCS and surrogate standard performance deficiencies. A "J" qualifier indicates that the analyte was detected and that the reported value should be considered estimated. A "UJ" qualifier indicates that the analyte was not detected and that the reported LOD should be considered estimated.

Indoor/Ambient Air and Sub-Slab Soil Vapor Sampling – Although QC outliers for FD RPD (VOCs) performance did result in some qualification of data, primarily as "J" qualified for positive results and "UJ" qualified for non-detected analytes, the field sampling precision for the indoor/ambient air and sub-slab soil vapor sampling was within acceptable limits.

Analytical Laboratory Precision

Groundwater Analyses – Although QC outliers for LCS/LCSD RPD (VOCs) performance did result in some qualification of data, primarily as "J" qualified for positive results and "UJ" qualified for non-detected analytes, the laboratory precision for the groundwater analyses was within acceptable limits.

Drinking Water Analyses – There were no data qualifications due to laboratory precision indicators. The laboratory precision for the drinking water analyses was within acceptable limits.

Indoor/Ambient Air and Sub-Slab Soil Vapor Analyses – Although QC outliers for laboratory replicate RPD and LCS/LCSD RPD performance did result in some qualification of data, primarily as "J" qualified for positive results and "UJ" qualified for non-detected analytes, the laboratory precision for the indoor/ambient air and sub-slab soil vapor analyses was within acceptable limits.

4.6.2 Accuracy/Bias Contamination

Results for all laboratory method blanks and equipment blanks (EBs) were evaluated and compared to measurement performance criteria presented on Worksheet #12 of the project QAPP (VERINA, 2020b). Results for target compounds that exceed criteria were documented in the respective data validation report(s) along with any limitations on the use of the data.

Groundwater Analyses – Although minor QC deficiencies related to EB (metals ICP/MS and VOCs), lab blank (metals ICP/MS and VOCs), and trip blank (VOCs) performance did result in some qualification of data, primarily as "J" qualified for positive results and "UJ" qualified for non-detected analytes, the accuracy/bias contamination for the groundwater sample data were within acceptable limits.

Drinking Water Analyses – Although minor QC deficiencies related to lab blank (metals ICP/MS and VOCs) performance did result in qualification of additional data, primarily as "J" qualified for positive results and "UJ" qualified for non-detected analytes, the accuracy/bias contamination for the drinking water sample data were within acceptable limits.

Indoor/Ambient Air and Sub-Slab Soil Vapor Analyses – Although QC outliers for Laboratory Blank performance did result in some qualification of data, primarily as "J" qualified for positive results and "UJ" qualified for non-detected analytes, the accuracy/bias contamination for the air and soil vapor sample data were within acceptable limits.

4.6.3 Analytical Accuracy/Bias

Analytical accuracy and bias were evaluated through MSs, surrogate recoveries, and LCS analyses. Results were evaluated using measurement performance criteria presented on Worksheet #12 of the project QAPP (VERINA, 2020b) to determine if significant matrix interference is present that could impact the overall accuracy of the sample results. Conclusions about the analytical accuracy/bias of the analyses were documented in the respective data validation report(s) along with any limitations on the use of the data.

Groundwater Analyses – Although minor QC deficiencies related to MS recovery (PAHs selective ion monitoring [SIM] and metals ICP/MS), LCS recovery (VOCs), and surrogate recovery (VOCs) performance did result in some qualification of data, primarily as "J" qualified for positive results and "UJ" qualified for non-detected analytes, the analytical accuracy/bias for the groundwater sample data were within acceptable limits.

Drinking Water Analyses – Although minor QC deficiencies related to MS recovery (metals ICP/MS and VOCs) performance did result in qualification of additional data, primarily as "J" qualified for positive results and "UJ" qualified for non-detected analytes, the analytical accuracy/bias for the balance of the

drinking water sample data were within acceptable limits. It should be noted that the ADR process initially rejected (i.e., "X" qualified) 21 VOCs (three analytes/results in each of the seven samples) due to LCS and surrogate standard performance deficiencies. However, during the data validation process, professional judgement was used to modify these X-qualified data to "J" qualified for positive results and "UJ" qualified for non-detected analytes. This decision was made due to the minor nature of the LCS and surrogate standard performance deficiencies. A "J" qualifier indicates that the analyte was detected and that the reported value should be considered estimated. A "UJ" qualifier indicates that the analyte was not detected and that the reported LOD should be considered estimated.

Indoor/Ambient Air and Sub-Slab Soil Vapor Analyses – There were no data qualifications due to analytical accuracy/bias indicators. The analytical accuracy/bias for the indoor/ambient air and sub-slab soil vapor sample data were within acceptable limits.

4.6.4 Sensitivity

The results for target compounds were checked against applicable screening criteria. If the LOD for a specific analyte exceeded any of the corresponding screening criteria, a review was performed to determine if data quality objectives will be impacted and if so, what actions will be taken to remedy the issue.

A summary of the sensitivity of the analytical results for the groundwater samples collected in July 2021 and presented in Table 6 are summarized below by chemical class:

VPH

- All LODs for non-detect results were below applicable EPA screening limits with the exception of naphthalene at a LOD of 3.80 µg/L versus the EPA Tapwater RSL of 0.17 (MEDEP Residential Groundwater RAG of 1.2 µg/L). Non-detect results for C9-C10 aromatics were reported at a LOD of 75.0 µg/L with there being no EPA screening criteria (the MEDEP Residential Groundwater RAG is 71 µg/L).

Metals including mercury

- All LODs for non-detect results for metals were below applicable EPA screening limits. Non-detect results for arsenic were reported at a LOD of 4.00 versus the EPA MCL of 10 (MEDEP Residential Groundwater RAG of 0.52 µg/L), and thallium were reported at a LOD of 0.400 µg/L versus the EPA MCL of 2 µg/L (MEDEP Residential Groundwater RAG of 0.2 µg/L).

PAHs

- All LODs for non-detect results were below applicable EPA screening limits with the exception of benzo(a)anthracene at a maximum LOD of 0.110 µg/L versus the EPA Tapwater RSL of 0.03 µg/L (MEDEP Residential Groundwater RAG of 0.3 µg/L), benzo(a)pyrene at a maximum LOD of 0.110 µg/L versus the EPA Tapwater RSL of 0.025 µg/L (MEDEP Residential Groundwater RAG of 0.25 µg/L), and dibenz(a,h)anthracene at a maximum LOD of 0.110 µg/L versus the EPA Tapwater RSL of 0.025 µg/L (MEDEP Residential Groundwater RAG of 0.25 µg/L).

VOCs

- All LODs for non-detect results were below applicable EPA screening limits with the exception of vinyl chloride at a LOD of 1.00 µg/L versus the EPA MCL of 2 µg/L (MEDEP Residential Groundwater RAG of 0.19 µg/L). Non-detect results for 1,1,2-trichloroethane were reported at a

LOD of 0.500 µg/L versus the EPA MCL of 5 µg/L (MEDEP Residential Groundwater RAG of 0.42 µg/L).

A summary of the sensitivity of the analytical results for the drinking water samples collected in July 2021 and presented in Table 7 are summarized below by chemical class:

VPH

- All LODs for non-detect results were below applicable EPA screening limits with the exception of naphthalene at a LOD of 3.80 µg/L versus the EPA Tapwater RSL of 0.17 (MEDEP Residential Groundwater RAG of 1.2 µg/L). Non-detect results for C9-C10 aromatics were reported at a LOD of 75.0 µg/L with there being no EPA screening limit (MEDEP Residential Groundwater RAG of 71 µg/L).

Metals including mercury

- All LODs for non-detect results for metals were below applicable EPA screening limits. Non-detect results for arsenic were reported at a LOD of 4.00 versus the EPA MCL of 10 (MEDEP Residential Groundwater RAG of 0.52 µg/L), and thallium were reported at a LOD of 0.400 µg/L versus the EPA MCL of 2 µg/L (MEDEP Residential Groundwater RAG of 0.2 µg/L).

PAHs

- All LODs for non-detect results were below applicable EPA screening limits with the exception of benzo(a)anthracene at a maximum LOD of 0.0960 µg/L versus the EPA Tapwater RSL of 0.03 µg/L (MEDEP Residential Groundwater RAG of 0.3 µg/L), benzo(a)pyrene at a maximum LOD of 0.0960 µg/L versus the EPA Tapwater RSL of 0.025 µg/L (MEDEP Residential Groundwater RAG of 0.25 µg/L), and dibenz(a,h)anthracene at a maximum LOD of 0.0960 µg/L versus the EPA Tapwater RSL of 0.025 µg/L (MEDEP Residential Groundwater RAG of 0.25 µg/L).

VOCs

- All LODs for non-detect results were below applicable EPA screening limits with the exception of 1,2-dibromo-3-chloropropane at a LOD of 0.250 µg/L versus the EPA MCL of 0.2 µg/L (MEDEP Residential Groundwater RAG of 0.003 µg/L), 1,2-dibromoethane at a LOD of 0.250 µg/L versus the EPA MCL of 0.05 µg/L (MEDEP Residential Groundwater RAG of 0.075 µg/L), and naphthalene at a LOD of 0.500 µg/L versus the EPA Tapwater RSL of 0.17 µg/L (MEDEP Residential Groundwater RAG of 1.2 µg/L). The LOD for vinyl chloride of 0.500 µg/L did not exceed the EPA MCL of 2 µg/L (MEDEP Residential Groundwater RAG of 0.19 µg/L). Non-detect results for 1,2,3-trichloropropane were reported at a LOD of 0.250 µg/L with there being no EPA screening limit (MEDEP Residential Groundwater RAG of 0.008 µg/L).

A summary of the sensitivity of the analytical results for the indoor/ambient air samples collected in July 2021 and presented in Table 8 are summarized below by chemical class:

VOCs

- All LODs for non-detect results were below applicable EPA screening limits with the exception of 1,1,2,2-tetrachloroethane at a LOD of 0.137 µg/m^3 versus the EPA Resident Air RSL of 0.048 µg/m^3 (MEDEP Indoor Air Residential RAG of 0.48 µg/m^3), 1,2-dibromoethane at a LOD of 0.154 µg/m^3 versus the EPA Resident Air RSL of 0.0047 µg/m^3 (MEDEP Indoor Air Residential RAG of 0.047 µg/m^3), allyl chloride (3-chloropropene) at a LOD of 0.626 µg/m^3 versus the EPA Resident

Air RSL of 0.47 µg/m^3 (MEDEP Indoor Air Residential RAG of 1 µg/m^3), benzyl chloride at a LOD of 1.04 µg/m^3 versus the EPA Resident Air RSL of 0.057 µg/m^3 (MEDEP Indoor Air Residential RAG of 0.57 µg/m^3), bromodichloromethane at a LOD of 0.134 µg/m^3 versus the EPA Resident Air RSL of 0.076 µg/m^3 (MEDEP Indoor Air Residential RAG of 0.76 µg/m^3), hexachlorobutadiene at a LOD of 0.533 µg/m^3 versus the EPA Resident Air RSL of 0.13 µg/m^3 (MEDEP Indoor Air Residential RAG of 1.3 µg/m^3), and vinyl bromide at a LOD of 0.874 µg/m^3 versus the EPA Resident Air RSL of 0.17 µg/m^3 (MEDEP Indoor Air Residential RAG of 1.9 µg/m^3).

All LODs for target compounds in the sub-slab soil vapor samples were below applicable EPA screening criteria. In the 24 instances that a target compound was non-detect and the LOD exceeded applicable screening criteria in the groundwater, drinking water, and indoor/ambient air samples, at no point was the target compound one of the COCs identified in the Final DD (USACE, 2019) and in only a limited number of cases (i.e., 7 of 24) did the LOD exceed both EPA and MEDEP screening criteria (or one screening criteria if only one was available). For these reasons, the sensitivity of the analytical methods is considered adequate to meet the project data quality objectives.

4.6.5 Representativeness

The samples required for this project were collected using standardized procedures and at carefully selected locations designed to provide a true representation of Site conditions. Standardized, accepted analytical methods were used to ensure that accurate, reproducible data were generated. Field instruments and SOPs identified in the project QAPP (VERINA, 2020b) were used to collect field data including groundwater elevations and water quality data to characterize subsurface conditions during the sampling activities. There were no deviations from the planned approach with respect to sample collection and analyses that would have resulted in any impact to the overall project goals. The samples and associated data can be considered representative of the Site and Site conditions as intended without limitations on use except where explicitly stated elsewhere in this LTM report.

4.6.6 Completeness

Field completeness was calculated as the ratio of the number of samples received in acceptable condition by the laboratories to the number of samples planned to be collected. All of the samples that were planned to be collected and submitted, were collected and submitted. The field completeness was 100%.

Analytical completeness was calculated as the ratio of valid analytical data results reported to the total number of analytical results requested. Valid data includes both unqualified data and qualified but usable data. Overall, the analytical completeness was 100%.

Groundwater Data – A total of 125 results (20.87%) out of the 599 results (sample and field QC samples) reported are qualified based on review and zero results (0.00%) have been rejected or deemed as having a serious deficiency (X qualifier). It should be noted that the ADR process initially rejected (i.e., "X" qualified) 36 VOCs (all analytes/results for one sample) due to a technical holding time performance deficiency. However, during the data validation process, professional judgement was used to modify these X-qualified data to "J" qualified for positive results and "UJ" qualified for non-detected analytes. This decision was made due to the minor nature of the technical holding time performance deficiency. A "J" qualifier indicates that the analyte was detected and that the reported value should be considered estimated. A "UJ" qualifier indicates that the analyte was not detected and that the reported LOD should be considered

estimated. Sample results that are qualified with "J" or "UJ" qualifiers are usable with caution. The analytical completeness for groundwater samples collected during this LTM sampling event was 100%.

Drinking Water Data – A total of 443 results (61.87%) out of the 716 results (sample and field QC samples) reported are qualified based on review and zero results (0.00%) have been rejected or deemed as having a serious deficiency (X qualifier). It should be noted that the ADR process initially rejected (i.e., "X" qualified) 21 VOCs (three analytes/results in each of the seven samples) due to LCS and surrogate standard performance deficiencies. However, during the data validation process, professional judgement was used to modify these X-qualified data to "J" qualified for positive results and "UJ" qualified for non-detected analytes. This decision was made due to the minor nature of the LCS and surrogate standard performance deficiencies. A "J" qualifier indicates that the analyte was detected and that the reported value should be considered estimated. A "UJ" qualifier indicates that the analyte was not detected and that the reported LOD should be considered estimated. Sample results that are qualified with "J" or "UJ" qualifiers are usable with caution. The analytical completeness for drinking water samples collected during this LTM sampling event was 100%.

Indoor/Ambient Air and Sub-Slab Soil Vapor Data – A total of 41 results (7.12%) out of the 576 results (sample and field QC samples) reported are qualified based on review and zero results (0.00%) have been rejected or deemed as having a serious deficiency (X qualifier). The analytical completeness for indoor/ambient air and sub-slab soil vapor samples collected during this LTM sampling event was 100%.

Overall, a total of 552 results (29.19%) out of the 1891 results (sample and field QC samples) reported are qualified based on review and zero results (0%) have been rejected or deemed as having a serious deficiency (X qualifier). Overall, the analytical completeness for this LTM sampling event was 100%.

Performance for both field completeness and analytical completeness were within acceptable limits.

4.6.7 Comparability

Comparability is an evaluation to determine the confidence with which one data set can be compared to another data set. Data subject to established QC measures are considered to be more comparable than data generated without strict adherence to standardized collection procedures, analytical methods, and analytical detection limits. The procedures and specifications prescribed in the project QAPP (VERINA, 2020b) were consistently applied throughout project implementation with no known variances or deviations that would have adversely impacted the comparability of the resulting data set. The samples and associated data from this LTM sampling event can be considered to be comparable to other Site data collected and analyzed under a similar program.

5.0 Conclusions

5.1 CSM Evaluation

In general, the data collected during LTM activities in July 2021 are consistent with and support the established CSM described in Section 2.4. There are no changes in surface topography, Site geology, the sources and nature and extent of contamination, current/future receptors, or land use. The concentrations of TCE and other compounds analyzed in bedrock groundwater and drinking water samples are similar to those measured in historical samples (see Figure 5 and Figure 6, and Appendices E and F). The only data collected in July 2021 that could affect the CSM are 1) the elevated groundwater elevation measured in MW-01, and 2) water being noted in the six-inch sump below overburden well MW-06. Groundwater levels will continue to be measured in these wells under the LTM program outlined in the LTMP (G2S, 2022a) so additional data will be produced to assess whether the Site hydrogeology included in the CSM needs to be modified.

5.2 POET System Evaluation

The drinking water data collected in July 2021 indicate that the POET system at DW-01 is operating as designed and protecting Site receptors. TCE was only detected in the influent sample DW-01-INF at an estimated concentration of 2.90 J µg/L, which is below the RG (and EPA MCL) of 5 µg/L. No compounds were detected in any drinking water samples at or above EPA MCLs.

5.3 VIMS Evaluation

The VI data collected in July 2021 serve as the baseline dataset that will be used to evaluate VIMS system performance in the future. The indoor air data indicate that there were potential concerns associated with 1,2-DCA and TCE concentrations measured before the VIMS was installed and initiated because there were exceedances of the EPA Resident Air RSL and RG, respectively. These compounds as well as other VOCs will be monitored in 2022 under the LTM program being implemented at the Site (G2S, 2022a).

6.0 Recommendations

The following recommendations are made based on the results of the July 2021 LTM event:

- Continue LTM activities for groundwater and drinking water at LO-58 including initiation of sampling and analysis for MNA parameters in December 2022 as described in the draft project QAPP (G2S, 2022b). In addition, initiate LTM activities for indoor air and VI at the AMAC Building in 2022 to assess the effectiveness of the VIMS since it was installed and started up in July 2021.
- Utilize all data collected through 2022 to evaluate the protectiveness of the selected remedy, and to conduct a comprehensive optimization review of the monitoring program to identify adjustments that can be made in monitored parameters/constituents, locations, and frequency of sampling events while assuring safety of potential receptors. Present any recommended adjustments to the monitoring program in the 2022 Annual LTM Report so MEDEP has an opportunity to review, provide input, and concur with any changes prior to implementing them.
- Continue monitoring and maintenance of the POET system for drinking water well DW-01, which continues to be protective. Prior to the next anticipated change-out of GAC in 2025, consider the following to reduce the potential for inorganics such as arsenic and antimony to leach from bituminous coal-based GAC and to facilitate ease of maintenance:
    - Consult with GAC vendors regarding the ability to better filter out colloidal GAC particles from the unit discharges or ability to re-pipe system for backflushing to redistribute GAC particles to minimize colloidal particle escape.
    - Use virgin coconut shell-based GAC and filter vessels capable of being auto-backflushed on a timed basis.
- Continue monitoring groundwater levels in MW-06 to determine if it is a dry well before abandoning it including consideration of potentially deploying a pressure transducer into the well to monitor for groundwater more frequently and over a longer period than is possible during a single field event. In addition, continue monitoring groundwater levels in MW-01 to evaluate groundwater elevations in this well over time and in relation to other wells in the network.
- Finalize plans and proceed with the installation of two new bedrock monitoring wells (see Figure 2 and G2S, 2022a) in Spring 2023 to monitor for possible offsite migration of TCE (and daughter products) in groundwater to adjacent residences, and assess fracture networks and associated groundwater conditions between source areas and downgradient drinking water wells on adjacent residences (i.e., drinking water wells DW-03 and DW-04).

7.0 References

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Tables

Table 1. Summary of Remediation Goals

Medium	Source	RGs
Groundwater	MCL	Trichloroethene - 5 µg/L
Air	Risk	Chloroform - 1.1 µg/m^3 Naphthalene - 0.7 µg/m^3 Trichloroethene - 2 µg/m^3

Notes:
MCL = Maximum contaminant level
µg/L = Microgram per liter
µg/m^3 = Microgram per cubic meter
RGs = Remediation goals

Table 2. Summary of Maine Residential Remedial Action Guidelines

Contaminant	Maine Indoor Air RAG (µg/m^3)	Maine Groundwater RAG (µg/L)
C9-C10 Aromatic Hydrocarbons	52	71
Chloroform	1.2	2.2
1,2-Dichloroethane	1.1	1.7
Manganese	0.052	430
1-Methylnaphthalene	--	11
Naphthalene	0.83	1.2
Trichloroethene	2.1	2.8

Notes:
µg/L = Microgram per liter
µg/m^3 = Microgram per cubic meter
RAG = Remedial Action Guideline

Table 3. Well Assessment Summary

Monitoring Well	Date	PID Reading (ppm)	Total Depth[2] (ft btoc)	Depth to Water (ft btoc)	Well Condition[3]
MW-01	7/19/2021	1.0	144.74	27.71	Good
MW-02	7/19/2021	0.4	61.64	41.52	Good
MW-03	7/19/2021	0.2	48.84	29.52	Good
MW-04	7/19/2021	0.0	82.88[4]	49.48	Missing inner well cap
MW-05	7/19/2021	0.0	79.51	34.76	Good

Monitoring Well	Date	PID Reading (ppm)	Total Depth[2] (ft btoc)	Depth to Water (ft btoc)	Well Condition[3]
MW-06[1]	7/19/2021	0.0	16.85	16.71	Good

Notes:
(1) Overburden monitoring well MW-06 contains a six-inch sump below the well.
(2) Total depth measurements taken following well sampling on 20 and 21 July 2021, except for MW-06.
(3) Good well condition indicates that the well was properly capped and locked upon arrival and no obstructions other than dedicated tubing (e.g., debris or sedimentation) were observed within the well casing/borehole.
(4) An error occurred in the field when measuring total depth of MW-04 so the depth provided is based on the measurement collected in December 2020.
ft btoc = Feet below top of casing
PID = Photoionization detector
ppm = Parts per million

Table 4. Water Quality Data

Location ID	Date/Time	DO (mg/L)	ORP (mv)	pH	Specific Conductivity (µS/cm)	Temperature (°C)	Turbidity (NTU)
MW-01	07/21/21	11.22	283.1	6.91	372.9	10.2	8.11
MW-02	07/20/21	10.73	359.6	7.55	517	11.0	0.58
MW-03	07/20/21	9.74	357.7	7.55	444	9.6	1.85
MW-04	07/21/21	8.4	244.2	7.8	597.8	8.4	4.71
MW-05	07/21/21	0.2	-39.1	7.74	572.1	8.3	2.66

Notes:
°C = Degrees Celsius
DO = Dissolved oxygen
µS/cm = Microsiemens per centimeter
mg/L = Milligrams per liter
mV = Millivolts
NTU = Nephelometric turbidity units
ORP = Oxidation reduction potential

Table 5. Groundwater Elevation Data

Location ID	MPE[1]	Date	Depth to Groundwater (ft BMP)	Groundwater Elevation[1]
MW-01	574.51	8/7/2019	42.12	532.39
	574.51	11/12/2019	30.48	544.03
	574.51	06/09/2020	36.35	538.16
	574.51	12/14/2020	28.82	545.69
	574.51	07/19/2021	27.71	546.8
MW-02	585.14	8/7/2019	45.41	539.73
	585.14	11/12/2019	38.36	546.78
	585.14	06/09/2020	41.17	543.97
	585.14	12/14/2020	35.09	550.05
	585.14	07/19/2021	41.52	543.62
MW-03	566.58	8/7/2019	33.78	532.8
	566.58	11/12/2019	22.38	544.2
	566.58	06/09/2020	28.03	538.55
	566.58	12/14/2020	20.48	546.1
	566.58	07/19/2021	29.52	537.06
MW-04	601.13	8/7/2019	53.57	547.56
	601.13	11/12/2019	40.5	560.63
	601.13	06/09/2020	48.93	552.2
	601.13	12/14/2020	39.97	561.16
	601.13	07/19/2021	49.48	551.65
MW-05	571.48	8/7/2019	38.81	532.67
	571.48	11/12/2019	27.47	544.01
	571.48	06/09/2020	33.19	538.29
	571.48	12/14/2020	25.74	545.74
	571.48	07/19/2021	34.76	536.72
MW-06	538.14	8/7/2019	dry	dry
	538.14	11/12/2019	dry	dry
	538.14	06/09/2020	dry	dry
	538.14	12/14/2020	dry	dry
	538.14	07/19/2021	16.71[2]	521.43[2]

Notes:
(1) All elevations are reported in feet related to North American Vertical Datum of 1988.
(2) Water encountered in 6-inch sump installed below MW-06.
ft BMP = Feet below measurement point
MPE = Measurement point elevation

Table 6. Bedrock Groundwater Analytical Results (July 2021)

						Location	MW-01	MW-02		MW-03	MW-04	MW-05
						Sample ID	MW-01-SUMMER2021	MW-02-SUMMER2021	MW-FD-SUMMER2021 (FD)	MW-03-SUMMER2021	MW-04-SUMMER2021	MW-05-SUMMER2021
						Sampling Date	21-Jul-21	20-Jul-21	20-Jul-21	20-Jul-21	21-Jul-21	20-Jul-21
Chemical	**Matrix**	**Screening Limit Type**	**Limit**	**Screening Limit Type**	**Limit**							
Volatile Petroleum Hydrocarbons (µg/L)												
Benzene	Aqueous	2019 May EPA MCL	5	2021 May Maine Residential Groundwater RAG	4.6		2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
C5-C8 VPH Aliphatic, Adjusted for Target Analytes, Surrogates and Internal Standards	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	180		75.0 U	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U
C9-C10 VPH, Aromatic	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	71		*75.0 U*	*75.0 U*	*75.0 U*	*75.0 U*	*75.0 U*	**76.0 J**
C9-C12 VPH Aliphatic, Adjusted for Target Analytes, Surrogates and Internal Standards	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	350		75.0 U	75.0 U	75.0 U	75.0 U	75.0 U	**82.0 J**
Ethylbenzene	Aqueous	2019 May EPA MCL	700	2021 May Maine Residential Groundwater RAG	15		3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
m,p-Xylene	Aqueous	2019 May EPA MCL	10000	2021 May Maine Residential Groundwater RAG	190		7.50 U	7.50 U	7.50 U	7.50 U	7.50 U	7.50 U
Methyl tert-butyl ether (MTBE)	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	140		3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
Naphthalene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	.17	2021 May Maine Residential Groundwater RAG	1.2		*3.80 U*	*3.80 U*	*3.80 U*	*3.80 U*	*3.80 U*	*3.80 U*
o-Xylene	Aqueous	2019 May EPA MCL	10000	2021 May Maine Residential Groundwater RAG	190		3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
Toluene	Aqueous	2019 May EPA MCL	1000	2021 May Maine Residential Groundwater RAG	1100		3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
Mercury (µg/L)												
Mercury	Aqueous	2019 May EPA MCL	2	2021 May Maine Residential Groundwater RAG	0.63		0.100 U	0.100 U	0.0170 J	0.100 U	0.100 U	0.100 U
Metals (µg/L)												
Antimony	Aqueous	2019 May EPA MCL	6	2021 May Maine Residential Groundwater RAG	7.8		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	0.500 U
Arsenic	Aqueous	2019 May EPA MCL	10	2021 May Maine Residential Groundwater RAG	0.52		*4.00 U*	*4.00 U*	*4.00 U*	*4.00 U*	*4.00 U*	*4.00 U*
Beryllium	Aqueous	2019 May EPA MCL	4	2021 May Maine Residential Groundwater RAG	25		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Cadmium	Aqueous	2019 May EPA MCL	5	2021 May Maine Residential Groundwater RAG	9.2		0.0630 J	0.0690 J	0.0390 J	0.0740 J	0.0530 J	0.739 J
Calcium	Aqueous	-	-	-	-		67500	95000	88400	75300	93500	103000
Chromium	Aqueous	2019 May EPA MCL	100	-	-		5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
Copper	Aqueous	2019 May EPA MCL	1300	2021 May Maine Residential Groundwater RAG	800		3.29 J	3.49 J	3.84 J	3.82 J	3.57 J	6.26 J

Table 6. Bedrock Groundwater Analytical Results (July 2021) (continued)

					Location	MW-01	MW-02		MW-03	MW-04	MW-05
					Sample ID	MW-01-SUMMER2021	MW-02-SUMMER2021	MW-FD-SUMMER2021 (FD)	MW-03-SUMMER2021	MW-04-SUMMER2021	MW-05-SUMMER2021
					Sampling Date	21-Jul-21	20-Jul-21	20-Jul-21	20-Jul-21	21-Jul-21	20-Jul-21
Chemical	**Matrix**	**Screening Limit Type**	**Limit**	**Screening Limit Type**	**Limit**						
Lead	Aqueous	2019 May EPA MCL	15	2021 May Maine Residential Groundwater RAG	5	1.00 U	1.00 U	0.500 U	1.00 U	1.00 U	1.00 U
Manganese	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	430	**2.30 J**	2.00 U	2.00 U	2.00 U	2.00 U	**621 J**
Nickel	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	390	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Selenium	Aqueous	2019 May EPA MCL	50	2021 May Maine Residential Groundwater RAG	100	3.00 U	**0.260 J**	3.00 U	3.00 U	3.00 U	3.00 U
Silver	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	94	0.400 U	0.400 U	0.400 U	0.400 U	0.400 U	0.400 U
Thallium	Aqueous	2019 May EPA MCL	2	2021 May Maine Residential Groundwater RAG	0.2	**0.0990 J**	**0.0920 J**	*0.400 U*	*0.400 U*	*0.400 U*	*0.400 U*
Zinc	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	6000	**4.80 J**	8.00 U	8.00 U	8.00 U	8.00 U	**6.50 J**
PAHs (µg/L)											
1-Methylnaphthalene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	1.1	2021 May Maine Residential Groundwater RAG	11	0.110 U	0.100 U	0.100 U	0.110 U	0.0930 U	**0.160 J**
2-Methylnaphthalene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	36	2021 May Maine Residential Groundwater RAG	36	0.110 U	0.100 U	0.100 U	0.110 U	0.0930 U	0.0930 U
Acenaphthene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	530	2021 May Maine Residential Groundwater RAG	540	0.110 U	0.100 U	0.100 U	0.110 U	0.0930 U	**0.180 J**
Acenaphthylene	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	520	0.110 U	0.100 U	0.100 U	0.110 U	0.0930 U	0.0930 U
Anthracene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	1800	2021 May Maine Residential Groundwater RAG	1800	0.110 U	0.100 U	0.100 U	0.110 U	0.0930 U	**0.0470 J**
Benzo(a)anthracene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	.03	2021 May Maine Residential Groundwater RAG	0.3	*0.110 U*	*0.100 U*	*0.100 U*	*0.110 U*	*0.0930 U*	*0.0930 U*
Benzo(a)pyrene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	.025	2021 May Maine Residential Groundwater RAG	0.25	*0.110 UJ*	*0.100 U*	*0.100 U*	*0.110 U*	*0.0930 U*	*0.0930 U*
Benzo(b)fluoranthene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	.25	2021 May Maine Residential Groundwater RAG	2.5	0.110 U	0.100 U	0.100 U	0.110 U	0.0930 U	0.0930 U
Benzo(g,h,i)perylene	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	600	0.110 UJ	0.100 U	0.100 U	0.110 U	0.0930 U	0.0930 U
Benzo(k)fluoranthene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	2.5	2021 May Maine Residential Groundwater RAG	25	0.110 UJ	0.100 U	0.100 U	0.110 U	0.0930 U	0.0930 U
Chrysene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	25	2021 May Maine Residential Groundwater RAG	250	0.110 U	0.100 U	0.100 U	0.110 U	0.0930 U	0.0930 U
Dibenz(a,h)anthracene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	.025	2021 May Maine Residential Groundwater RAG	0.25	*0.110 UJ*	*0.100 U*	*0.100 U*	*0.110 U*	*0.0930 U*	*0.0930 U*
Fluoranthene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	800	2021 May Maine Residential Groundwater RAG	800	0.110 U	0.100 U	0.100 U	0.110 U	0.0930 U	0.0930 U
Fluorene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	290	2021 May Maine Residential Groundwater RAG	290	0.110 U	0.100 U	0.100 U	0.110 U	0.0930 U	**0.440**

Table 6. Bedrock Groundwater Analytical Results (July 2021) (continued)

						Location	**MW-01**	**MW-02**		**MW-03**	**MW-04**	**MW-05**
						Sample ID	**MW-01-SUMMER2021**	**MW-02-SUMMER2021**	**MW-FD-SUMMER2021 (FD)**	**MW-03-SUMMER2021**	**MW-04-SUMMER2021**	**MW-05-SUMMER2021**
						Sampling Date	**21-Jul-21**	**20-Jul-21**	**20-Jul-21**	**20-Jul-21**	**21-Jul-21**	**20-Jul-21**
Chemical	**Matrix**	**Screening Limit Type**	**Limit**	**Screening Limit Type**	**Limit**							
Indeno(1,2,3-c,d)pyrene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	.25	2021 May Maine Residential Groundwater RAG	2.5		0.110 UJ	0.100 U	0.100 U	0.110 U	0.0930 U	0.0930 U
Naphthalene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	.17	2021 May Maine Residential Groundwater RAG	1.2		0.110 U	0.100 U	0.100 U	0.110 U	0.0930 U	0.0930 U
Phenanthrene	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	180		0.110 U	0.100 U	0.100 U	0.110 U	0.0930 U	**0.240**
Pyrene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	120	2021 May Maine Residential Groundwater RAG	120		0.110 U	0.100 U	0.100 U	0.110 U	0.0930 U	0.0930 U
VOCs (µg/L)												
1,1,1-Trichloroethane	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	8000		0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U
1,1,2,2-Tetrachloroethane	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	0.76		0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U
1,1,2-Trichloroethane	Aqueous	2019 May EPA MCL	5	2021 May Maine Residential Groundwater RAG	0.42		*0.500 U*	*0.500 U*	*0.500 UJ*	*0.500 U*	*0.500 U*	*0.500 U*
1,1-Dichloroethane	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	28		0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U
1,1-Dichloroethene	Aqueous	2019 May EPA MCL	7	2021 May Maine Residential Groundwater RAG	290		0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U
1,2-Dichloroethane	Aqueous	2019 May EPA MCL	5	2021 May Maine Residential Groundwater RAG	1.7		0.500 U	0.500 U	0.500 UJ	0.500 U	**0.270 J**	0.500 U
1,2-Dichloropropane	Aqueous	2019 May EPA MCL	5	2021 May Maine Residential Groundwater RAG	8.3		0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U
2-Butanone (MEK)	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	5600		2.50 U	2.50 U	2.50 UJ	2.50 U	2.50 U	2.50 U
2-Hexanone	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	38		2.50 U	2.50 U	2.50 UJ	2.50 U	2.50 U	2.50 U
4-Methyl-2-pentanone (MIBK)	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	6300		2.50 U	2.50 U	2.50 UJ	2.50 U	2.50 U	2.50 U
Acetone	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	14000		2.50 U	2.50 U	2.50 UJ	2.50 U	2.50 U	2.50 U
Benzene	Aqueous	2019 May EPA MCL	5	2021 May Maine Residential Groundwater RAG	4.6		0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U
Bromodichloromethane	Aqueous	2019 May EPA MCL	80	2021 May Maine Residential Groundwater RAG	1.3		0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U
Bromoform	Aqueous	2019 May EPA MCL	80	2021 May Maine Residential Groundwater RAG	33		0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U
Bromomethane	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	7.6		1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U
Carbon disulfide	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	810		0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U
Carbon Tetrachloride	Aqueous	2019 May EPA MCL	5	2021 May Maine Residential Groundwater RAG	4.6		0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U

Table 6. Bedrock Groundwater Analytical Results (July 2021) (continued)

						Location	**MW-01**	**MW-02**		**MW-03**	**MW-04**	**MW-05**
						Sample ID	**MW-01-SUMMER2021**	**MW-02-SUMMER2021**	**MW-FD-SUMMER2021 (FD)**	**MW-03-SUMMER2021**	**MW-04-SUMMER2021**	**MW-05-SUMMER2021**
						Sampling Date	**21-Jul-21**	**20-Jul-21**	**20-Jul-21**	**20-Jul-21**	**21-Jul-21**	**20-Jul-21**
Chemical	**Matrix**	**Screening Limit Type**	**Limit**	**Screening Limit Type**	**Limit**							
Chlorobenzene	Aqueous	2019 May EPA MCL	100	2021 May Maine Residential Groundwater RAG	78		0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U
Chloroethane	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	21000		1.00 U	1.00 U	1.00 UJ	1.00 U	**0.710 J**	1.00 U
Chloroform	Aqueous	2019 May EPA MCL	80	2021 May Maine Residential Groundwater RAG	2.2		0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U
Chloromethane	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	190		1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U
cis-1,2-Dichloroethene	Aqueous	2019 May EPA MCL	70	2021 May Maine Residential Groundwater RAG	35		0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U
cis-1,3-Dichloropropene	Aqueous	-	-	-	-		0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U
Dibromochloromethane	Aqueous	2019 May EPA MCL	80	2021 May Maine Residential Groundwater RAG	8.7		0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U
Ethylbenzene	Aqueous	2019 May EPA MCL	700	2021 May Maine Residential Groundwater RAG	15		0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U
m,p-Xylene	Aqueous	2019 May EPA MCL	10000	2021 May Maine Residential Groundwater RAG	190		1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U	1.00 U
Methylene chloride	Aqueous	2019 May EPA MCL	5	2021 May Maine Residential Groundwater RAG	110		2.50 U	2.50 U	2.50 UJ	2.50 U	2.50 U	5.00 U
o-Xylene	Aqueous	2019 May EPA MCL	10000	2021 May Maine Residential Groundwater RAG	190		0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U
Styrene	Aqueous	2019 May EPA MCL	100	2021 May Maine Residential Groundwater RAG	1200		0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U
Tetrachloroethene (PCE)	Aqueous	2019 May EPA MCL	5	2021 May Maine Residential Groundwater RAG	41		0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U
Toluene	Aqueous	2019 May EPA MCL	1000	2021 May Maine Residential Groundwater RAG	1100		0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U
trans-1,2-Dichloroethene	Aqueous	2019 May EPA MCL	100	2021 May Maine Residential Groundwater RAG	68		0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U
trans-1,3-Dichloropropene	Aqueous	-	-	-	-		0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	0.500 U
Trichloroethene (TCE)	Aqueous	Final DD Remediation Goal	5	2021 May Maine Residential Groundwater RAG	2.8		0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	**0.310 J**
Vinyl chloride	Aqueous	2019 May EPA MCL	2	2021 May Maine Residential Groundwater RAG	0.19		*1.00 U*	*1.00 U*	*1.00 UJ*	*1.00 U*	*1.00 U*	*1.00 U*
Xylenes, Total	Aqueous	2019 May EPA MCL	10000	2021 May Maine Residential Groundwater RAG	190		1.50 U	1.50 U	1.50 UJ	1.50 U	1.50 U	1.50 U

Notes:
Detected results appear in bold font, underlined results exceed Maine Residential Groundwater RAG, and undetected results with LODs exceeding one or both screening limits shown in italics.
FD = Field duplicate.
µg/L = Micrograms per liter.
J = The reported result is an estimated value.
U = Not detected; the compound/analyte was analyzed for, but not detected above the LOD.
UJ = Target analyte was not detected above the method detection limit; however, the reported detection limit is approximate and may or may not represent the actual LOD.

Table 7. Drinking Water Analytical Results (July 2021)

					Location	DW-01-EFF	DW-01-INF	DW-01-MID	DW-02R-EFF	DW-02R-INF	
					Sample ID	DW-01-EFF-SUMMER2021	DW-01-INF-SUMMER2021	DW-01-MID-SUMMER2021	DW-02R-EFF-SUMMER2021	DW-02R-INF-SUMMER2021	DW-FD-SUMMER2021 (FD)
					Sampling Date	20-Jul-21	20-Jul-21	20-Jul-21	21-Jul-21	21-Jul-21	21-Jul-21
Chemical	**Matrix**	**Screening Limit Type**	**Limit**	**Screening Limit Type**	**Limit**						
Volatile Petroleum Hydrocarbons (µg/L)											
Benzene	Aqueous	2019 May EPA MCL	5	2021 May Maine Residential Groundwater RAG	4.6	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
C5-C8 VPH Aliphatic, Adjusted for Target Analytes, Surrogates and Internal Standards	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	180	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U
C9-C10 VPH, Aromatic	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	71	*75.0 U*	*75.0 U*	*75.0 U*	*75.0 U*	*75.0 U*	*75.0 U*
C9-C12 VPH Aliphatic, Adjusted for Target Analytes, Surrogates and Internal Standards	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	350	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U
Ethylbenzene	Aqueous	2019 May EPA MCL	700	2021 May Maine Residential Groundwater RAG	15	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
m,p-Xylene	Aqueous	2019 May EPA MCL - Total Xylenes	10000	2021 May Maine Residential Groundwater RAG	190	7.50 U	7.50 U	7.50 U	7.50 U	7.50 U	7.50 U
Methyl tert-butyl ether (MTBE)	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	140	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
Naphthalene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	.17	2021 May Maine Residential Groundwater RAG	1.2	*3.80 U*	*3.80 U*	*3.80 U*	*3.80 U*	*3.80 U*	*3.80 U*
o-Xylene	Aqueous	2019 May EPA MCL - Total Xylenes	10000	2021 May Maine Residential Groundwater RAG	190	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
Toluene	Aqueous	2019 May EPA MCL	1000	2021 May Maine Residential Groundwater RAG	1100	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
Mercury (µg/L)											
Mercury	Aqueous	2019 May EPA MCL	2	2021 May Maine Residential Groundwater RAG	0.63	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U
Metals (µg/L)											
Antimony	Aqueous	2019 May EPA MCL	6	2021 May Maine Residential Groundwater RAG	7.8	0.500 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Arsenic	Aqueous	2019 May EPA MCL	10	2021 May Maine Residential Groundwater RAG	0.52	*4.00 U*	*4.00 U*	*4.00 U*	*4.00 U*	*4.00 U*	*4.00 U*
Beryllium	Aqueous	2019 May EPA MCL	4	2021 May Maine Residential Groundwater RAG	25	1.00 U	0.200 U	1.00 U	0.200 U	1.00 U	1.00 U
Cadmium	Aqueous	2019 May EPA MCL	5	2021 May Maine Residential Groundwater RAG	9.2	**0.0390 J**	0.200 U	**0.0830 J**	0.200 U	**0.0370 J**	**0.0460 J**
Calcium	Aqueous	-	-	-	-	**83800**	**88500**	**89300**	**59600**	**59600**	**58400**
Chromium	Aqueous	2019 May EPA MCL	100	-	-	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U

Table 7. Drinking Water Analytical Results (July 2021) (Continued)

						Location	**DW-01-EFF**	**DW-01-INF**	**DW-01-MID**	**DW-02R-EFF**	**DW-02R-INF**	
						Sample ID	**DW-01-EFF-SUMMER2021**	**DW-01-INF-SUMMER2021**	**DW-01-MID-SUMMER2021**	**DW-02R-EFF-SUMMER2021**	**DW-02R-INF-SUMMER2021**	**DW-FD-SUMMER2021 (FD)**
						Sampling Date	**20-Jul-21**	**20-Jul-21**	**20-Jul-21**	**21-Jul-21**	**21-Jul-21**	**21-Jul-21**
Chemical	**Matrix**	**Screening Limit Type**	**Limit**	**Screening Limit Type**	**Limit**							
Copper	Aqueous	2019 May EPA MCL	1300	2021 May Maine Residential Groundwater RAG	800		**13.7**	**7.84**	**11.8**	**21.4**	**12.2 J**	**18.5 J**
Lead	Aqueous	2019 May EPA MCL	15	2021 May Maine Residential Groundwater RAG	5		1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	**2.48 J**
Manganese	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	430		2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
Nickel	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	390		**4.64**	2.00 U	**2.18**	2.00 U	2.00 U	**2.98**
Selenium	Aqueous	2019 May EPA MCL	50	2021 May Maine Residential Groundwater RAG	100		3.00 U	3.00 U	**0.300 J**	3.00 U	3.00 U	**0.220 J**
Silver	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	94		0.400 U	0.400 U	0.400 U	0.400 U	0.400 U	0.400 U
Thallium	Aqueous	2019 May EPA MCL	2	2021 May Maine Residential Groundwater RAG	0.2		*0.400 U*	*0.400 U*	**0.140 J**	*0.400 U*	*0.400 U*	*0.400 U*
Zinc	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	6000		**35.0**	**6.00 J**	**35.0**	**21.0**	**7.60 J**	**19.0 J**
PAHs (µg/L)												
1-Methylnaphthalene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	1.1	2021 May Maine Residential Groundwater RAG	11		0.0930 U	0.0930 U	0.0930 U	0.0960 U	0.0950 U	0.0950 U
2-Methylnaphthalene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	36	2021 May Maine Residential Groundwater RAG	36		0.0930 U	0.0930 U	0.0930 U	0.0960 U	0.0950 U	0.0950 U
Acenaphthene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	530	2021 May Maine Residential Groundwater RAG	540		0.0930 U	0.0930 U	0.0930 U	0.0960 U	0.0950 U	0.0950 U
Acenaphthylene	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	520		0.0930 U	0.0930 U	0.0930 U	0.0960 U	0.0950 U	0.0950 U
Anthracene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	1800	2021 May Maine Residential Groundwater RAG	1800		0.0930 U	0.0930 U	0.0930 U	0.0960 U	0.0950 U	0.0950 U
Benzo(a)anthracene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	.03	2021 May Maine Residential Groundwater RAG	0.3		*0.0930 U*	*0.0930 U*	*0.0930 U*	*0.0960 U*	*0.0950 U*	*0.0950 U*
Benzo(a)pyrene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	.025	2021 May Maine Residential Groundwater RAG	0.25		*0.0930 U*	*0.0930 U*	*0.0930 U*	*0.0960 U*	*0.0950 U*	*0.0950 U*
Benzo(b)fluoranthene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	.25	2021 May Maine Residential Groundwater RAG	2.5		0.0930 U	0.0930 U	0.0930 U	0.0960 U	0.0950 U	0.0950 U
Benzo(g,h,i)perylene	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	600		0.0930 U	0.0930 U	0.0930 U	0.0960 U	0.0950 U	0.0950 U
Benzo(k)fluoranthene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	2.5	2021 May Maine Residential Groundwater RAG	25		0.0930 U	0.0930 U	0.0930 U	0.0960 U	0.0950 U	0.0950 U
Chrysene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	25	2021 May Maine Residential Groundwater RAG	250		0.0930 U	0.0930 U	0.0930 U	0.0960 U	0.0950 U	0.0950 U
Dibenz(a,h)anthracene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	.025	2021 May Maine Residential Groundwater RAG	0.25		*0.0930 U*	*0.0930 U*	*0.0930 U*	*0.0960 U*	*0.0950 U*	*0.0950 U*
Fluoranthene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	800	2021 May Maine Residential Groundwater RAG	800		0.0930 U	0.0930 U	0.0930 U	0.0960 U	0.0950 U	0.0950 U

Table 7. Drinking Water Analytical Results (July 2021) (Continued)

					Location	**DW-01-EFF**	**DW-01-INF**	**DW-01-MID**	**DW-02R-EFF**	**DW-02R-INF**	
					Sample ID	**DW-01-EFF-SUMMER2021**	**DW-01-INF-SUMMER2021**	**DW-01-MID-SUMMER2021**	**DW-02R-EFF-SUMMER2021**	**DW-02R-INF-SUMMER2021**	**DW-FD-SUMMER2021 (FD)**
					Sampling Date	**20-Jul-21**	**20-Jul-21**	**20-Jul-21**	**21-Jul-21**	**21-Jul-21**	**21-Jul-21**
Chemical	**Matrix**	**Screening Limit Type**	**Limit**	**Screening Limit Type**	**Limit**						
Fluorene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	290	2021 May Maine Residential Groundwater RAG	290	0.0930 U	0.0930 U	0.0930 U	0.0960 U	0.0950 U	0.0950 U
Indeno(1,2,3-c,d)pyrene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	.25	2021 May Maine Residential Groundwater RAG	2.5	0.0930 U	0.0930 U	0.0930 U	0.0960 U	0.0950 U	0.0950 U
Naphthalene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	.17	2021 May Maine Residential Groundwater RAG	1.2	0.0930 U	0.0930 U	0.0930 U	0.0960 U	0.0950 U	0.0950 U
Phenanthrene	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	180	0.0930 U	0.0930 U	0.0930 U	0.0960 U	0.0950 U	0.0950 U
Pyrene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	120	2021 May Maine Residential Groundwater RAG	120	0.0930 U	0.0930 U	0.0930 U	0.0960 U	0.0950 U	0.0950 U
VOCs (µg/L)											
1,1,1,2-Tetrachloroethane	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	5.7	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
1,1,1-Trichloroethane	Aqueous	2019 May EPA MCL	200	2021 May Maine Residential Groundwater RAG	8000	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
1,1,2,2-Tetrachloroethane	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	0.76	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
1,1,2-Trichloroethane	Aqueous	2019 May EPA MCL	5	2021 May Maine Residential Groundwater RAG	0.42	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
1,1-Dichloroethane	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	28	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
1,1-Dichloroethene	Aqueous	2019 May EPA MCL	7	2021 May Maine Residential Groundwater RAG	290	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
1,1-Dichloropropene	Aqueous	-	-	-	-	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
1,2,3-Trichlorobenzene	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	7	0.500 UJ	0.500 UJ	0.500 UJ	0.500 UJ	0.500 UJ	0.500 UJ
1,2,3-Trichloropropane	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	0.008	*0.250 UJ*	*0.250 UJ*	*0.250 UJ*	*0.250 UJ*	*0.250 UJ*	*0.250 UJ*
1,2,4-Trichlorobenzene	Aqueous	2019 May EPA MCL	70	2021 May Maine Residential Groundwater RAG	4	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
1,2,4-Trimethylbenzene	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	56	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
1,2-Dibromo-3-chloropropane	Aqueous	2019 May EPA MCL	.2	2021 May Maine Residential Groundwater RAG	0.003	*0.250 UJ*	*0.250 UJ*	*0.250 UJ*	*0.250 UJ*	*0.250 UJ*	*0.250 UJ*
1,2-Dibromoethane (EDB)	Aqueous	2019 May EPA MCL	.05	2021 May Maine Residential Groundwater RAG	0.075	*0.250 UJ*	*0.250 UJ*	*0.250 UJ*	*0.250 UJ*	*0.250 UJ*	*0.250 UJ*
1,2-Dichlorobenzene	Aqueous	2019 May EPA MCL	600	2021 May Maine Residential Groundwater RAG	300	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
1,2-Dichloroethane	Aqueous	2019 May EPA MCL	5	2021 May Maine Residential Groundwater RAG	1.7	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
1,2-Dichloropropane	Aqueous	2019 May EPA MCL	5	2021 May Maine Residential Groundwater RAG	8.3	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ

Table 7. Drinking Water Analytical Results (July 2021) (Continued)

					Location	DW-01-EFF	DW-01-INF	DW-01-MID	DW-02R-EFF	DW-02R-INF	
					Sample ID	DW-01-EFF-SUMMER2021	DW-01-INF-SUMMER2021	DW-01-MID-SUMMER2021	DW-02R-EFF-SUMMER2021	DW-02R-INF-SUMMER2021	DW-FD-SUMMER2021 (FD)
					Sampling Date	20-Jul-21	20-Jul-21	20-Jul-21	21-Jul-21	21-Jul-21	21-Jul-21
Chemical	**Matrix**	**Screening Limit Type**	**Limit**	**Screening Limit Type**	**Limit**						
1,3,5-Trimethylbenzene	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	60	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
1,3-Dichlorobenzene	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	300	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
1,3-Dichloropropane	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	370	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
1,4-Dichlorobenzene	Aqueous	2019 May EPA MCL	75	2021 May Maine Residential Groundwater RAG	4.8	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
2,2-Dichloropropane	Aqueous	-	-	-	-	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
2-Butanone (MEK)	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	5600	2.50 UJ	2.50 UJ	2.50 UJ	2.50 UJ	2.50 UJ	2.50 UJ
2-Chlorotoluene	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	240	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
2-Hexanone	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	38	2.50 UJ	2.50 UJ	2.50 UJ	2.50 UJ	2.50 UJ	2.50 UJ
4-Chlorotoluene	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	250	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
4-Methyl-2-pentanone (MIBK)	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	6300	2.50 UJ	2.50 UJ	2.50 UJ	2.50 UJ	2.50 UJ	2.50 UJ
Acetone	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	14000	**2.40 J**	2.50 UJ	2.50 UJ	2.50 UJ	2.50 UJ	2.50 UJ
Benzene	Aqueous	2019 May EPA MCL	5	2021 May Maine Residential Groundwater RAG	4.6	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
Bromobenzene	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	62	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
Bromochloromethane	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	83	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
Bromodichloromethane	Aqueous	2019 May EPA MCL	80	2021 May Maine Residential Groundwater RAG	1.3	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
Bromoform	Aqueous	2019 May EPA MCL	80	2021 May Maine Residential Groundwater RAG	33	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
Bromomethane	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	7.6	0.500 UJ	0.500 UJ	0.500 UJ	0.500 UJ	0.500 UJ	0.500 UJ
Carbon disulfide	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	810	0.500 UJ	0.500 UJ	0.500 UJ	0.500 UJ	0.500 UJ	0.500 UJ
Carbon Tetrachloride	Aqueous	2019 May EPA MCL	5	2021 May Maine Residential Groundwater RAG	4.6	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
Chlorobenzene	Aqueous	2019 May EPA MCL	100	2021 May Maine Residential Groundwater RAG	78	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
Chloroethane	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	21000	0.500 UJ	0.500 UJ	0.500 UJ	0.500 UJ	0.500 UJ	0.500 UJ
Chloroform	Aqueous	2019 May EPA MCL	80	2021 May Maine Residential Groundwater RAG	2.2	0.250 UJ	0.500 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ

Table 7. Drinking Water Analytical Results (July 2021) (Continued)

						Location	**DW-01-EFF**	**DW-01-INF**	**DW-01-MID**	**DW-02R-EFF**	**DW-02R-INF**	
						Sample ID	**DW-01-EFF-SUMMER2021**	**DW-01-INF-SUMMER2021**	**DW-01-MID-SUMMER2021**	**DW-02R-EFF-SUMMER2021**	**DW-02R-INF-SUMMER2021**	**DW-FD-SUMMER2021 (FD)**
						Sampling Date	**20-Jul-21**	**20-Jul-21**	**20-Jul-21**	**21-Jul-21**	**21-Jul-21**	**21-Jul-21**
Chemical	**Matrix**	**Screening Limit Type**	**Limit**	**Screening Limit Type**	**Limit**							
Chloromethane	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	190		1.00 UJ	1.00 UJ	1.00 UJ	1.00 UJ	1.00 UJ	1.00 UJ
cis-1,2-Dichloroethene	Aqueous	2019 May EPA MCL	70	2021 May Maine Residential Groundwater RAG	35		0.250 UJ	**0.740 J**	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
cis-1,3-Dichloropropene	Aqueous	-	-	-	-		0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
Cumene	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	450		0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
Dibromochloromethane	Aqueous	2019 May EPA MCL	80	2021 May Maine Residential Groundwater RAG	8.7		0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
Dibromomethane	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	8.3		0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
Dichlorodifluoromethane	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	200		0.500 UJ	0.500 UJ	0.500 UJ	0.500 UJ	0.500 UJ	0.500 UJ
Ethylbenzene	Aqueous	2019 May EPA MCL	700	2021 May Maine Residential Groundwater RAG	15		0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
Hexachlorobutadiene	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	1.4		0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
m,p-Xylene	Aqueous	2019 May EPA MCL - Total Xylenes	10000	2021 May Maine Residential Groundwater RAG	190		0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
Methyl tert-butyl ether (MTBE)	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	140		0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
Methylene chloride	Aqueous	2019 May EPA MCL	5	2021 May Maine Residential Groundwater RAG	110		2.50 UJ	1.20 UJ	1.20 UJ	2.50 UJ	2.50 UJ	2.50 UJ
Naphthalene	Aqueous	2019 Nov EPA Tapwater (THQ 1.0)	.17	2021 May Maine Residential Groundwater RAG	1.2		*0.500 UJ*	*0.500 UJ*	*0.500 UJ*	*0.500 UJ*	*0.500 UJ*	*0.500 UJ*
n-Butylbenzene	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	1000		0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
n-Propylbenzene	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	660		0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
o-Xylene	Aqueous	2019 May EPA MCL - Total Xylenes	10000	2021 May Maine Residential Groundwater RAG	190		0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
p-Cymene (p-Isopropyltoluene)	Aqueous	-	-	-	-		0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
sec-Butylbenzene	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	2000		0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
Styrene	Aqueous	2019 May EPA MCL	100	2021 May Maine Residential Groundwater RAG	1200		0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
Tetrachloroethene (PCE)	Aqueous	2019 May EPA MCL	5	2021 May Maine Residential Groundwater RAG	41		0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
Toluene	Aqueous	2019 May EPA MCL	1000	2021 May Maine Residential Groundwater RAG	1100		0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
trans-1,2-Dichloroethene	Aqueous	2019 May EPA MCL	100	2021 May Maine Residential Groundwater RAG	68		0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ

Table 7. Drinking Water Analytical Results (July 2021) (Continued)

					Location	**DW-01-EFF**	**DW-01-INF**	**DW-01-MID**	**DW-02R-EFF**	**DW-02R-INF**	
					Sample ID	**DW-01-EFF-SUMMER2021**	**DW-01-INF-SUMMER2021**	**DW-01-MID-SUMMER2021**	**DW-02R-EFF-SUMMER2021**	**DW-02R-INF-SUMMER2021**	**DW-FD-SUMMER2021 (FD)**
					Sampling Date	**20-Jul-21**	**20-Jul-21**	**20-Jul-21**	**21-Jul-21**	**21-Jul-21**	**21-Jul-21**
Chemical	**Matrix**	**Screening Limit Type**	**Limit**	**Screening Limit Type**	**Limit**						
trans-1,3-Dichloropropene	Aqueous	-	-	-	-	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
Trichloroethene (TCE)	Aqueous	Final DD Remediation Goal	5	2021 May Maine Residential Groundwater RAG	2.8	0.250 UJ	**2.90 J**	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
Trichlorofluoromethane	Aqueous	-	-	2021 May Maine Residential Groundwater RAG	5200	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ	0.250 UJ
Vinyl chloride	Aqueous	2019 May EPA MCL	2	2021 May Maine Residential Groundwater RAG	0.19	*0.500 UJ*	*0.500 UJ*	*0.500 UJ*	*0.500 UJ*	*0.500 UJ*	*0.500 UJ*

Notes:
Detected results appear in bold font, underlined results exceed Maine Residential Groundwater RAG, and undetected results with LODs exceeding one or both screening limits shown in italics.
FD = Field duplicate.
µg/L = Micrograms per liter.
J = The reported result is an estimated value.
U = Not detected; the compound/analyte was analyzed for, but not detected above the LOD.
UJ = Target analyte was not detected above the method detection limit; however, the reported detection limit is approximate and may or may not represent the actual LOD.

Table 8. Indoor/Ambient Air Analytical Results (July 2021)

					Location	AA-01	IA-01		IA-02
					Sample ID	AA-01-SUMMER2021	IA-01-SUMMER2021	IA-FD-SUMMER2021 (FD)	IA-02-SUMMER2021
					Sampling Date	24-Jul-21	24-Jul-21	24-Jul-21	24-Jul-21
Chemical	**Matrix**	**Screening Limit Type**	**Limit**	**Screening Limit Type**	**Limit**				
VOCs (µg/m³)									
1,1,1-Trichloroethane	Air	2019 May EPA Resident Air (THQ 1.0)	5200	2021 May Maine Indoor Air Residential RAG	5200	0.109 U	0.109 U	0.109 U	**0.0980 J**
1,1,2,2-Tetrachloroethane	Air	2019 May EPA Resident Air (THQ 1.0)	.048	2021 May Maine Indoor Air Residential RAG	0.48	*0.137 U*	*0.137 U*	*0.137 U*	*0.137 U*
1,1,2-Trichloro-1,2,2-trifluoroethane	Air	2019 May EPA Resident Air (THQ 1.0)	5200	2021 May Maine Indoor Air Residential RAG	5200	**0.452**	**0.475**	**0.422**	**0.391**
1,1,2-Trichloroethane	Air	2019 May EPA Resident Air (THQ 1.0)	.18	2021 May Maine Indoor Air Residential RAG	0.21	0.109 U	0.109 U	0.109 U	0.109 U
1,1-Dichloroethane	Air	2019 May EPA Resident Air (THQ 1.0)	1.8	2021 May Maine Indoor Air Residential RAG	18	0.0810 U	0.0810 U	0.0810 U	0.0810 U
1,1-Dichloroethene	Air	2019 May EPA Resident Air (THQ 1.0)	210	2021 May Maine Indoor Air Residential RAG	210	0.0790 U	0.0790 U	0.0790 U	0.0790 U
1,2,4-Trichlorobenzene	Air	2019 May EPA Resident Air (THQ 1.0)	2.1	2021 May Maine Indoor Air Residential RAG	2.1	0.371 U	0.371 U	0.371 U	0.371 U
1,2,4-Trimethylbenzene	Air	2019 May EPA Resident Air (THQ 1.0)	63	2021 May Maine Indoor Air Residential RAG	63	0.0980 U	**0.403**	**0.452**	**0.457**
1,2-Dibromoethane (EDB)	Air	2019 May EPA Resident Air (THQ 1.0)	.0047	2021 May Maine Indoor Air Residential RAG	0.047	*0.154 U*	*0.154 U*	*0.154 U*	*0.154 U*
1,2-Dichlorobenzene	Air	2019 May EPA Resident Air (THQ 1.0)	210	2021 May Maine Indoor Air Residential RAG	210	0.120 U	0.120 U	0.120 U	0.120 U
1,2-Dichloroethane	Air	2019 May EPA Resident Air (THQ 1.0)	.11	2021 May Maine Indoor Air Residential RAG	1.1	0.0810 U	**0.271**	**0.223**	**0.251**
1,2-Dichloropropane	Air	2019 May EPA Resident Air (THQ 1.0)	.76	2021 May Maine Indoor Air Residential RAG	4.2	0.0920 U	0.0920 U	**0.102**	**0.0920**
1,2-Dichlorotetrafluoroethane	Air	-	-	-	-	**0.0910 J**	**0.105 J**	**0.0840 J**	**0.0980 J**
1,3,5-Trimethylbenzene	Air	2019 May EPA Resident Air (THQ 1.0)	63	2021 May Maine Indoor Air Residential RAG	63	0.0980 U	**0.123**	**0.138**	**0.143**
1,3-Butadiene	Air	2019 May EPA Resident Air (THQ 1.0)	.094	2021 May Maine Indoor Air Residential RAG	0.94	0.0440 U	**0.0240 J**	0.0440 U	**0.0290 J**
1,3-Dichlorobenzene	Air	-	-	-	-	0.120 U	0.120 U	**0.0960 J**	0.120 U
1,4-Dichlorobenzene	Air	2019 May EPA Resident Air (THQ 1.0)	.26	2021 May Maine Indoor Air Residential RAG	2.6	0.120 U	0.120 U	0.120 U	**0.0600 J**
1,4-Dioxane	Air	2019 May EPA Resident Air (THQ 1.0)	.56	2021 May Maine Indoor Air Residential RAG	5.6	0.360 U	**0.400**	**0.436**	**0.515**
2,2,4-Trimethylpentane	Air	-	-	-	-	**0.0650 J**	0.934 U	0.934 U	0.934 U
2-Butanone (MEK)	Air	2019 May EPA Resident Air (THQ 1.0)	5200	2021 May Maine Indoor Air Residential RAG	5200	**0.271 J**	**2.50**	**2.37**	**2.34**
2-Hexanone	Air	2019 May EPA Resident Air (THQ 1.0)	31	2021 May Maine Indoor Air Residential RAG	31	0.820 U	**0.352 J**	**0.385 J**	**0.389 J**
4-Ethyltoluene	Air	-	-	-	-	0.0980 U	**0.0840 J**	**0.0890 J**	**0.0930 J**
4-Methyl-2-pentanone (MIBK)	Air	2019 May EPA Resident Air (THQ 1.0)	3100	2021 May Maine Indoor Air Residential RAG	3100	2.05 U	**0.352 J**	**0.303 J**	**0.283 J**
Acetone	Air	2019 May EPA Resident Air (THQ 1.0)	32000	2021 May Maine Indoor Air Residential RAG	32000	**4.25**	**49.4**	**43.9**	**49.9**
Allyl chloride (3-Chloropropene)	Air	2019 May EPA Resident Air (THQ 1.0)	.47	2021 May Maine Indoor Air Residential RAG	1	*0.626 U*	*0.626 U*	*0.626 U*	*0.626 U*
Benzene	Air	2019 May EPA Resident Air (THQ 1.0)	.36	2021 May Maine Indoor Air Residential RAG	3.6	**0.163 J**	**0.323**	**0.294 J**	**0.310 J**
Benzyl chloride	Air	2019 May EPA Resident Air (THQ 1.0)	.057	2021 May Maine Indoor Air Residential RAG	0.57	*1.04 U*	*1.04 U*	*1.04 U*	*1.04 U*
Bromodichloromethane	Air	2019 May EPA Resident Air (THQ 1.0)	.076	2021 May Maine Indoor Air Residential RAG	0.76	*0.134 U*	*0.134 U*	*0.134 U*	*0.134 U*
Bromoform	Air	2019 May EPA Resident Air (THQ 1.0)	2.6	2021 May Maine Indoor Air Residential RAG	26	0.207 U	0.207 U	0.207 U	0.207 U
Bromomethane	Air	2019 May EPA Resident Air (THQ 1.0)	5.2	2021 May Maine Indoor Air Residential RAG	5.2	**0.0580 J**	**0.0390 J**	0.0780 U	**0.0470 J**
Carbon disulfide	Air	2019 May EPA Resident Air (THQ 1.0)	730	2021 May Maine Indoor Air Residential RAG	730	**0.178 J**	**0.181 J**	**0.153 J**	**0.178 J**
Carbon Tetrachloride	Air	2019 May EPA Resident Air (THQ 1.0)	.47	2021 May Maine Indoor Air Residential RAG	4.7	**0.390**	**0.440**	**0.390**	**0.409**
Chlorobenzene	Air	2019 May EPA Resident Air (THQ 1.0)	52	2021 May Maine Indoor Air Residential RAG	52	0.461 U	0.461 U	0.461 U	0.461 U
Chloroethane	Air	2019 May EPA Resident Air (THQ 1.0)	10000	2021 May Maine Indoor Air Residential RAG	10000	0.264 U	0.264 U	**0.0530 J**	**0.0420 J**
Chloroform	Air	Final DD Remediation Goal	1.1	2021 May Maine Indoor Air Residential RAG	1.2	**0.142**	**0.776**	**0.664**	**0.708**
Chloromethane	Air	2019 May EPA Resident Air (THQ 1.0)	94	2021 May Maine Indoor Air Residential RAG	94	**0.793**	**1.44**	**1.26**	**1.42**
cis-1,2-Dichloroethene	Air	-	-	2021 May Maine Indoor Air Residential RAG	830	0.0790 U	0.0790 U	0.0790 U	0.0790 U

Table 8. Indoor/Ambient Air Analytical Results (July 2021) (continued)

						Location	AA-01	IA-01		IA-02
						Sample ID	AA-01-SUMMER2021	IA-01-SUMMER2021	IA-FD-SUMMER2021 (FD)	IA-02-SUMMER2021
						Sampling Date	24-Jul-21	24-Jul-21	24-Jul-21	24-Jul-21
Chemical	**Matrix**	**Screening Limit Type**	**Limit**	**Screening Limit Type**	**Limit**					
cis-1,3-Dichloropropene	Air	-	-	-	-		0.0910 U	0.0910 U	0.0910 U	0.0910 U
Cumene	Air	2019 May EPA Resident Air (THQ 1.0)	420	2021 May Maine Indoor Air Residential RAG	420		0.983 U	**0.216 J**	**0.216 J**	**0.202 J**
Cyclohexane	Air	2019 May EPA Resident Air (THQ 1.0)	6300	2021 May Maine Indoor Air Residential RAG	6300		**0.0480 J**	**0.189 J**	**0.203 J**	**0.244 J**
Dibromochloromethane	Air	-	-	-	-		0.170 U	0.170 U	0.170 U	0.170 U
Dichlorodifluoromethane	Air	2019 May EPA Resident Air (THQ 1.0)	100	2021 May Maine Indoor Air Residential RAG	100		**2.14**	**2.24**	**1.91**	**1.94**
Ethanol	Air	-	-	-	-		**22.6 J**	**7990 J**	**10400 J**	**8740 J**
Ethylbenzene	Air	2019 May EPA Resident Air (THQ 1.0)	1.1	2021 May Maine Indoor Air Residential RAG	11		0.0870 U	**0.400**	**0.417**	**0.417**
Hexachlorobutadiene	Air	2019 May EPA Resident Air (THQ 1.0)	.13	2021 May Maine Indoor Air Residential RAG	1.3		*0.533 U*	*0.533 U*	*0.533 U*	*0.533 U*
m,p-Xylene	Air	-	-	2021 May Maine Indoor Air Residential RAG	100		**0.104 J**	**1.28**	**1.39**	**1.29**
Methyl tert-butyl ether (MTBE)	Air	2019 May EPA Resident Air (THQ 1.0)	11	2021 May Maine Indoor Air Residential RAG	110		0.721 U	0.721 U	0.721 U	0.721 U
Methylene chloride	Air	2019 May EPA Resident Air (THQ 1.0)	100	2021 May Maine Indoor Air Residential RAG	630		1.74 U	1.74 U	1.74 U	1.74 U
Naphthalene	Air	Final DD Remediation Goal	0.7	2021 May Maine Indoor Air Residential RAG	0.83		0.262 U	0.262 U	0.262 U	0.262 U
n-Heptane	Air	2019 May EPA Resident Air (THQ 1.0)	420	-	-		0.820 U	**0.369 J**	**0.393 J**	**0.418 J**
o-Xylene	Air	2019 May EPA Resident Air (THQ 1.0)	100	2021 May Maine Indoor Air Residential RAG	100		**0.0520 J**	**0.599**	**0.630**	**0.552**
Propylene	Air	2019 May EPA Resident Air (THQ 1.0)	3100	-	-		0.861 U	0.861 U	0.861 U	0.861 U
Styrene	Air	2019 May EPA Resident Air (THQ 1.0)	1000	2021 May Maine Indoor Air Residential RAG	1000		**0.0810 J**	**1.39**	**1.39**	**1.95**
tert-Butyl alcohol	Air	-	-	-	-		**0.0640 J**	**9.64**	**8.25**	**9.40**
Tetrachloroethene (PCE)	Air	2019 May EPA Resident Air (THQ 1.0)	11	2021 May Maine Indoor Air Residential RAG	42		**0.136**	**0.0810 J**	**0.0950 J**	0.136 U
Tetrahydrofuran	Air	2019 May EPA Resident Air (THQ 1.0)	2100	2021 May Maine Indoor Air Residential RAG	2100		**0.242 J**	**1.13 J**	**1.04 J**	**0.702 J**
Toluene	Air	2019 May EPA Resident Air (THQ 1.0)	5200	2021 May Maine Indoor Air Residential RAG	5200		**0.226**	**1.48**	**1.82**	**1.70**
trans-1,2-Dichloroethene	Air	-	-	2021 May Maine Indoor Air Residential RAG	42		0.0790 U	0.0790 U	0.0790 U	0.0790 U
trans-1,3-Dichloropropene	Air	-	-	-	-		0.0910 U	0.0910 U	0.0910 U	0.0910 U
Trichloroethene (TCE)	Air	Final DD Remediation Goal	2	2021 May Maine Indoor Air Residential RAG	2.1		0.107 U	**3.48**	**3.42**	**4.27**
Trichlorofluoromethane	Air	-	-	-	-		**1.14**	**29.7**	**25.1**	**24.2**
Vinyl acetate	Air	2019 May EPA Resident Air (THQ 1.0)	210	2021 May Maine Indoor Air Residential RAG	210		3.52 U	3.52 U	3.52 U	3.52 U
Vinyl bromide	Air	2019 May EPA Resident Air (THQ 1.0)	.088	2021 May Maine Indoor Air Residential RAG	1.9		*0.874 U*	*0.874 U*	*0.874 U*	*0.874 U*
Vinyl chloride	Air	2019 May EPA Resident Air (THQ 1.0)	.17	2021 May Maine Indoor Air Residential RAG	1.7		0.0510 U	0.0510 U	0.0510 U	0.0510 U

Notes:
Detected results appear in bold font, shaded results exceed Final DD RG or Federal screening limit, underlined results exceed Maine Indoor Air Residential RAG, and undetected results with LODs exceeding one or both screening limits shown in italics.
FD = Field duplicate.
$\mu g/m^3$ = Micrograms per cubic meter.
J = The reported result is an estimated value.
U = Not detected; the compound/analyte was analyzed for, but not detected above the LOD.
UJ = Target analyte was not detected above the method detection limit; however, the reported detection limit is approximate and may or may not represent the actual LOD.

Table 9. Sub-Slab Soil Vapor Analytical Results (July 2021)

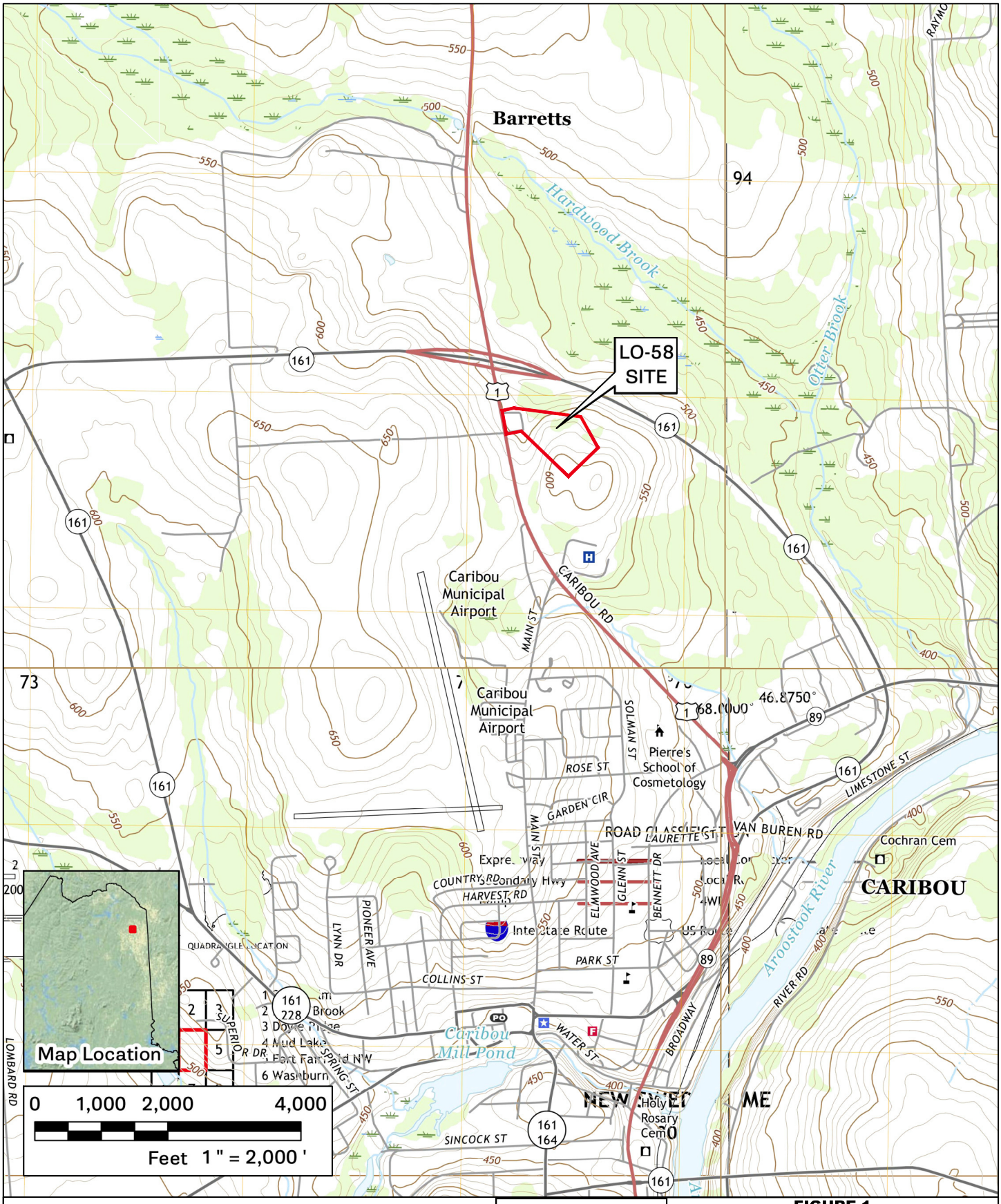
			Location	SV-01	SV-02		SV-03	SV-04
			Sample ID	SV-01-SUMMER2021	SV-02-SUMMER2021	SV-FD-SUMMER2021 (FD)	SV-03-SUMMER2021	SV-04-SUMMER2021
			Sampling Date	24-Jul-21	24-Jul-21	24-Jul-21	24-Jul-21	24-Jul-21
Chemical	**Matrix**	**Screening Limit Type[1]**	**Limit**					
VOCs (µg/m³)								
1,1,1-Trichloroethane	Gas	2021 May Maine Sub-Slab Residential Air RAG	173333	0.109 U	**0.186**	**0.0550 J**	**1.16**	**13.0**
1,1,2,2-Tetrachloroethane	Gas	2021 May Maine Sub-Slab Residential Air RAG	16	0.137 U	0.137 U	0.137 U	0.196 U	0.172 U
1,1,2-Trichloro-1,2,2-trifluoroethane	Gas	2021 May Maine Sub-Slab Residential Air RAG	173333	**0.399**	**0.406**	**0.414**	**0.569**	**0.671**
1,1,2-Trichloroethane	Gas	2021 May Maine Sub-Slab Residential Air RAG	7	0.109 U	0.109 U	0.109 U	0.156 U	0.136 U
1,1-Dichloroethane	Gas	2021 May Maine Sub-Slab Residential Air RAG	600	0.0810 U	0.0810 U	0.0810 U	0.116 U	0.101 U
1,1-Dichloroethene	Gas	2021 May Maine Sub-Slab Residential Air RAG	7000	0.0790 U	0.0790 U	0.0790 U	0.113 U	0.0990 U
1,2,4-Trichlorobenzene	Gas	2021 May Maine Sub-Slab Residential Air RAG	70	0.371 U	0.371 U	0.371 U	0.530 U	0.464 U
1,2,4-Trimethylbenzene	Gas	2021 May Maine Sub-Slab Residential Air RAG	2100	**0.152**	**0.826 J**	**0.216 J**	**6.78**	**5.11**
1,2-Dibromoethane (EDB)	Gas	2021 May Maine Sub-Slab Residential Air RAG	2	0.154 U	0.154 U	0.154 U	0.220 U	0.192 U
1,2-Dichlorobenzene	Gas	2021 May Maine Sub-Slab Residential Air RAG	7000	0.120 U	0.120 U	0.120 U	0.172 U	0.150 U
1,2-Dichloroethane	Gas	2021 May Maine Sub-Slab Residential Air RAG	37	0.0810 U	0.0810 U	0.0810 U	0.116 U	0.101 U
1,2-Dichloropropane	Gas	2021 May Maine Sub-Slab Residential Air RAG	140	0.0920 U	0.0920 U	0.0920 U	0.132 U	0.116 U
1,2-Dichlorotetrafluoroethane	Gas	-	-	**0.0770 J**	**0.0910 J**	**0.0770 J**	**0.140 J**	0.437 U
1,3,5-Trimethylbenzene	Gas	2021 May Maine Sub-Slab Residential Air RAG	2100	0.0980 U	**0.143**	0.0980 U	**1.99**	**1.01**
1,3-Butadiene	Gas	2021 May Maine Sub-Slab Residential Air RAG	31	0.0440 U	**0.0330 J**	0.0440 U	0.0630 U	0.0550 U
1,3-Dichlorobenzene	Gas	-	-	**0.210**	**0.721 J**	**0.277 J**	**1.44**	**2.34**
1,4-Dichlorobenzene	Gas	2021 May Maine Sub-Slab Residential Air RAG	87	0.120 U	0.120 U	0.120 U	0.172 U	0.150 U
1,4-Dioxane	Gas	2021 May Maine Sub-Slab Residential Air RAG	187	0.360 U	0.360 U	0.360 U	**0.237 J**	**0.378 J**
2,2,4-Trimethylpentane	Gas	-	-	0.934 U	0.934 U	0.934 U	1.34 U	1.17 U
2-Butanone (MEK)	Gas	2021 May Maine Sub-Slab Residential Air RAG	173333	**0.363 J**	**0.563 J**	**0.316 J**	**3.30**	**4.90**
2-Hexanone	Gas	2021 May Maine Sub-Slab Residential Air RAG	1033	0.820 U	**0.0820 J**	0.820 U	**0.545 J**	**1.00 J**
4-Ethyltoluene	Gas	-	-	0.0980 U	**0.0980 J**	0.0980 U	**0.541**	**0.718**
4-Methyl-2-pentanone (MIBK)	Gas	2021 May Maine Sub-Slab Residential Air RAG	103333	**0.115 J**	**0.123 J**	2.05 U	**0.257 J**	**0.688 J**
Acetone	Gas	2021 May Maine Sub-Slab Residential Air RAG	1066667	**1.99 J**	**3.06**	**1.07 J**	**19.8**	**71.3**
Allyl chloride (3-Chloropropene)	Gas	2021 May Maine Sub-Slab Residential Air RAG	33	0.626 U	0.626 U	0.626 U	0.895 U	0.783 U
Benzene	Gas	2021 May Maine Sub-Slab Residential Air RAG	120	**0.115 J**	**0.102 J**	**0.0930 J**	**0.850**	**0.444**
Benzyl chloride	Gas	2021 May Maine Sub-Slab Residential Air RAG	19	1.04 U	1.04 U	1.04 U	1.48 U	1.29 U
Bromodichloromethane	Gas	2021 May Maine Sub-Slab Residential Air RAG	25	0.134 U	**0.281 J**	0.134 UJ	0.192 U	**0.100 J**
Bromoform	Gas	2021 May Maine Sub-Slab Residential Air RAG	867	0.207 U	0.207 U	0.207 U	0.296 U	0.258 U
Bromomethane	Gas	2021 May Maine Sub-Slab Residential Air RAG	173	0.0780 U	0.0780 U	0.0780 U	0.111 U	0.0970 U
Carbon disulfide	Gas	2021 May Maine Sub-Slab Residential Air RAG	24333	**0.0780 J**	**0.0590 J**	**0.0840 J**	**0.0930 J**	**0.187 J**
Carbon Tetrachloride	Gas	2021 May Maine Sub-Slab Residential Air RAG	157	**0.421**	**0.384**	**0.403**	**0.530**	**0.165**
Chlorobenzene	Gas	2021 May Maine Sub-Slab Residential Air RAG	1733	0.461 U	0.461 U	0.461 U	0.659 U	0.576 U
Chloroethane	Gas	2021 May Maine Sub-Slab Residential Air RAG	333333	0.264 U	0.264 U	0.264 U	0.377 U	0.330 U

Table 9. Sub-Slab Soil Vapor Analytical Results (July 2021) (continued)

				Location	SV-01	SV-02		SV-03	SV-04
				Sample ID	SV-01-SUMMER2021	SV-02-SUMMER2021	SV-FD-SUMMER2021 (FD)	SV-03-SUMMER2021	SV-04-SUMMER2021
				Sampling Date	24-Jul-21	24-Jul-21	24-Jul-21	24-Jul-21	24-Jul-21
Chemical	**Matrix**	**Screening Limit Type[1]**	**Limit**						
Chloroform	Gas	2021 May Maine Sub-Slab Residential Air RAG	40		**0.327**	**14.0 J**	**0.337 J**	**1.01**	**0.232**
Chloromethane	Gas	2021 May Maine Sub-Slab Residential Air RAG	3133		**0.434**	**0.254 J**	0.413 U	0.591 U	0.516 U
cis-1,2-Dichloroethene	Gas	2021 May Maine Sub-Slab Residential Air RAG	27667		0.0790 U	0.0790 U	0.0790 U	0.113 U	0.0990 U
cis-1,3-Dichloropropene	Gas	-	-		0.0910 U	0.0910 U	0.0910 U	0.130 U	0.113 U
Cumene	Gas	2021 May Maine Sub-Slab Residential Air RAG	14000		0.983 U	**0.0590 J**	0.983 U	**6.69**	**0.215 J**
Cyclohexane	Gas	2021 May Maine Sub-Slab Residential Air RAG	210000		**0.537 J**	**0.461 J**	**0.647 J**	**0.358 J**	**0.310 J**
Dibromochloromethane	Gas	-	-		0.170 U	0.170 U	0.170 U	0.244 U	0.213 U
Dichlorodifluoromethane	Gas	2021 May Maine Sub-Slab Residential Air RAG	3333		**3.39**	**2.23**	**3.48**	**4.41**	**3.07**
Ethanol	Gas	-	-		**78.4 J**	**117 J**	**65.4 J**	**580 J**	**520 J**
Ethylbenzene	Gas	2021 May Maine Sub-Slab Residential Air RAG	367		**0.0570 J**	**0.139**	**0.0650 J**	**0.830**	**0.756**
Hexachlorobutadiene	Gas	2021 May Maine Sub-Slab Residential Air RAG	43		0.533 U	0.533 U	0.533 U	0.762 U	0.667 U
m,p-Xylene	Gas	2021 May Maine Sub-Slab Residential Air RAG	3333		**0.174**	**0.504**	**0.217**	**2.42**	**2.61**
Methyl tert-butyl ether (MTBE)	Gas	2021 May Maine Sub-Slab Residential Air RAG	3667		0.721 U	0.721 U	0.721 U	1.03 U	0.901 U
Methylene chloride	Gas	2021 May Maine Sub-Slab Residential Air RAG	21000		1.74 U	1.74 U	1.74 U	**3.61**	2.17 U
Naphthalene	Gas	2021 May Maine Sub-Slab Residential Air RAG	28		0.262 U	**0.199 J**	0.262 U	**0.949**	**0.760**
n-Heptane	Gas	-	-		**0.0780 J**	**0.131 J**	**0.0620 J**	**0.287 J**	**0.418 J**
o-Xylene	Gas	2021 May Maine Sub-Slab Residential Air RAG	3333		**0.0830 J**	**0.243**	**0.100**	**1.23**	**1.13**
Propylene	Gas	-	-		0.861 U	0.861 U	0.861 U	1.23 U	1.08 U
Styrene	Gas	2021 May Maine Sub-Slab Residential Air RAG	33333		**0.111**	**0.379 J**	**0.132 J**	**2.32**	**0.681**
tert-Butyl alcohol	Gas	-	-		**0.203 J**	**0.406 J**	**0.146 J**	**15.2**	**15.1**
Tetrachloroethene (PCE)	Gas	2021 May Maine Sub-Slab Residential Air RAG	1400		**0.149**	**0.170**	**0.149**	**2.14**	**0.279**
Tetrahydrofuran	Gas	2021 May Maine Sub-Slab Residential Air RAG	70000		**0.849 J**	**0.737 J**	**0.289 J**	**3.48**	**5.43**
Toluene	Gas	2021 May Maine Sub-Slab Residential Air RAG	173333		**0.249**	**0.369**	**0.173 J**	**8.22**	**2.03**
trans-1,2-Dichloroethene	Gas	2021 May Maine Sub-Slab Residential Air RAG	1400		0.0790 U	0.0790 U	0.0790 U	0.113 U	0.0990 U
trans-1,3-Dichloropropene	Gas	-	-		0.0910 U	0.0910 U	0.0910 U	0.130 U	0.113 U
Trichloroethene (TCE)	Gas	2021 May Maine Sub-Slab Residential Air RAG	70		**2.43**	**8.33 J**	**2.75 J**	**199**	**8.92**
Trichlorofluoromethane	Gas	-	-		**174**	**83.7 J**	**197 J**	**5.96**	**4.75**
Vinyl acetate	Gas	2021 May Maine Sub-Slab Residential Air RAG	7000		3.52 U	3.52 U	3.52 U	5.04 U	4.40 U
Vinyl bromide	Gas	2021 May Maine Sub-Slab Residential Air RAG	63		0.874 U	0.874 U	0.874 U	1.25 U	1.09 U
Vinyl chloride	Gas	2021 May Maine Sub-Slab Residential Air RAG	57		0.0510 U	0.0510 U	0.0510 U	0.0730 U	**0.0990**

Notes:
(1) As per the MEDEP Remedial Action Guidelines for Contaminated Sites (2021), an attenuation factor of 0.03 has been applied to the Indoor Air Residential RAGs to arrive at RAGs that are comparable to sub-slab soil vapor concentrations.
Detected results appear in bold font and underlined results exceed Maine Sub-Slab Residential Air RAG.
FD = Field duplicate.
$\mu g/m^3$ = Micrograms per cubic meter.
J = The reported result is an estimated value.
U = Not detected; the compound/analyte was analyzed for, but not detected above the LOD.
UJ = Target analyte was not detected above the method detection limit; however, the reported detection limit is approximate and may or may not represent the actual LOD.

Figures



USGS TOPOGRAPHIC MAP
NEW SWEDEN, ME
1983 REVISED 2017

US Army Corps of Engineers
New England District

FIGURE 1

SITE LOCATION
FORMER LO-58
NIKE BATTERY LAUNCH SITE
CARIBOU, MAINE

PREPARED BY: JH	CHECKED BY: TW
PROJECT NO.: 2046.003	DATE: AUGUST 2022

N

EXPLANATION

- APPROXIMATE PROPERTY BOUNDARY
- MW-01 — MONITORING WELL
- MW-07 — PROPOSED MONITORING WELL
- DW-01 — DRINKING WATER SUPPLY WELL
- DW-02 — FORMER DRINKING WATER SUPPLY WELL

SOURCE:

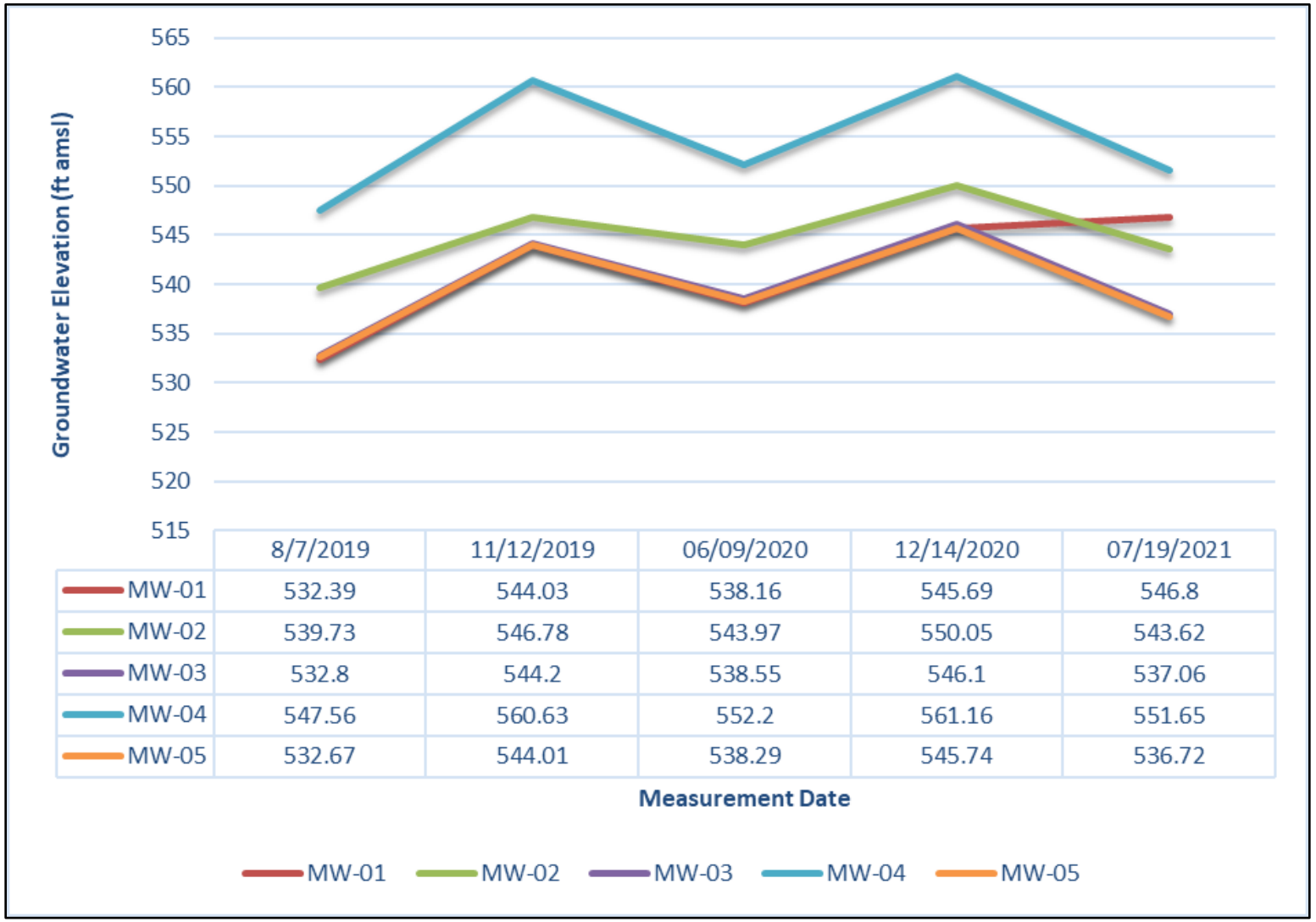
1. SITE PLAN WAS DEVELOPED FROM A CORPS OF ENGINEERS SURVEY DATED MAY 2006, AND OBSERVATIONS MADE BY NOBIS.
2. LOCATIONS OF SITE FEATURES DEPICTED HEREON ARE APPROXIMATE AND GIVEN FOR ILLUSTRATIVE PURPOSES ONLY
3. SOURCE OF AERIAL IMAGE FROM 2020 MICROSOFT CORPORATION© DIGITAL GLOBE © CNES DISTRIBUTION AIRBUS © DS 2020 © HERE ACCESSED ON JUNE 1, 2020
4. ELEVATIONS FROM USGS TOPOGRAPHIC MAP, NEW SWEDEN, ME

0 150 FT.
APPROXIMATE SCALE

GROUNDWATER MONITORING WELL AND DRINKING WATER WELL LOCATIONS

FORMER LO-58 NIKE BATTERY LAUNCH SITE – CARIBOU, ME

Prepared By: JH/TW	Date: AUGUST 2022
Project No: 2046.003	Figure: 2



	8/7/2019	11/12/2019	06/09/2020	12/14/2020	07/19/2021
MW-01	532.39	544.03	538.16	545.69	546.8
MW-02	539.73	546.78	543.97	550.05	543.62
MW-03	532.8	544.2	538.55	546.1	537.06
MW-04	547.56	560.63	552.2	561.16	551.65
MW-05	532.67	544.01	538.29	545.74	536.72

Figure 3. Bedrock Groundwater Elevations Over Time

N

EXPLANATION

- APPROXIMATE PROPERTY BOUNDARY
- MW-01 MONITORING WELL
- MW-07 PROPOSED MONITORING WELL
- DW-01 DRINKING WATER SUPPLY WELL
- DW-02 FORMER DRINKING WATER SUPPLY WELL

GROUNDWATER ELEVATION CONTOUR LINE REPRSENTS AVERAGE OF HYDRAULIC HEAD VALUES IN BEDROCK MONITORING WELLS AS MEASURED ON 07/19/2021"

ARROW INDICATES GENERALIZED GROUNDWATER FLOW DIRECTION

539.50

CONTOUR INTERVAL = 2.0 FEET
AVERAGE HYDRAULIC GRADIENT = 0.02 FT/FT

SOURCE:

1. SITE PLAN WAS DEVELOPED FROM A CORPS OF ENGINEERS SURVEY DATED MAY 2006, AND OBSERVATIONS MADE BY NOBIS.
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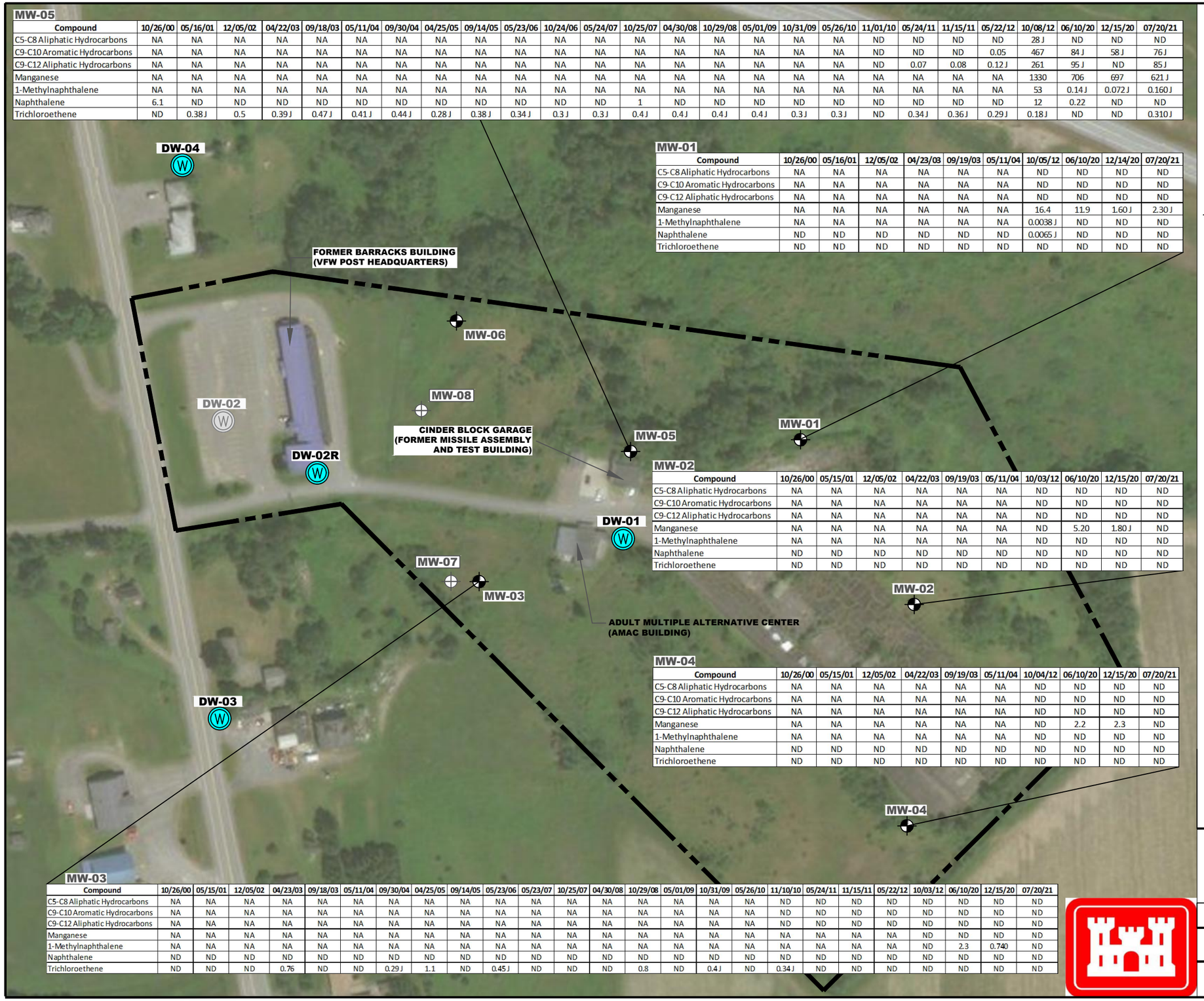
4. ELEVATIONS FROM USGS TOPOGRAPHIC MAP, NEW SWEDEN, ME

0 150 FT.
APPROXIMATE SCALE

BEDROCK GROUNDWATER LEVEL MAP

FORMER LO-58 NIKE BATTERY LAUNCH SITE – CARIBOU, ME

Prepared By: JH/TW	Date: AUGUST 2022
Project No: 2046.003	Figure: 4



MW-05

Compound	10/26/00	05/16/01	12/05/02	04/22/03	09/18/03	05/11/04	09/30/04	04/25/05	09/14/05	05/23/06	10/24/06	05/24/07	10/25/07	04/30/08	10/29/08	05/01/09	10/31/09	05/26/10	11/01/10	05/24/11	11/15/11	05/22/12	10/08/12	06/10/20	12/15/20	07/20/21
C5-C8 Aliphatic Hydrocarbons	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	28 J	ND	ND	ND
C9-C10 Aromatic Hydrocarbons	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	0.05	467	84 J	58 J	76 J
C9-C12 Aliphatic Hydrocarbons	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	0.07	0.08	0.12 J	261	95 J	ND	85 J
Manganese	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1330	706	697	621 J
1-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	53	0.14 J	0.072 J	0.160 J
Naphthalene	6.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	12	0.22	ND	ND
Trichloroethene	ND	0.38 J	0.5	0.39 J	0.47 J	0.41 J	0.44 J	0.28 J	0.38 J	0.34 J	0.3 J	0.3 J	0.4 J	0.4 J	0.4 J	0.4 J	0.3 J	0.3 J	ND	0.34 J	0.36 J	0.29 J	0.18 J	ND	ND	0.310 J

MW-01

Compound	10/26/00	05/16/01	12/05/02	04/23/03	09/19/03	05/11/04	10/05/12	06/10/20	12/14/20	07/20/21
C5-C8 Aliphatic Hydrocarbons	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND
C9-C10 Aromatic Hydrocarbons	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND
C9-C12 Aliphatic Hydrocarbons	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND
Manganese	NA	NA	NA	NA	NA	NA	16.4	11.9	1.60 J	2.30 J
1-Methylnaphthalene	NA	NA	NA	NA	NA	NA	0.0038 J	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	0.0065 J	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

MW-02

Compound	10/26/00	05/15/01	12/05/02	04/22/03	09/19/03	05/11/04	10/03/12	06/10/20	12/15/20	07/20/21
C5-C8 Aliphatic Hydrocarbons	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND
C9-C10 Aromatic Hydrocarbons	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND
C9-C12 Aliphatic Hydrocarbons	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND
Manganese	NA	NA	NA	NA	NA	NA	ND	5.20	1.80 J	ND
1-Methylnaphthalene	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

MW-04

Compound	10/26/00	05/15/01	12/05/02	04/22/03	09/19/03	05/11/04	10/04/12	06/10/20	12/15/20	07/20/21
C5-C8 Aliphatic Hydrocarbons	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND
C9-C10 Aromatic Hydrocarbons	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND
C9-C12 Aliphatic Hydrocarbons	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND
Manganese	NA	NA	NA	NA	NA	NA	ND	2.2	2.3	ND
1-Methylnaphthalene	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

MW-03

Compound	10/26/00	05/15/01	12/05/02	04/23/03	09/18/03	05/11/04	09/30/04	04/25/05	09/14/05	05/23/06	05/23/07	10/25/07	04/30/08	10/29/08	05/01/09	10/31/09	05/26/10	11/10/10	05/24/11	11/15/11	05/22/12	10/03/12	06/10/20	12/15/20	07/20/21
C5-C8 Aliphatic Hydrocarbons	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
C9-C10 Aromatic Hydrocarbons	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
C9-C12 Aliphatic Hydrocarbons	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND
Manganese	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND
1-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	2.3	0.740	ND
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	0.76	ND	ND	0.29 J	1.1	ND	0.45 J	ND	ND	ND	0.8	ND	0.4 J	ND	0.34 J	ND	ND	ND	ND	ND	ND	ND

N

EXPLANATION

- APPROXIMATE PROPERTY BOUNDARY
- MW-01 MONITORING WELL
- MW-07 PROPOSED MONITORING WELL
- DW-01 DRINKING WATER SUPPLY WELL
- DW-02 FORMER DRINKING WATER SUPPLY WELL

Analyte	Maine RAG	Federal MCL
VPH		
C5-C8 Aliphatics Hydrocarbons	180	-
C9-C10 Aromatic Hydrocarbons	71	-
C9-C12 Aliphatic Hydrocarbons	350	-
Metals		
Manganese	430	-
VOCs		
Naphthalene	1.2	-
Trichloroethene	2.8	5
SVOCs		
1- Methylnapthalene	11	-

NOTES:
1) ALL CONCENTRATIONS REPORTED IN MICROGRAMS PER LITER (µg/L)
2) NA = NOT ANALYZED
3) ND = NOT DETECTED
4) J = RESULT IS AN ESTIMATED VALUE
5) SVOCs = SEMIVOLATILE ORGANIC COMPOUNDS
6) VOCs = VOLATILE ORGANIC COMPOUNDS
7) VPH = VOLATILE PETROLEUM HYDROCARBON

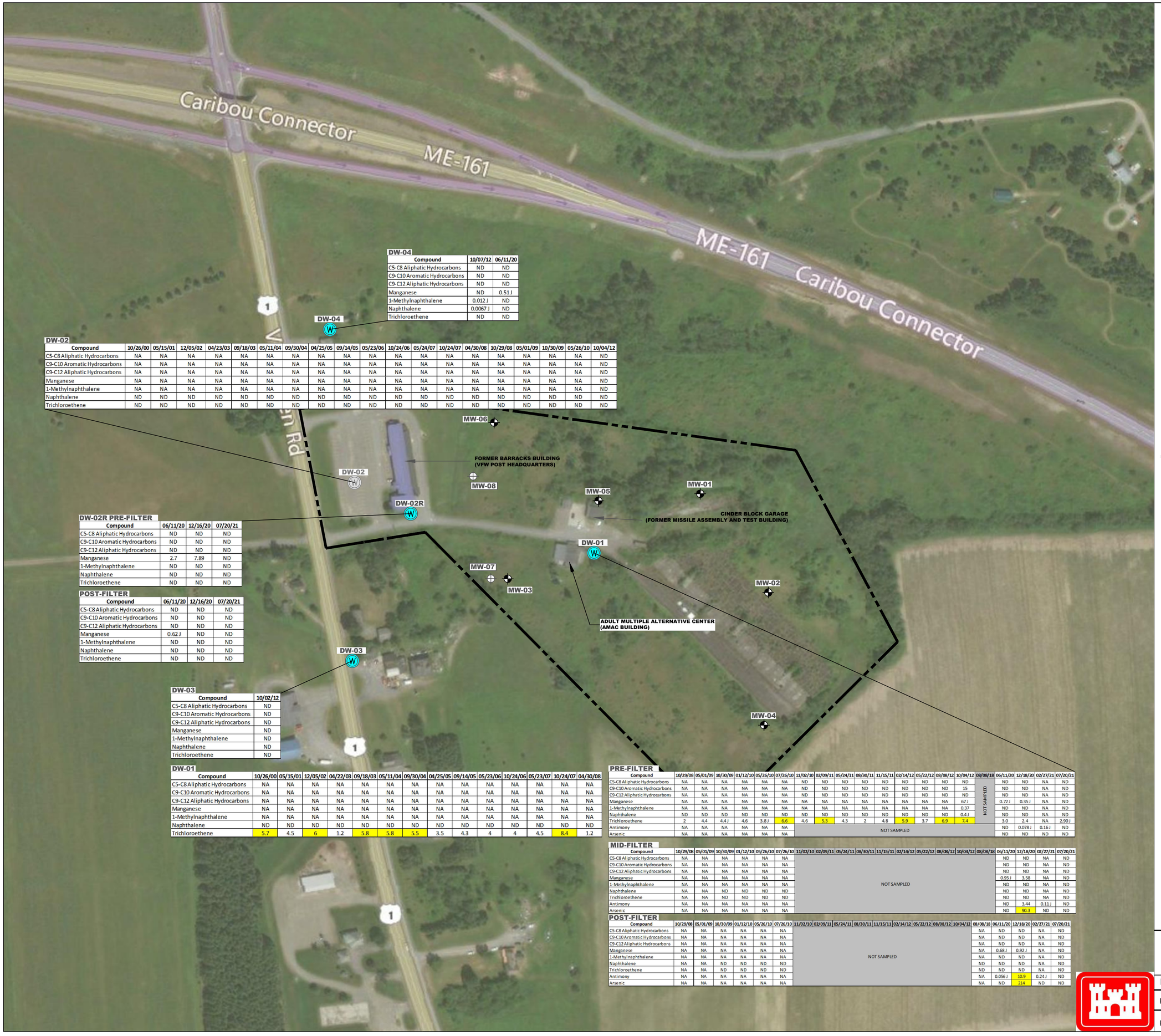
SOURCE:
1. SITE PLAN WAS DEVELOPED FROM A CORPS OF ENGINEERS SURVEY DATED MAY 2006, AND OBSERVATIONS MADE BY NOBIS.
2. LOCATIONS OF SITE FEATURES DEPICTED HEREON ARE APPROXIMATE AND GIVEN FOR ILLUSTRATIVE PURPOSES ONLY
3. SOURCE OF AERIAL IMAGE FROM 2020 MICROSOFT CORPORATION© DIGITAL GLOBE © CNES DISTRIBUTION AIRBUS © DS 2020 © HERE ACCESSED ON JUNE 1, 2020

0 150 FT.
APPROXIMATE SCALE

BEDROCK GROUNDWATER ANALYTICAL RESULTS

FORMER LO-58 NIKE BATTERY LAUNCH SITE – CARIBOU, ME

Prepared By: JH/TW	Date: DECEMBER 2022
Project No: 2046.003	Figure: 5



DW-04

Compound	10/07/12	06/11/20
C5-C8 Aliphatic Hydrocarbons	ND	ND
C9-C10 Aromatic Hydrocarbons	ND	ND
C9-C12 Aliphatic Hydrocarbons	ND	ND
Manganese	ND	0.51 J
1-Methylnaphthalene	0.012 J	ND
Naphthalene	0.0067 J	ND
Trichloroethene	ND	ND

DW-02

Compound	10/26/00	05/15/01	12/05/02	04/23/03	09/18/03	05/11/04	09/30/04	04/25/05	09/14/05	05/23/06	10/24/06	05/24/07	10/24/07	04/30/08	10/29/08	05/01/09	10/30/09	05/26/10	10/04/12
C5-C8 Aliphatic Hydrocarbons	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
C9-C10 Aromatic Hydrocarbons	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
C9-C12 Aliphatic Hydrocarbons	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
Manganese	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
1-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

DW-02R PRE-FILTER

Compound	06/11/20	12/16/20	07/20/21
C5-C8 Aliphatic Hydrocarbons	ND	ND	ND
C9-C10 Aromatic Hydrocarbons	ND	ND	ND
C9-C12 Aliphatic Hydrocarbons	ND	ND	ND
Manganese	2.7	7.89	ND
1-Methylnaphthalene	ND	ND	ND
Naphthalene	ND	ND	ND
Trichloroethene	ND	ND	ND

POST-FILTER

Compound	06/11/20	12/16/20	07/20/21
C5-C8 Aliphatic Hydrocarbons	ND	ND	ND
C9-C10 Aromatic Hydrocarbons	ND	ND	ND
C9-C12 Aliphatic Hydrocarbons	ND	ND	ND
Manganese	0.62 J	ND	ND
1-Methylnaphthalene	ND	ND	ND
Naphthalene	ND	ND	ND
Trichloroethene	ND	ND	ND

DW-03

Compound	10/02/12
C5-C8 Aliphatic Hydrocarbons	ND
C9-C10 Aromatic Hydrocarbons	ND
C9-C12 Aliphatic Hydrocarbons	ND
Manganese	ND
1-Methylnaphthalene	ND
Naphthalene	ND
Trichloroethene	ND

DW-01

Compound	10/26/00	05/15/01	12/05/02	04/22/03	09/18/03	05/11/04	09/30/04	04/25/05	09/14/05	05/23/06	10/24/06	05/23/07	10/24/07	04/30/08
C5-C8 Aliphatic Hydrocarbons	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
C9-C10 Aromatic Hydrocarbons	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
C9-C12 Aliphatic Hydrocarbons	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	5.7	4.5	6	1.2	5.8	5.8	5.5	3.5	4.3	4	4	4.5	8.4	1.2

PRE-FILTER

Compound	10/29/08	05/01/09	10/30/09	01/12/10	05/26/10	07/26/10	11/02/10	02/09/11	05/24/11	08/30/11	11/15/11	02/14/12	05/22/12	08/08/12	10/04/12	08/08/18	06/11/20	12/18/20	02/27/21	07/20/21
C5-C8 Aliphatic Hydrocarbons	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	NOT SAMPLED	ND	ND	NA	ND
C9-C10 Aromatic Hydrocarbons	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	15		ND	ND	NA	ND
C9-C12 Aliphatic Hydrocarbons	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	NA	ND
Manganese	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	67 J		0.72 J	0.35 J	NA	ND
1-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.37		ND	ND	NA	ND
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.4 J		ND	ND	NA	ND
Trichloroethene	2	4.4	4.4 J	4.6	3.8 J	6.6	4.6	5.3	4.3	2	4.8	5.9	3.7	6.9	7.4		3.0	2.4	NA	2.90 J
Antimony	NA	NA	NA	NA	NA	NA	NOT SAMPLED										ND	0.078 J	0.16 J	ND
Arsenic	NA	NA	NA	NA	NA	NA											ND	ND	ND	ND

MID-FILTER

Compound	10/29/08	05/01/09	10/30/09	01/12/10	05/26/10	07/26/10	11/02/10	02/09/11	05/24/11	08/30/11	11/15/11	02/14/12	05/22/12	08/08/12	10/04/12	08/08/18	06/11/20	12/18/20	02/27/21	07/20/21
C5-C8 Aliphatic Hydrocarbons	NA	NA	NA	NA	NA	NA	NOT SAMPLED										ND	ND	NA	ND
C9-C10 Aromatic Hydrocarbons	NA	NA	NA	NA	NA	NA											ND	ND	NA	ND
C9-C12 Aliphatic Hydrocarbons	NA	NA	NA	NA	NA	NA											ND	ND	NA	ND
Manganese	NA	NA	NA	NA	NA	NA											0.95 J	3.58	NA	ND
1-Methylnaphthalene	NA	NA	NA	NA	NA	NA											ND	ND	NA	ND
Naphthalene	NA	NA	ND	ND	ND	ND											ND	ND	NA	ND
Trichloroethene	NA	NA	ND	ND	ND	ND											ND	ND	NA	ND
Antimony	NA	NA	NA	NA	NA	NA											ND	3.44	0.11 J	ND
Arsenic	NA	NA	NA	NA	NA	NA											ND	90.3	ND	ND

POST-FILTER

Compound	10/29/08	05/01/09	10/30/09	01/12/10	05/26/10	07/26/10	11/02/10	02/09/11	05/24/11	08/30/11	11/15/11	02/14/12	05/22/12	08/08/12	10/04/12	08/08/18	06/11/20	12/18/20	02/27/21	07/20/21
C5-C8 Aliphatic Hydrocarbons	NA	NA	NA	NA	NA	NA	NOT SAMPLED									NA	ND	ND	NA	ND
C9-C10 Aromatic Hydrocarbons	NA	NA	NA	NA	NA	NA										NA	ND	ND	NA	ND
C9-C12 Aliphatic Hydrocarbons	NA	NA	NA	NA	NA	NA										NA	ND	ND	NA	ND
Manganese	NA	NA	NA	NA	NA	NA										NA	0.68 J	0.92 J	NA	ND
1-Methylnaphthalene	NA	NA	NA	NA	NA	NA										NA	ND	ND	NA	ND
Naphthalene	NA	NA	ND	ND	ND	ND										ND	ND	ND	NA	ND
Trichloroethene	NA	NA	ND	ND	ND	ND										ND	ND	ND	NA	ND
Antimony	NA	NA	NA	NA	NA	NA										NA	0.056 J	10.9	0.24 J	ND
Arsenic	NA	NA	NA	NA	NA	NA										NA	ND	214	ND	ND

N

EXPLANATION

- APPROXIMATE PROPERTY BOUNDARY
- MW-01 MONITORING WELL
- MW-07 PROPOSED MONITORING WELL
- DW-01 DRINKING WATER SUPPLY WELL
- DW-02 FORMER DRINKING WATER SUPPLY WELL

Analyte	Maine RAG	Federal MCL
VPH		
C5-C8 Aliphatics Hydrocarbons	180	-
C9-C10 Aromatic Hydrocarbons	71	-
C9-C12 Aliphatic Hydrocarbons	350	-
Metals		
Antimony	7.8	6
Arsenic	0.52	10
Manganese	430	-
VOCs		
Naphthalene	1.2	-
Trichloroethene	2.8	5

NOTES:
1) ALL CONCENTRATIONS REPORTED IN MICROGRAMS PER LITER (µg/L)
2) NA = NOT ANALYZED
3) ND = NOT DETECTED
4) J = RESULT IS AN ESTIMATED VALUE
5) SCVOCs = SEMIVOLATILE ORGANIC COMPOUNDS
6) VOCs = VOLATILE ORGANIC COMPOUNDS
7) VPH = VOLATILE PETROLEUM HYDROCARBON
8) YELLOW HIGHLIGHTING INDICATES RESULT EXCEEDS THE FEDERAL MCL

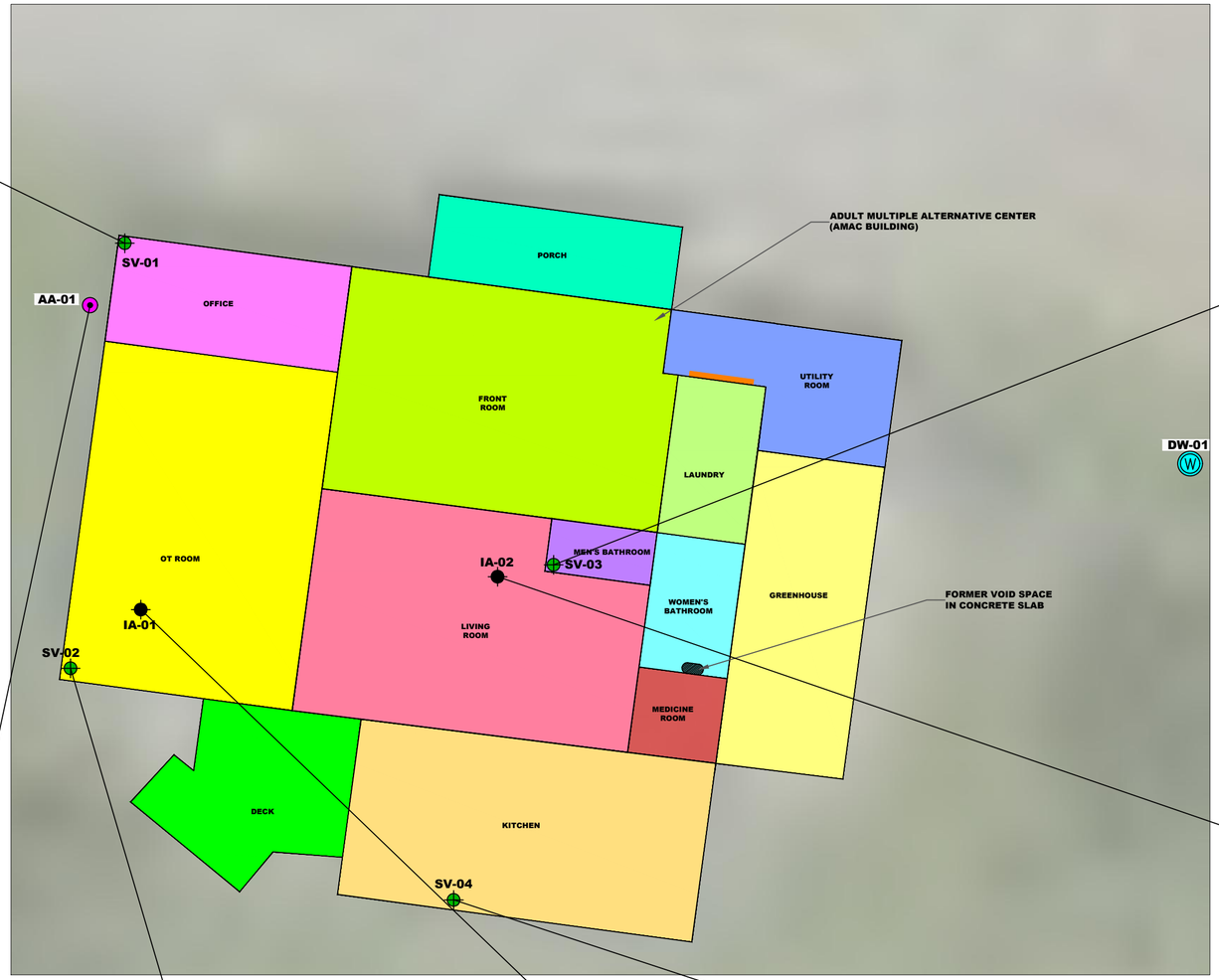
SOURCE:
1. SITE PLAN WAS DEVELOPED FROM A CORPS OF ENGINEERS SURVEY DATED MAY 2006, AND OBSERVATIONS MADE BY NOBIS.
2. LOCATIONS OF SITE FEATURES DEPICTED HEREON ARE APPROXIMATE AND GIVEN FOR ILLUSTRATIVE PURPOSES ONLY
3. SOURCE OF AERIAL IMAGE FROM 2020 MICROSOFT CORPORATION© DIGITAL GLOBE © CNES DISTRIBUTION AIRBUS © DS 2020 © HERE ACCESSED ON JUNE 1, 2020

0 150 FT.
APPROXIMATE SCALE

DRINKING WATER ANALYTICAL RESULTS

FORMER LO-58 NIKE BATTERY LAUNCH SITE – CARIBOU, ME

Prepared By: JH/TW	Date: AUGUST 2022
Project No: 2046.003	Figure: 6



SV-01

Sampling Date	24-Jul-21
1,1,1-Trichloroethane	0.109 U
1,1,2-Trichloro-1,2,2-	**0.399**
1,2,4-Trimethylbenzene	**0.152**
1,2-Dichlorotetrafluoroethane	**0.0770 J**
1,3,5-Trimethylbenzene	0.0980 U
1,3-Butadiene	0.0440 U
1,3-Dichlorobenzene	**0.210**
1,4-Dioxane	0.360 U
2-Butanone (MEK)	**0.363 J**
2-Hexanone	0.820 U
4-Ethyltoluene	0.0980 U
4-Methyl-2-pentanone (MIBK)	**0.115 J**
Acetone	**1.99 J**
Benzene	**0.115 J**
Bromodichloromethane	0.134 U
Carbon disulfide	**0.0780 J**
Carbon Tetrachloride	**0.421**
Chloroform	**0.327**
Chloromethane	**0.434**
Cumene	0.983 U
Cyclohexane	**0.537 J**
Dichlorodifluoromethane	**3.39**
Ethanol	**78.4 J**
Ethylbenzene	**0.0570 J**
m,p-Xylene	**0.174**
Methylene chloride	1.74 U
Naphthalene	0.262 U
n-Heptane	**0.0780 J**
o-Xylene	**0.0830 J**
Styrene	**0.111**
tert-Butyl alcohol	**0.203 J**
Tetrachloroethene (PCE)	**0.149**
Tetrahydrofuran	**0.849 J**
Toluene	**0.249**
Trichloroethene (TCE)	**2.43**
Trichlorofluoromethane	**174**
Vinyl chloride	0.0510 U

SV-03

Sampling Date	24-Jul-21
1,1,1-Trichloroethane	**1.16**
1,1,2-Trichloro-1,2,2-	**0.569**
1,2,4-Trimethylbenzene	**6.78**
1,2-Dichlorotetrafluoroethane	**0.140 J**
1,3,5-Trimethylbenzene	**1.99**
1,3-Butadiene	0.0630 U
1,3-Dichlorobenzene	**1.44**
1,4-Dioxane	**0.237 J**
2-Butanone (MEK)	**3.30**
2-Hexanone	**0.545 J**
4-Ethyltoluene	**0.541**
4-Methyl-2-pentanone (MIBK)	**0.257 J**
Acetone	**19.8**
Benzene	**0.850**
Bromodichloromethane	0.192 U
Carbon disulfide	**0.0930 J**
Carbon Tetrachloride	**0.530**
Chloroform	**1.01**
Chloromethane	0.591 U
Cumene	**6.69**
Cyclohexane	**0.358 J**
Dichlorodifluoromethane	**4.41**
Ethanol	**580 J**
Ethylbenzene	**0.830**
m,p-Xylene	**2.42**
Methylene chloride	**3.61**
Naphthalene	**0.949**
n-Heptane	**0.287 J**
o-Xylene	**1.23**
Styrene	**2.32**
tert-Butyl alcohol	**15.2**
Tetrachloroethene (PCE)	**2.14**
Tetrahydrofuran	**3.48**
Toluene	**8.22**
Trichloroethene (TCE)	**199**
Trichlorofluoromethane	**5.96**
Vinyl chloride	0.0730 U

IA-02

Sampling Date	24-Jul-21
1,1,1-Trichloroethane	**0.0980 J**
1,1,2-Trichloro-1,2,2-	**0.391**
1,2,4-Trimethylbenzene	**0.457**
1,2-Dichloroethane	**0.251**
1,2-Dichloropropane	**0.0920**
1,2-Dichlorotetrafluoroethane	**0.0980 J**
1,3,5-Trimethylbenzene	**0.143**
1,3-Butadiene	**0.0290 J**
1,3-Dichlorobenzene	0.120 U
1,4-Dichlorobenzene	**0.0600 J**
1,4-Dioxane	**0.515**
2,2,4-Trimethylpentane	0.934 U
2-Butanone (MEK)	**2.34**
2-Hexanone	**0.389 J**
4-Ethyltoluene	**0.0930 J**
4-Methyl-2-pentanone (MIBK)	**0.283 J**
Acetone	**49.9**
Benzene	**0.310 J**
Bromomethane	**0.0470 J**
Carbon disulfide	**0.178 J**
Carbon Tetrachloride	**0.409**
Chloroethane	**0.0420 J**
Chloroform	**0.708**
Chloromethane	**1.42**
Cumene	**0.202 J**
Cyclohexane	**0.244 J**
Dichlorodifluoromethane	**1.94**
Ethanol	**8740 J**
Ethylbenzene	**0.417**
m,p-Xylene	**1.29**
Naphthalene	0.262 U
n-Heptane	**0.418 J**
o-Xylene	**0.552**
Styrene	**1.95**
tert-Butyl alcohol	**9.40**
Tetrachloroethene (PCE)	0.136 U
Tetrahydrofuran	**0.702 J**
Toluene	**1.70**
Trichloroethene (TCE)	**4.27**
Trichlorofluoromethane	**24.2**

AA-01

Sampling Date	24-Jul-21
1,1,1-Trichloroethane	0.109 U
1,1,2-Trichloro-1,2,2-	**0.452**
1,2,4-Trimethylbenzene	0.0980 U
1,2-Dichloroethane	0.0810 U
1,2-Dichloropropane	0.0920 U
1,2-Dichlorotetrafluoroethane	**0.0910 J**
1,3,5-Trimethylbenzene	0.0980 U
1,3-Butadiene	0.0440 U
1,3-Dichlorobenzene	0.120 U
1,4-Dichlorobenzene	0.120 U
1,4-Dioxane	0.360 U
2,2,4-Trimethylpentane	**0.0650 J**
2-Butanone (MEK)	**0.271 J**
2-Hexanone	0.820 U
4-Ethyltoluene	0.0980 U
4-Methyl-2-pentanone (MIBK)	2.05 U
Acetone	**4.25**
Benzene	**0.163 J**
Bromomethane	**0.0580 J**
Carbon disulfide	**0.178 J**
Carbon Tetrachloride	**0.390**
Chloroethane	0.264 U
Chloroform	**0.142**
Chloromethane	**0.793**
Cumene	0.983 U
Cyclohexane	**0.0480 J**
Dichlorodifluoromethane	**2.14**
Ethanol	**22.6 J**
Ethylbenzene	0.0870 U
m,p-Xylene	**0.104 J**
Naphthalene	0.262 U
n-Heptane	0.820 U
o-Xylene	**0.0520 J**
Styrene	**0.0810 J**
tert-Butyl alcohol	**0.0640 J**
Tetrachloroethene (PCE)	**0.136**
Tetrahydrofuran	**0.242 J**
Toluene	**0.226**
Trichloroethene (TCE)	0.107 U
Trichlorofluoromethane	**1.14**

SV-02

Sampling Date	24-Jul-21	24-Jul-21
1,1,1-Trichloroethane	**0.186**	**0.0550 J**
1,1,2-Trichloro-1,2,2-	**0.406**	**0.414**
1,2,4-Trimethylbenzene	**0.826 J**	**0.216 J**
1,2-Dichlorotetrafluoroethane	**0.0910 J**	**0.0770 J**
1,3,5-Trimethylbenzene	**0.143**	0.0980 U
1,3-Butadiene	**0.0330 J**	0.0440 U
1,3-Dichlorobenzene	**0.721 J**	**0.277 J**
1,4-Dioxane	0.360 U	0.360 U
2-Butanone (MEK)	**0.563 J**	**0.316 J**
2-Hexanone	**0.0820 J**	0.820 U
4-Ethyltoluene	**0.0980 J**	0.0980 U
4-Methyl-2-pentanone (MIBK)	**0.123 J**	2.05 U
Acetone	**3.06**	**1.07 J**
Benzene	**0.102 J**	**0.0930 J**
Bromodichloromethane	**0.281 J**	0.134 UJ
Carbon disulfide	**0.0590 J**	**0.0840 J**
Carbon Tetrachloride	**0.384**	**0.403**
Chloroform	**14.0 J**	**0.337 J**
Chloromethane	**0.254 J**	0.413 U
Cumene	**0.0590 J**	0.983 U
Cyclohexane	**0.461 J**	**0.647 J**
Dichlorodifluoromethane	**2.23**	**3.48**
Ethanol	**117 J**	**65.4 J**
Ethylbenzene	**0.139**	**0.0650 J**
m,p-Xylene	**0.504**	**0.217**
Methylene chloride	1.74 U	1.74 U
Naphthalene	**0.199 J**	0.262 U
n-Heptane	**0.131 J**	**0.0620 J**
o-Xylene	**0.243**	**0.100**
Styrene	**0.379 J**	**0.132 J**
tert-Butyl alcohol	**0.406 J**	**0.146 J**
Tetrachloroethene (PCE)	**0.170**	**0.149**
Tetrahydrofuran	**0.737 J**	**0.289 J**
Toluene	**0.369**	**0.173 J**
Trichloroethene (TCE)	**8.33 J**	**2.75 J**
Trichlorofluoromethane	**83.7 J**	**197 J**
Vinyl chloride	0.0510 U	0.0510 U

IA-01

Sampling Date	24-Jul-21	24-Jul-21
1,1,1-Trichloroethane	0.109 U	0.109 U
1,1,2-Trichloro-1,2,2-	**0.475**	**0.422**
1,2,4-Trimethylbenzene	**0.403**	**0.452**
1,2-Dichloroethane	**0.271**	**0.223**
1,2-Dichloropropane	0.0920 U	**0.102**
1,2-Dichlorotetrafluoroethane	**0.105 J**	**0.0840 J**
1,3,5-Trimethylbenzene	**0.123**	**0.138**
1,3-Butadiene	**0.0240 J**	0.0440 U
1,3-Dichlorobenzene	0.120 U	**0.0960 J**
1,4-Dichlorobenzene	0.120 U	0.120 U
1,4-Dioxane	**0.400**	**0.436**
2,2,4-Trimethylpentane	0.934 U	0.934 U
2-Butanone (MEK)	**2.50**	**2.37**
2-Hexanone	**0.352 J**	**0.385 J**
4-Ethyltoluene	**0.0840 J**	**0.0890 J**
4-Methyl-2-pentanone (MIBK)	**0.352 J**	**0.303 J**
Acetone	**49.4**	**43.9**
Benzene	**0.323**	**0.294 J**
Bromomethane	**0.0390 J**	0.0780 U
Carbon disulfide	**0.181 J**	**0.153 J**
Carbon Tetrachloride	**0.440**	**0.390**
Chloroethane	0.264 U	**0.0530 J**
Chloroform	**0.776**	**0.664**
Chloromethane	**1.44**	**1.26**
Cumene	**0.216 J**	**0.216 J**
Cyclohexane	**0.189 J**	**0.203 J**
Dichlorodifluoromethane	**2.24**	**1.91**
Ethanol	**7990 J**	**10400 J**
Ethylbenzene	**0.400**	**0.417**
m,p-Xylene	**1.28**	**1.39**
Naphthalene	0.262 U	0.262 U
n-Heptane	**0.369 J**	**0.393 J**
o-Xylene	**0.599**	**0.630**
Styrene	**1.39**	**1.39**
tert-Butyl alcohol	**9.64**	**8.25**
Tetrachloroethene (PCE)	**0.0810 J**	**0.0950 J**
Tetrahydrofuran	**1.13 J**	**1.04 J**
Toluene	**1.48**	**1.82**
Trichloroethene (TCE)	**3.48**	**3.42**
Trichlorofluoromethane	**29.7**	**25.1**

SV-04

Sampling Date	24-Jul-21
1,1,1-Trichloroethane	**13.0**
1,1,2-Trichloro-1,2,2-	**0.671**
1,2,4-Trimethylbenzene	**5.11**
1,2-Dichlorotetrafluoroethane	0.437 U
1,3,5-Trimethylbenzene	**1.01**
1,3-Butadiene	0.0550 U
1,3-Dichlorobenzene	**2.34**
1,4-Dioxane	**0.378 J**
2-Butanone (MEK)	**4.90**
2-Hexanone	**1.00 J**
4-Ethyltoluene	**0.718**
4-Methyl-2-pentanone (MIBK)	**0.688 J**
Acetone	**71.3**
Benzene	**0.444**
Bromodichloromethane	**0.100 J**
Carbon disulfide	**0.187 J**
Carbon Tetrachloride	**0.165**
Chloroform	**0.232**
Chloromethane	0.516 U
Cumene	**0.215 J**
Cyclohexane	**0.310 J**
Dichlorodifluoromethane	**3.07**
Ethanol	**520 J**
Ethylbenzene	**0.756**
m,p-Xylene	**2.61**
Methylene chloride	2.17 U
Naphthalene	**0.760**
n-Heptane	**0.418 J**
o-Xylene	**1.13**
Styrene	**0.681**
tert-Butyl alcohol	**15.1**
Tetrachloroethene (PCE)	**0.279**
Tetrahydrofuran	**5.43**
Toluene	**2.03**
Trichloroethene (TCE)	**8.92**
Trichlorofluoromethane	**4.75**
Vinyl chloride	**0.0990**

N

EXPLANATION

- AA-01 — AMBIENT AIR SAMPLE LOCATION
- IA-01 — INDOOR AIR SAMPLE LOCATION
- SV-01 — SUB–SLAB VAPOR MONITORING POINT
- DW-01 — DRINKING WATER SUPPLY WELL
- ELECTRICAL PANEL

- DECK
- FRONT ROOM
- GREENHOUSE
- KITCHEN
- WOMEN'S BATHROOM
- LAUNDRY
- MEDICINE ROOM
- LIVING ROOM
- MEN'S BATHROOM
- OT ROOM
- OFFICE
- UTILITY ROOM
- PORCH

NOTES:
1. DETECTED RESULTS APPEAR IN BOLD FONT, SHADED RESULTS EXCEED FINAL DECISION DOCUMENT RG OR FEDERAL SCREENING LIMIT, AND UNDERLINED RESULTS EXCEED MAINE RAG.
   ALL RESULTS PRESENTED IN UNITS OF MICROGRAMS PER CUBIC METER ($\mu g/m^3$)
2. J = THE REPORTED RESULT IS AN ESTIMATED VALUE.
3. U = NOT DETECTED; THE COMPOUND/ANALYTE WAS ANALYZED FOR, BUT NOT DETECTED ABOVE THE LOD.
4. UJ = TARGET ANALYTE WAS NOT DETECTED ABOVE THE METHOD DETECTION LIMIT; HOWEVER, THE REPORTED DETECTION LIMIT IS APPROXIMATE AND MAY OR MAY NOT REPRESENT THE ACTUAL LOD.

	Indoor/Ambient Air Critiera				Sub-Slab Vapor Criteria	
	RG or Federal Screening Criteria		MEDEP Screening Criteria		MEDEP[1]	
Chloroform	Final Decision Document RG	1.1	2021 May Maine Indoor Air Residential	1.2	2021 May Maine Sub-Slab Residential Air RAG	40
Naphthalene	Final Decision Document RG	0.7	2021 May Maine Indoor Air Residential	0.83	2021 May Maine Sub-Slab Residential Air RAG	28
TCE	Final Decision Document RG	2	2021 May Maine Indoor Air Residential	2.1	2021 May Maine Sub-Slab Residential Air RAG	70
1,2-Dichloroethane	2019 May EPA Resident Air (THQ 1.0)	11	2021 May Maine Indoor Air Residential	1.1	2021 May Maine Sub-Slab Residential Air RAG	37

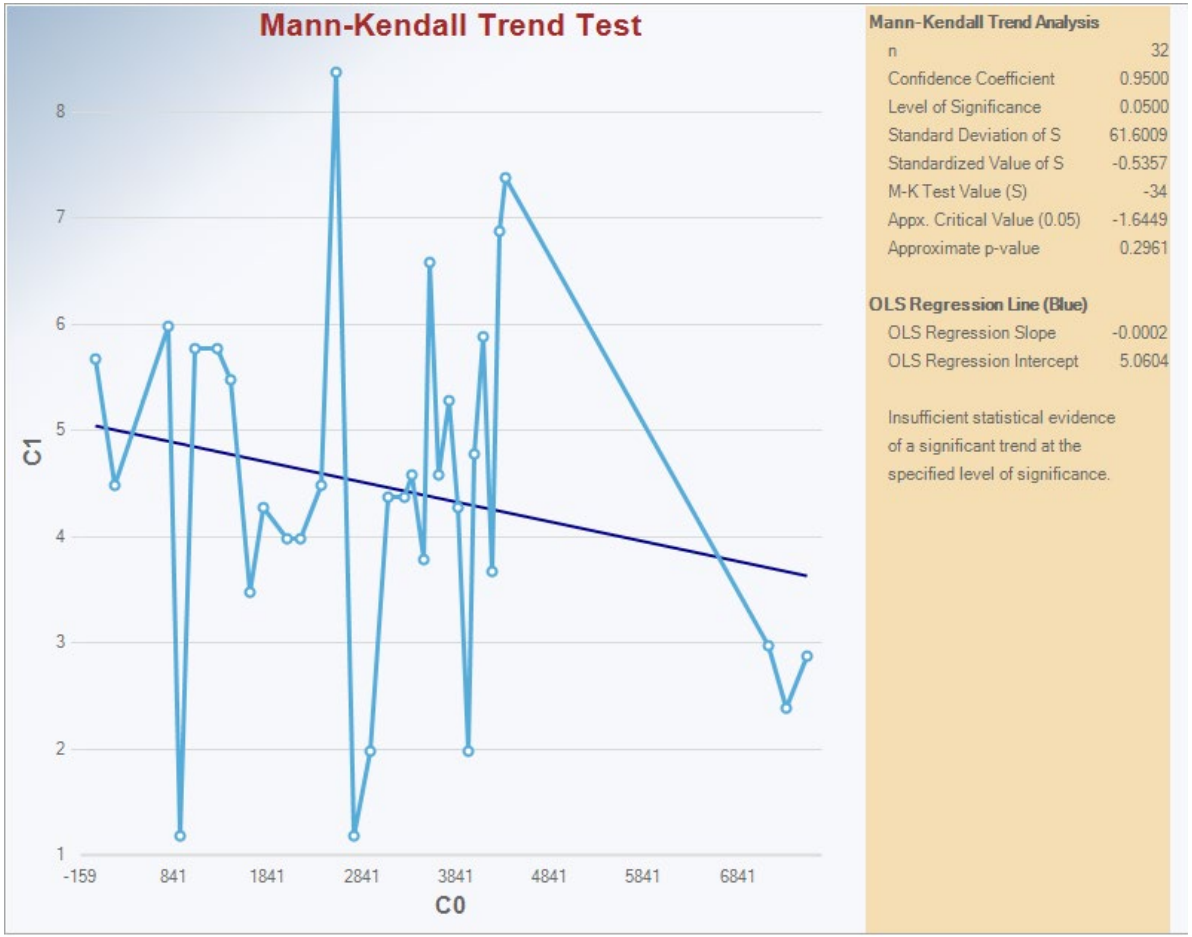
(1) As per the MDEP Remedial Action Guidelines for Contaminated Sites (2021), an attenuation factor of 0.03 has been applied to the Indoor Air Residential RAGs to arrive at RAGs that are comparable to sub–slab soil vapor concentrations.

0 10 FT.
APPROXIMATE SCALE

VAPOR INTRUSION SAMPLING RESULTS PRIOR TO VIMS INSTALLATION (JULY 2021)

FORMER LO–58 NIKE BATTERY LAUNCH SITE – CARIBOU, ME

Prepared By: JH/TW	Date: DECEMBER 2022
Project No: 2046.003	Figure: 7



Mann-Kendall Trend Test Analysis		
Full Precision	OFF	
Confidence Coefficient	0.95	
Level of Significance	0.05	

C1

General Statistics	
Number of Events Reported (m)	32
Number of Missing Events	0
Number or Reported Events Used	32
Number Values Reported (n)	32
Minimum	1.2
Maximum	8.4
Mean	4.481
Geometric Mean	4.095
Median	4.45
Standard Deviation	1.711
Coefficient of Variation	0.382

Mann-Kendall Test	
M-K Test Value (S)	-34
Critical Value (0.05)	-1.645
Standard Deviation of S	61.6
Standardized Value of S	-0.536
Approximate p-value	0.296

Insufficient evidence to identify a significant trend at the specified level of significance.

Figure 8. Mann-Kendall Trend Analysis for TCE in DW-01 Influent Sample

Appendix A. Well Inspection/Groundwater Level Field Forms

U.S. Army Corps of Engineers

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT LOG

Former LO-58 NIKE Battery Launch Site, Caribou, Maine
FUDS Project No.: D01ME007702
NAE Project No: 108313
Contract No. W912WJ19C0019

WELL ID: MW-01

DATE/TIME: 7/19/21 17:46

INSPECTED BY: S. MacCarter, C. Pyra

VENT WELL:

PHOTOIONIZATION DETECTOR (PID) READING (PPM) 1.0

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT:

WELL DEPTH (FEET FROM TOP OF PVC)				144.74 (7/21/21)
WATER LEVEL DEPTH (FEET FROM TOP OF PVC)				27.71
WELL STICKUP				1.41
CASING STICKUP (FEET)				1.66
WELL DIAMETER (INCHES)				2” PVC
WELL CONSTRUCTION (PVC, STEEL, ETC.)				PVC inner, steel stick-up outer
LOCKED UPON ARRIVAL?	☒	YES	☐	NO
LOCK REPLACED?	☐	YES	☒	NO
OBSTRUCTIONS?	☒	YES	☐	NO
WELL RELABELED?	☐	YES	☒	NO

GENERAL CONDITION/COMMENTS: Located in light brush. Standpipe is visible at the edge of the concrete pad area. Well label is not visible. Exterior steel standpipe contains dent. Bladder pump tubing was contained within interior PVC well casing, removed from well. Standpipe prevents intrusion from runoff. Standpipe has a steel well cover. Field personnel were unable to recognize any sediment contained at the bottom of well.

U.S. Army Corps of Engineers

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT LOG

Former LO-58 NIKE Battery Launch Site, Caribou, Maine
FUDS Project No.: D01ME007702
NAE Project No: 108313
Contract No. W912WJ19C0019

WELL ID: MW-02

DATE/TIME: 7/19/21 17:58

INSPECTED BY: S. MacCarter, C. Pyra

VENT WELL:

PHOTOIONIZATION DETECTOR (PID) READING (PPM) 0.4

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT:

WELL DEPTH (FEET FROM TOP OF PVC)				61.64 (7/20/21)
WATER LEVEL DEPTH (FEET FROM TOP OF PVC)				41.52
WELL STICKUP				1.87
CASING STICKUP (FEET)				2.64
WELL DIAMETER (INCHES)				2” PVC
WELL CONSTRUCTION (PVC, STEEL, ETC.)				PVC inner, steel stick-up outer
LOCKED UPON ARRIVAL?	☒	YES	☐	NO
LOCK REPLACED?	☐	YES	☒	NO
OBSTRUCTIONS?	☒	YES	☐	NO - tubing
WELL RELABELED?	☐	YES	☒	NO

GENERAL CONDITION/COMMENTS: Located in thick brush. Standpipe is visible from former launch area. Well label is not visible. Exterior steel standpipe is in good condition. Standpipe prevents intrusion from runoff. Standpipe has a steel well cover. Bladder pump tubing was contained within interior PVC well casing, removed from well. No softness felt at the bottom of the well column indicating silt buildup when gauging.

U.S. Army Corps of Engineers

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT LOG

Former LO-58 NIKE Battery Launch Site, Caribou, Maine
FUDS Project No.: D01ME007702
NAE Project No: 108313
Contract No. W912WJ19C0019

WELL ID: MW-03

DATE/TIME: 7/19/21 17:15

INSPECTED BY: S. MacCarter

VENT WELL:

PHOTOIONIZATION DETECTOR (PID) READING (PPM) 0.2

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT:

WELL DEPTH (FEET FROM TOP OF PVC)	48.84 (7/20/21)			
WATER LEVEL DEPTH (FEET FROM TOP OF PVC)	29.52			
WELL STICKUP	3.68			
CASING STICKUP (FEET)	4.13			
WELL DIAMETER (INCHES)	2” PVC			
WELL CONSTRUCTION (PVC, STEEL, ETC.)	PVC inner, steel stick-up outer			
LOCKED UPON ARRIVAL?	☒	YES	☐	NO
LOCK REPLACED?	☐	YES	☒	NO
OBSTRUCTIONS?	☒	YES	☐	NO
WELL RELABELED?	☐	YES	☒	NO

GENERAL CONDITION/COMMENTS: Located in thick brush. Standpipe is visible from the driveway. Well label is not visible. Exterior steel standpipe is in good condition. Standpipe prevents intrusion from runoff. Standpipe has a steel well cover. Bladder pump tubing is contained within interior PVC well casing, removed from well. No softness felt at the bottom of the well column indicating silt buildup when gauging.

U.S. Army Corps of Engineers

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT LOG

Former LO-58 NIKE Battery Launch Site, Caribou, Maine
FUDS Project No.: D01ME007702
NAE Project No: 108313
Contract No. W912WJ19C0019

WELL ID: MW-04

DATE/TIME: 7/19/21 18:51

INSPECTED BY: C. Pyra, S. MacCarter

VENT WELL:

PHOTOIONIZATION DETECTOR (PID) READING (PPM) 0.0

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT:

WELL DEPTH (FEET FROM TOP OF PVC)				82.88*
WATER LEVEL DEPTH (FEET FROM TOP OF PVC)				49.48
WELL STICKUP				2.05
CASING STICKUP (FEET)				2.46
WELL DIAMETER (INCHES)				2" PVC
WELL CONSTRUCTION (PVC, STEEL, ETC.)				PVC inner, steel stick-up outer
LOCKED UPON ARRIVAL?	☒	YES	☐	NO
LOCK REPLACED?	☐	YES	☒	NO
OBSTRUCTIONS?	☒	YES	☐	NO
WELL RELABELED?	☐	YES	☒	NO

GENERAL CONDITION/COMMENTS: Located on embankment. Standpipe is visible from the driveway. Well label is not visible. Exterior steel standpipe is in good condition. Standpipe prevents intrusion from runoff. Standpipe has a steel well cover. No inner cap on well, not mentioned in last assessment report. Dedicated bladder pump tubing was found in well, removed from well.

*Field error occurred measuring total depth. The total depth last measured in December 2020 is provided.

U.S. Army Corps of Engineers

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT LOG

Former LO-58 NIKE Battery Launch Site, Caribou, Maine
FUDS Project No.: D01ME007702
NAE Project No: 108313
Contract No. W912WJ19C0019

WELL ID: MW-05

DATE/TIME: 7/19/21 16:36

INSPECTED BY: S. MacCarter, C. Pyra

VENT WELL:

PHOTOIONIZATION DETECTOR (PID) READING (PPM) 0.0

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT:

WELL DEPTH (FEET FROM TOP OF PVC)				79.51 (7/21/21)
WATER LEVEL DEPTH (FEET FROM TOP OF PVC)				34.76
WELL STICKUP				N/A- Flush Mount
CASING STICKUP (FEET)				N/A- Flush Mount
WELL DIAMETER (INCHES)				2” PVC
WELL CONSTRUCTION (PVC, STEEL, ETC.)				PVC
LOCKED UPON ARRIVAL?	☒	YES	☐	NO
LOCK REPLACED?	☐	YES	☒	NO
OBSTRUCTIONS?	☒	YES	☐	NO
WELL RELABELED?	☐	YES	☒	NO

GENERAL CONDITION/COMMENTS: Flush mount in thick brush, surrounded by large trees and bushes. Identified using map location relative to site features. Well label is not visible. Exterior flush mount cover is in good condition. Visual inspection suggests that the pad condition prevents intrusion from runoff. Standpipe has a steel well cover. Dedicated bladder tubing found in well, removed from well. No softness felt at the bottom of the well column indicating silt buildup when gauging. Well location marked by small flag and a cinder block.

U.S. Army Corps of Engineers

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT LOG

Former LO-58 NIKE Battery Launch Site, Caribou, Maine
FUDS Project No.: D01ME007702
NAE Project No: 108313
Contract No. W912WJ19C0019

WELL ID: MW-06

DATE/TIME: 7/19/21 17:27

INSPECTED BY: S. MacCarter, C. Pyra

VENT WELL:

PHOTOIONIZATION DETECTOR (PID) READING (PPM) 0.0

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT:

WELL DEPTH (FEET FROM TOP OF PVC)	16.85
WATER LEVEL DEPTH (FEET FROM TOP OF PVC)	16.71
WELL STICKUP	2.70
CASING STICKUP (FEET)	2.81
WELL DIAMETER (INCHES)	2” PVC
WELL CONSTRUCTION (PVC, STEEL, ETC.)	PVC inner, steel stick-up outer

LOCKED UPON ARRIVAL?	☒	YES	☐	NO
LOCK REPLACED?	☐	YES	☒	NO
OBSTRUCTIONS?	☐	YES	☒	NO
WELL RELABELED?	☐	YES	☒	NO

GENERAL CONDITION/COMMENTS: Standpipe is not visible from parking area or driveway. Located at bottom of slope approximately 10-15 ft from tree line in easily traversed brush. Well label is not visible. Exterior steel standpipe is in good condition. Interior PVC well casing is also in good condition. Standpipe prevents intrusion from runoff. Standpipe has a steel well cover. Monitoring well was equipped with a lock. Appreciable groundwater suitable for sampling was not encountered.

Appendix B. Low-Flow Purge Logs

Low-Flow Field Log

Nobis — Engineering a Sustainable Future

Site Name: Former LO-58
Job Number: 2102.0110
Sampler: S MacCarter

Date: 7/21/2021

Well ID: MW-01
Sample ID: MW-01-SUMMER2021 (plus MS &MSD)
Reviewed By: M Simoneau

Measurement Reference Point (MP): Top PVC (PVC, Casing, Ground, etc.)
Depth to GW: 38.11 (ft from MP)
Depth to Bottom: 144.74 (ft from MP)
Pump Intake Depth: 134 (ft from MP)
Well depth as installed: 142 (ft bgs)
Screen interval (range): 131-141 (ft bgs)

Purging start time: 12:01
Parameter stabalization (Y/N): Y
Two hour time limit reached (Y/N): N
Sample time: 13:40
Total volume purged (gals): ~2 (pre-sample)
Time at purge completion: 15:09

Equipment Vendor: PINE
Pump Type: Bladder
Turbidity Meter: HACH 2100Q
Serial #: 21010D000025
Multimeter: YSIProPlus
Serial #: 18D100093

Notes (Initial PID reading, SOP deviations, etc.): Hard to disccern true bottom due to depth of well

Lab Analyses: VOC, VPH, PAH, Metals

QC Info (Duplicate, MS/MSD): MS/MSD collected

Clock Time	Bladder Pump Discharge/ Refill	Purge Rate	Depth to Water	Draw down	Cum. Draw down	Temp ±3%	Spec. Cond. ±3%	pH ±0.1	ORP ±10	DO ±10% if >0.5 mg/L	Turbidity ±10% if >5 NTU	Comments/Gas Pressure/Observations	Stability Calculator (auto)
HHMM	sec./sec. or setting	ml/min	ft. below MP	ft.	ft.	°C	µS/cm[c]		mV	mg/L	NTU		
12:01	40/20	100	38.16									mild sulfur odor	
12:35	40/20	100	38.14	-0.02	-0.02	10.60	367.5	6.66	202.9	9.10	43.2		
12:40	40/20	100	38.09	-0.05	-0.07	11.10	365.4	6.71	207.9	9.13	27.6		
12:45	40/20	100	38.09	0.00	-0.07	11.00	360.4	6.73	212.1	8.75	22.9		Not Stable
12:50	40/20	100	38.09	0.00	-0.07	11.40	364.7	6.75	220.9	9.40	19.4		Not Stable
12:55	40/20	100	38.09	0.00	-0.07	11.20	364.6	6.77	228.7	8.69	21.2		Not Stable
13:00	40/20	100	38.09	0.00	-0.07	10.60	362.2	6.81	235.9	9.09	10.9		Not Stable
13:05	40/20	100	38.09	0.00	-0.07	10.60	361.3	6.81	244.3	9.13	9.62		Not Stable
13:10	40/20	100	38.09	0.00	-0.07	10.40	363.5	6.82	253.3	9.16	9.88		Not Stable
13:15	40/20	100	38.09	0.00	-0.07	10.30	370	6.84	260.7	9.58	9.54		Not Stable
13:20	40/20	100	38.09	0.00	-0.07	10.30	371.3	6.86	266.6	10.01	9.19		Not Stable
13:25	40/20	100	38.09	0.00	-0.07	10.40	373.5	6.88	273.4	10.63	8.76		Not Stable
13:30	40/20	100	38.09	0.00	-0.07	10.30	374.5	6.90	279.2	10.89	8.03		Not Stable
13:35	40/20	100	38.09	0.00	-0.07	10.20	372.9	6.91	283.1	11.22	8.11		Stable

Low-Flow Field Log

Nobis — Engineering a Sustainable Future

Date: 7/20/2021

Site Name: Former LO-58
Job Number: 2102.0110
Sampler: S. MacCarter

Well ID: **MW-02**
Sample ID: MW-02-SUMMER2021 & MW-FD-SUMMER2021
Reviewed By: M. Simoneau

Measurement Reference Point (MP): Top PVC (PVC, Casing, Ground, etc.)
Depth to GW: 44.32 (ft from MP)
Depth to Bottom: 61.64 (ft from MP)
Pump Intake Depth: 57 (ft from MP)
Well depth as installed: 62 (ft bgs)
Screen interval (range): 50-60 (ft bgs)

Purging start time: 10:55
Parameter stabalization (Y/N): Y
Two hour time limit reached (Y/N): N
Sample time: 11:38
Total volume purged (gals): ~1.5 (pre-sample)
Time at purge completion: 12:28

Equipment Vendor: PINE
Pump Type: Bladder
Turbidity Meter: HACH 2100Q
Serial #: 21010D000025
Multimeter: YSIProPlus
Serial #: 18D100093

Notes (Initial PID reading, SOP deviations, etc.): FD assigned sample time 12:15

Lab Analyses: VOC, VPH, PAH, Metals

QC Info (Duplicate, MS/MSD): Field duplicate (FD) collected

Clock Time	Bladder Pump Discharge/ Refill	Purge Rate	Depth to Water	Draw down	Cum. Draw down	Temp ±3%	Spec. Cond. ±3%	pH ±0.1	ORP ±10	DO ±10% if >0.5 mg/L	Turbidity ±10% if >5 NTU	Comments/Gas Pressure/Observations	Stability Calculator (auto)
HHMM	sec./sec. or setting	ml/min	ft. below MP	ft.	ft.	°C	µS/cm[c]		mV	mg/L	NTU		
11:03	10/5	100	44.86										
11:08	10/5	100	45.20	0.34	0.34	11.00	516	7.64	356.2	11.97	2.93		
11:13	10/5	100	45.40	0.20	0.54	11.11	518	7.57	358.3	11.48	1.04		
11:18	10/5	100	45.30	-0.10	0.44	11.42	519	7.57	358.8	11.40	0.83		Not Stable
11:23	10/5	100	45.03	-0.27	0.17	10.90	518	7.56	359.2	11.21	0.62		Not Stable
11:28	10/5	100	44.76	-0.27	-0.10	10.80	517	7.56	359.5	11.04	0.77		Not Stable
11:33	10/5	100	44.85	0.09	-0.01	11.00	517	7.55	359.6	10.73	0.58		Stable

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Low-Flow Field Log

Nobis — Engineering a Sustainable Future

Date: 7/20/2021

Site Name: Former LO-58
Job Number: 2102.0110
Sampler: S. MacCarter

Well ID: **MW-03**
Sample ID: MW-03-SUMMER2021
Reviewed By: M. Simoneau

Measurement Reference Point (MP): Top PVC (PVC, Casing, Ground, etc.)
Depth to GW: 29.74 (ft from MP)
Depth to Bottom: 48.84 (ft from MP)
Pump Intake Depth: 45 (ft from MP)
Well depth as installed: 47 (ft bgs)
Screen interval (range): 36-46 (ft bgs)

Purging start time: 14:48
Parameter stabalization (Y/N): Y
Two hour time limit reached (Y/N): N
Sample time: 15:38
Total volume purged (gals): ~2.5 (pre-sample)
Time at purge completion: 15:55

Equipment Vendor: PINE
Pump Type: Bladder
Turbidity Meter: Hach 2100Q
Serial #: 21010D000025
Multimeter: YSI ProPlus
Serial #: 18D100093

Notes (Initial PID reading, SOP deviations, etc.):

Lab Analyses: VOC, VPH, PAH, Metals
QC Info (Duplicate, MS/MSD): None

Clock Time	Bladder Pump Discharge/ Refill	Purge Rate	Depth to Water	Draw down	Cum. Draw down	Temp ±3%	Spec. Cond. ±3%	pH ±0.1	ORP ±10	DO ±10% if >0.5 mg/L	Turbidity ±10% if >5 NTU	Comments/Gas Pressure/Observations	Stability Calculator (auto)
HHMM	sec./sec. or setting	ml/min	ft. below MP	ft.	ft.	°C	µS/cm[c]		mV	mg/L	NTU		
14:58	10/5	200	29.78										
15:03	10/5	100	29.78	0.00	0.00	10.70	434	7.54	355.3	10.21	5.21		
15:08	10/5	100	29.78	0.00	0.00	11.10	445	7.51	356.2	10.07	3.66		
15:13	10/5	100	29.78	0.00	0.00	10.50	444	7.52	356	9.89	2.44		Not Stable
15:18	10/5	150	29.78	0.00	0.00	10.50	445	7.53	356.2	9.71	1.96		Not Stable
15:23	10/5	150	29.78	0.00	0.00	9.60	446	7.54	356.4	9.85	1.07		Not Stable
15:28	10/5	150	29.78	0.00	0.00	9.50	447	7.54	356.9	9.86	0.9		Not Stable
15:33	10/5	150	29.78	0.00	0.00	9.60	444	7.55	357.7	9.74	1.85		Stable

SOP No: SA-003 Draft Revision: 4

Low-Flow Field Log

Nobis — Engineering a Sustainable Future

Site Name:	Former LO-58	Date:	7/21/2021
Job Number:	2102.0110	Page:	1 of 1
Sampler:	C. Pyra	**Well ID:**	**MW-04**
		Sample ID:	MW-04-SUMMER2021
		Reviewed By:	M Simoneau

Measurement Reference Point (MP):	Top PVC (PVC, Casing, Ground, etc.)	Purging start time:	15:35
Depth to GW:	49.53 (ft from MP)	Parameter stabalization (Y/N):	Y
Depth to Bottom:	82.88 * (ft from MP)	Two hour time limit reached (Y/N):	N
Pump Intake Depth:	78 (ft from MP)	Sample time:	16:25
Well depth as installed:	82 (ft bgs)	Total volume purged (gals):	~2.25 (pre-sample)
Screen interval (range):	70-80 (ft bgs)	Time at purge completion:	16:30

Equipment Vendor:	PINE	Turbidity Meter:	Hach 2100Q	Multimeter:	YSI ProPlus
Pump Type:	Bladder	Serial #:	18010C063835	Serial #:	18J103063

Notes (Initial PID reading, SOP deviations, etc.): * = Total well depth field measurement error, use same measurement as December 2020 field event of 82.88 ft from MP

Lab Analyses: VOC, VPH, PAH, Metals

QC Info (Duplicate, MS/MSD): None

Clock Time	Bladder Pump Discharge/ Refill	Purge Rate	Depth to Water	Draw down	Cum. Draw down	Temp ±3%	Spec. Cond. ±3%	pH ±0.1	ORP ±10	DO ±10% if >0.5 mg/L	Turbidity ±10% if >5 NTU	Comments/Gas Pressure/Observations	Stability Calculator (auto)
HHMM	sec./sec. or setting	ml/min	ft. below MP	ft.	ft.	°C	µS/cm[c]		mV	mg/L	NTU		
15:35	10/5	100	49.53										
15:40	10/5	100	49.50	-0.03	-0.03	8.90	566.5	7.39	219.5	9.90	31.3		
15:45	10/5	100	48.50	0.00	0.00	8.80	590.1	7.53	222.9	9.40	28.4		
15:50	10/5	100	48.50	0.00	0.00	8.50	596	7.61	228.1	9.50	23.0		Not Stable
15:55	10/5	100	48.50	0.00	0.00	8.50	594.8	7.64	232.1	9.00	19.3		Not Stable
16:00	10/5	100	48.50	0.00	0.00	8.50	596.1	7.69	237	8.90	12.4		Not Stable
16:05	10/5	100	48.50	0.00	0.00	8.40	596	7.70	242	8.80	7.74		Not Stable
16:10	10/5	100	48.50	0.00	0.00	8.30	597.2	7.78	243.1	8.50	4.93		Not Stable
16:15	10/5	100	48.50	0.00	0.00	8.40	597.4	7.78	243.9	8.50	4.89		Not Stable
16:20	10/5	100	48.50	0.00	0.00	8.40	597.8	7.80	244.2	8.40	4.71		Stable

SOP No: SA-003 Draft Revision: 4

Low-Flow Field Log

Engineering a Sustainable Future

Site Name: Former LO-58
Job Number: 2102.0110
Sampler: C. Pyra

Date: 7/21/2021

Well ID: **MW-05**
Sample ID: MW-05-SUMMER2021
Reviewed By: M. Simoneau

Measurement Reference Point (MP): Top PVC (PVC, Casing, Ground, etc.)
Depth to GW: 35.06 (ft from MP)
Depth to Bottom: 79.51 (ft from MP)
Pump Intake Depth: 75 (ft from MP)
Well depth as installed: 82 (ft bgs)
Screen interval (range): 70-80 (ft bgs)

Purging start time: 10:27
Parameter stabalization (Y/N): Y
Two hour time limit reached (Y/N): N
Sample time: 12:30
Total volume purged (gals): ~3.70 (pre-sample)
Time at purge completion: 13:00

Equipment Vendor: PINE
Pump Type: Bladder
Turbidity Meter: Hach 2100Q
Serial #: 18010C063835
Multimeter: YSI ProPlus
Serial #: 18J103063

Notes (Initial PID reading, SOP deviations, etc.):

Lab Analyses: VOC, VPH, PAH, Metals
QC Info (Duplicate, MS/MSD): None

Clock Time	Bladder Pump Discharge/ Refill	Purge Rate	Depth to Water	Draw down	Cum. Draw down	Temp ±3%	Spec. Cond. ±3%	pH ±0.1	ORP ±10	DO ±10% if >0.5 mg/L	Turbidity ±10% if >5 NTU	Comments/Gas Pressure/Observations	Stability Calculator (auto)
HHMM	sec./sec. or setting	ml/min	ft. below MP	ft.	ft.	°C	µS/cm[c]		mV	mg/L	NTU		
10:30	10/5	100	35.33										
10:35	10/5	100	35.33	0.00	0.00	8.40	549.3	7.17	230.8	0.70	12.4		
10:40	10/5	100	35.33	0.00	0.00	8.40	556.1	7.30	192.3	0.80	9.12		
10:45	10/5	100	35.33	0.00	0.00	8.20	557.2	7.35	164.5	0.50	7.31		Not Stable
10:50	10/5	100	35.33	0.00	0.00	8.20	551.1	7.39	126.1	0.50	4.69		Not Stable
10:55	10/5	100	35.33	0.00	0.00	8.10	552	7.41	101.2	0.60	4.1		Not Stable
11:00	10/5	100	35.33	0.00	0.00	8.00	555.1	7.45	54.1	0.30	3.63		Not Stable
11:05	10/5	100	35.33	0.00	0.00	8.00	557	7.48	44.9	0.30	3.25		Not Stable
11:10	10/5	100	35.33	0.00	0.00	8.00	559.1	7.50	33.9	0.30	3.48		Not Stable
11:15	10/5	100	35.33	0.00	0.00	8.00	560.1	7.53	13.3	0.30	3.8		Not Stable
11:20	10/5	100	35.33	0.00	0.00	8.00	561.1	7.55	8.8	0.30	3.1		Not Stable
11:25	10/5	100	35.33	0.00	0.00	8.00	562.7	7.58	3.1	0.30	2.88		Not Stable
11:30	10/5	100	35.33	0.00	0.00	8.00	565.1	7.58	-2.3	0.20	2.85		Not Stable
11:35	10/5	100	35.33	0.00	0.00	8.00	566.3	7.58	-13.2	0.20	2.8		Not Stable
11:40	10/5	100	35.33	0.00	0.00	8.00	566.9	7.59	-16.2	0.20	2.9		Not Stable
11:45	10/5	100	35.33	0.00	0.00	8.00	567.3	7.60	19.5	0.20	2.89		Not Stable
11:50	10/5	100	35.33	0.00	0.00	8.00	568	7.61	-22.8	0.20	2.83		Not Stable

Low-Flow Field Log

Nobis — Engineering a Sustainable Future

Site Name:	Former LO-58	Date:	7/21/2021
Job Number:	2102.0110	Page:	2 of 2
Sampler:	C. Pyra	**Well ID:**	**MW-05**
		Sample ID:	MW-05-SUMMER2021
		Reviewed By:	M. Simoneau

Measurement Reference Point (MP): Top PVC (PVC, Casing, Ground, etc.)
Depth to GW: 35.06 (ft from MP)
Depth to Bottom: 79.51 (ft from MP)
Pump Intake Depth: 75 (ft from MP)
Well depth as installed: 82 (ft bgs)
Screen interval (range): 70-80 (ft bgs)

Purging start time: 10:27
Parameter stabalization (Y/N): Y
Two hour time limit reached (Y/N): N
Sample time: 12:30
Total volume purged (gals): ~3.70 (pre-sample)
Time at purge completion: 13:00

Equipment Vendor: PINE
Pump Type: Bladder
Turbidity Meter: Hach 2100Q
Serial #: 18010C063835
Multimeter: YSI ProPlus
Serial #: 18J103063

Notes (Initial PID reading, SOP deviations, etc.): 0

Lab Analyses: VOC, VPH, PAH, Metals

QC Info (Duplicate, MS/MSD): None

Clock Time	Bladder Pump Discharge/ Refill	Purge Rate	Depth to Water	Draw down	Cum. Draw down	Temp ±3%	Spec. Cond. ±3%	pH ±0.1	ORP ±10	DO ±10% if >0.5 mg/L	Turbidity ±10% if >5 NTU	Comments/Gas Pressure/Observations	Stability Calculator (auto)
HHMM	sec./sec. or setting	ml/min	ft. below MP	ft.	ft.	oC	µS/cm		mV	mg/L	NTU		
11:55	10/5	100	35.33	0.00	0.00	8.10	5.69	7.68	-24.5	0.20	2.84		Not Stable
12:00	10/5	100	35.33	0.00	0.00	8.20	570	7.70	-29.3	0.20	2.82		Not Stable
12:05	10/5	100	35.33	0.00	0.00	8.20	570.4	7.73	-33.6	0.20	2.8		Not Stable
12:10	10/5	100	35.33	0.00	0.00	8.20	571	7.73	-36.8	0.20	2.79		Stable
12:15	10/5	100	35.33	0.00	0.00	8.20	571.5	7.73	-37.8	0.20	2.7		Stable
12:20	10/5	100	35.33	0.00	0.00	8.20	571.8	7.74	-30	0.20	2.67		Stable
12:25	10/5	100	35.33	0.00	0.00	8.30	572	7.74	-38.5	0.20	2.66		Stable
12:30	10/5	100	35.33	0.00	0.00	8.30	572.1	7.74	-39.1	0.20	2.66		Stable

SOP No: SA-003 Draft Revision: 4

Appendix C. Daily Contractor Reports

7-20-21 LO-58 AW / VI Sampling (143)

0815 NOBLS (J. Stalnaker) on-Site Craig County Environmental Already on-Site

0820 Verina (C. Pyfa, S. McCarter) On-Site

0830 H+S Briefing

0840 LYNN On-Site. Provides Key and Access to Buildings (AMAC)

0845 Discover MIL and EFF Ports are NOT Present, County to Contact Plumber to get them Installed Crew Working on Surveys of Building To Identify air Sampling Interference Materials, Shut down Air Purifiers, Locate SV-03 and SV-04 Locations County Confirming System Installation Locations and Pipe Runs.

0930 S. MacCarter Prepping For Air Sampling, Updated M. Hanson about AMAC Building. Plumber will be out this afternoon to Install Sample Ports. Confirm Video Survey Approach, locate 2 Locations to Install

0935 LYNN OFF-Site

Josh

Pg 1 of 4

(144) Lo-58 GW / VE 7-2-21

1000 Confirm Wood Floor is Present over Slab / Trenches in Former Generator Building (Control Room)

1045 County OFF-Site Collected 2 Samples For Asbestos Analysis 1 Floor Tile at SV-04, 1 Floor tile For Extraction Point

1055 S. MacCarter Begins Pursing MW-02. Will Be at F DUP Location

1110 J. Stewart Check in with S. MacCarter, drop off Sample Containers + ICE

C. Pyra Removing Materials Identified in AMAC Buildings as Potential Interference and Storing in Garage Building

1138 S.M. Collects MW-02, FDUP at 1215

1200 Discuss Asbestos issue with Mike. Call County to Cancel Samples

1215 County Plumbing on Site to Install Mid and Eff Ports at DW-01

1230 Assess Building to Try to Log

Find and Location For SV-04
and Extraction Point. No Viable
Location for SV-04 or Extraction Point
1245 Confirm with County That Installation
can Proceed if Tile is Removed.
1250 Call Mike Hansen we will install
SV-04 and Extraction Point After Removing
Tile. Sidewalk Tile is Not Pulled
By Hammer Drill or Chisel.
Mike Hansen APPROVES approach
1255 C. PYRA OFF-SITE to grab
Lunch
1305 County PLUMBING OFF-SITE
MIP & EFF Ports Installed
1310 S.C Decon Inc Bladder PUMP
1340 C.P On-Site from LUNCH
1410 S.C. Setting UP at MW-03
1425 I.S. Completed Dig Safe Markouts
and Can in Ticket #20212906936
1448 S.C Begin Purge at MW-03
1550 C.P Completes Removal of Interference Materials From The ANAC
Building. Begin Purge at Blvd
1538 S.C Collect MW-03-Summer-21

(146) Lo-58 GW/ VI 7-20-21

1620 C.P Test DW-01 water For Arsenic 0 — 0.5 ug/L

1625 S.M Doing Endow Dam Cal and Clean UP

1650 C.P and S.M Begin Collecting DW-01 Samples

1652 Collect DW-01-EFF-Summer2021

1705 Collect DW-01-MID-Summer2021

1715 Collect DW-01-INF-Summer2021 Sample is MS/MSD

1730 CP + SM End of day Cal and decon Pump + WL Meter JS Closing up AMAC Building

1615 NOBLS + Verina OFF-Site

0755 J. Stewart NOBIS on-site
Obj: Complete GW/DW Sampling
DW-02R, MW-01, MW-04, and MW-05
Wx: 60's Overcast and 1" Rain
0805 Call Roger to Set UP Access to
VFW. Leave 2nd Voice Mail
0810 Roger Calls Will Open VFW
around 1030 Today.
0815 C. Pyra on-site
0820 S. MacCarter on-site
0825 H+S Briefing
0840 C.P. + S.M Begin Morning Calls
0935 C.P + S.M Complete Morning Calls
will head out to Sample MW-01
(MS/MSD) and MW-05
0940 J.S OFF-Site To Pick UP
a POP UP Canopy
1045 J.S on-site. Check in with
Roger at VFW We have access For
the day
1100 Check on C.P + S.M.
CP on MW-05, S.M Prep
For MW-01. JS assists
1130 Robot Calls, USACE Requ
Sample IDs Change to "JUL4 202
From "Summer 2021"
Pg 1 of 2

-Josh

(148) LO-58 GW/VI 7-21-21

1200 S.M Begin Purge at MW-01
1215 Confirm DW-02R Sample Location
1230 Collect Sample MW-05-Summer2021
1320 CP OFF-Site for Lunch
1325 JS Begins Purge at DW-02R
1400 CP on-Site Collect Sample DW-02R-EFF (Mens Sink)
1415 Collect Sample DW-02R-INF
1430 Collect Sample DW-~~02R~~ FD-Summer 2021 at DW-02R INF
* 1340 Collect Sample MW-01 (MS/MSD)
1445 CP Begin Set UP at MW-04
1530 S.M Done at MW-01 Begin Breaking Down Setup, Decon Equip End of day Cal
1625 Collect Sample MW-04-Summer2021
S.M. Working on End of Day Cal and Clean Up of Low-Flow Sampling Equipment Not Needed for The Rest of the Event.
1640 CP Begin End of day Cal of Equipment.
1730 JS. C.P & S.M OFF-Site after Securing the Site Buildings

Pg 2 of 2

7-22-21 Lo-58 GW/VI (149)

0810 J. Stewart on-site
0820 S. MacCarter on-site
Obj: Install SV-03 and SV-04
Assess SV-01 and SV-02
Leak Test SV-01 ~~and~~ → SV-04
Prep for air Sampling
Wx 60-70 Mostly Sunny
0845 C. Pyra on-site
0850 H&S Briefing
0900 Begin Moving Items to Access SV-01 and SV-02
0915 JS off-site to Purchase I/O bit
0935 JS on-site with bit
0945 SV-01 + SV-02 Exposed
Both Locations appear Viable bases on a visual assessment
1010 Collect Equipment Blank From Bladder Pump
1015 CP Prep SV-03 + SV-04 Installation Areas
1130 SV-04 Installed
1150 SV-03 Installed SM prepping For Seal Check with He tracer
1200 ~~CP~~ off-site For Lunch
1220 JS off-site For Lunch

Pg 1 OF 2

Josh

(150) LO-58 GW/VI 7-22-21

1235 CP on-Site
1240 JS on-Site
1310 SM Setting up For Leak test at SV-01
1325 SV-01 PID = 2.1 PPM, Leak test Passed See Field Sheet
1345 SV-02 PID = 1.8 PPM, Leak Test Passed See Field Sheet
1405 SV-03 PID = 1.9 PPM, Leak Test Passed See Field Sheet
1420 SV-04 PID = 1.5 PPM, Leak Test Passed See Field Sheet
1430 Crew packing up Equipment
1445 JS Provides Training on how to Hook up Summas For Sub-Slab Samples
1455 Lock up Apmt buildings and Garage
1505 Off-Site Whole Crew
2030 Drop Samples Off at Lab
2230 JS Arrives at NOBIS office

Pg 2 of 2

U.S. Army Corps of Engineers

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT LOG

Former LO-58 NIKE Battery Launch Site, Caribou, Maine
FUDS Project No.: D01ME007702
NAE Project No: 108313
Contract No. W912WJ19C0019

WELL ID: MW-01 1746

DATE/TIME: 7/19/21

INSPECTED BY: S. Maclaine, C. Pyra

VENT WELL:

PHOTOIONIZATION DETECTOR (PID) READING (PPM) 1.0

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT:

WELL DEPTH (FEET FROM TOP OF PVC) 144.74 - 7/21/21

WATER LEVEL DEPTH (FEET FROM TOP OF PVC) 07.71

WELL STICKUP ~~1.66~~ -0.85 → 1.41 ↓ 1.66

CASING STICKUP (FEET) 2" PVC

WELL DIAMETER (INCHES)

WELL CONSTRUCTION (PVC, STEEL, ETC.) PVC, steel stickup

LOCKED UPON ARRIVAL?	☒	YES	☐	NO
LOCK REPLACED?	☐	YES	☒	NO
OBSTRUCTIONS?	☒	YES	☐	NO – well + debris removed.
WELL RELABELED?	☐	YES	☒	NO

GENERAL CONDITION/COMMENTS:
same, good, brushy
as last visit
overgrown brush

U.S. Army Corps of Engineers

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT LOG

Former LO-58 NIKE Battery Launch Site, Caribou, Maine
FUDS Project No.: D01ME007702
NAE Project No: 108313
Contract No. W912WJ19C0019

WELL ID: MW-02

DATE/TIME: 7/19/21 17:58

INSPECTED BY: S. MacCarter, C. Pyrq

VENT WELL:

PHOTOIONIZATION DETECTOR (PID) READING (PPM) 0.4

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT:

WELL DEPTH (FEET FROM TOP OF PVC)				@1.64 - 7/20/21
WATER LEVEL DEPTH (FEET FROM TOP OF PVC)				41.52
WELL STICKUP				-0.77 → 1.87
CASING STICKUP (FEET)				2.64
WELL DIAMETER (INCHES)				2" PVC
WELL CONSTRUCTION (PVC, STEEL, ETC.)				PVC, steel stickup.
LOCKED UPON ARRIVAL?	☐	YES	☐	NO
LOCK REPLACED?	☐	YES	☐	NO
OBSTRUCTIONS?	☒	YES	☐	NO - old tubing
WELL RELABELED?	☐	YES	☐	NO

GENERAL CONDITION/COMMENTS:

Same as last year, old tubing removed from well

U.S. Army Corps of Engineers

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT LOG

Former LO-58 NIKE Battery Launch Site, Caribou, Maine
FUDS Project No.: D01ME007702
NAE Project No: 108313
Contract No. W912WJ19C0019

WELL ID: MW-03

DATE/TIME: 7/19/21 17:15

INSPECTED BY: S. MacCarter

VENT WELL:

PHOTOIONIZATION DETECTOR (PID) READING (PPM) 0.2

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT:

WELL DEPTH (FEET FROM TOP OF PVC) 48.84 - 7/20/21

WATER LEVEL DEPTH (FEET FROM TOP OF PVC) 39.52

WELL STICKUP ~~4.13~~ 3.68

CASING STICKUP (FEET) ~~-0.45~~ 4.13

WELL DIAMETER (INCHES) 2"

WELL CONSTRUCTION (PVC, STEEL, ETC.) PVC, Steel stick-up

LOCKED UPON ARRIVAL?	☒	YES	☐	NO
LOCK REPLACED?	☐	YES	☒	NO
OBSTRUCTIONS?	☒	YES	☐	NO - dedicated tubing
WELL RELABELED?	☐	YES	☒	NO

GENERAL CONDITION/COMMENTS:

same as last year, old tubing removed from well

U.S. Army Corps of Engineers

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT LOG

Former LO-58 NIKE Battery Launch Site, Caribou, Maine
FUDS Project No.: D01ME007702
NAE Project No: 108313
Contract No. W912WJ19C0019

WELL ID: MW-04

DATE/TIME: 7/19/21 18:51

INSPECTED BY: C. Pyra, S. Maclaster

VENT WELL:

PHOTOIONIZATION DETECTOR (PID) READING (PPM) 0.0

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT:

WELL DEPTH (FEET FROM TOP OF PVC)	80.88* (Degraded)
WATER LEVEL DEPTH (FEET FROM TOP OF PVC)	49.48
WELL STICKUP	~~2.46~~ -0.41 / ~~2.05~~
CASING STICKUP (FEET)	2.46
WELL DIAMETER (INCHES)	2"
WELL CONSTRUCTION (PVC, STEEL, ETC.)	PVC, steel stickup.

LOCKED UPON ARRIVAL?	☒	YES	☐	NO
LOCK REPLACED?	☐	YES	☒	NO
OBSTRUCTIONS?	☒	YES	☐	NO tubing.
WELL RELABELED?	☐	YES	☒	NO

GENERAL CONDITION/COMMENTS:
missing inner cap, no mention of missing inner cap in last report, otherwise OK/same as last report

* Dec. 2020 measurement, measurement collected after low flow was erroneous.

U.S. Army Corps of Engineers

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT LOG

Former LO-58 NIKE Battery Launch Site, Caribou, Maine
FUDS Project No.: D01ME007702
NAE Project No: 108313
Contract No. W912WJ19C0019

WELL ID: MW-05

DATE/TIME: 7/19/21 16:36

INSPECTED BY: S. MacCarter

VENT WELL:

PHOTOIONIZATION DETECTOR (PID) READING (PPM) 0.0

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT:

WELL DEPTH (FEET FROM TOP OF PVC)	79.51 - 7/21/21
WATER LEVEL DEPTH (FEET FROM TOP OF PVC)	34.76
WELL STICKUP	NA
CASING STICKUP (FEET)	Flush mount
WELL DIAMETER (INCHES)	8"
WELL CONSTRUCTION (PVC, STEEL, ETC.)	PVC

LOCKED UPON ARRIVAL?	☒	YES	☐	NO
LOCK REPLACED?	☐	YES	☒	NO
OBSTRUCTIONS?	☒	YES	☐	NO
WELL RELABELED?	☐	YES	☒	NO

GENERAL CONDITION/COMMENTS:
dedicated tubing in well, removed. well condition same as last time

*PID reading = 0.0 + 100.6

U.S. Army Corps of Engineers

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT LOG

Former LO-58 NIKE Battery Launch Site, Caribou, Maine
FUDS Project No.: D01ME007702
NAE Project No: 108313
Contract No. W912WJ19C0019

WELL ID: MW-06

DATE/TIME: 7/19/21 ~~05~~ 12:87

INSPECTED BY: S. MacCarter

VENT WELL:

PHOTOIONIZATION DETECTOR (PID) READING (PPM) 0.0

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT:

WELL DEPTH (FEET FROM TOP OF PVC)	16.75
WATER LEVEL DEPTH (FEET FROM TOP OF PVC)	16.71
WELL STICKUP	~~2.~~ -0.11 → 2.70
CASING STICKUP (FEET)	2.81
WELL DIAMETER (INCHES)	1"
WELL CONSTRUCTION (PVC, STEEL, ETC.)	PVC, Steel stickup

LOCKED UPON ARRIVAL?	☒	YES	☐	NO
LOCK REPLACED?	☐	YES	☒	NO
OBSTRUCTIONS?	☐	YES	☒	NO
WELL RELABELED?	☐	YES	☒	NO

GENERAL CONDITION/COMMENTS:

Good, same as last time, not enough water to sample.

6:15 BAR 29.43 67.3F

VERINA Consulting Group, LLC

INDOOR/AMBIENT AIR SAMPLING LOG

Site Name: Former UCSB Job No.: 3102.C108

Personnel: S. MacCarter, C. Pyra Weather: sunny, breezy, 60s-70s

Cansiter Type: 6L Summa Sample Period: 24 hr

Sample ID	IA-01	IAFD	IA-02	AA-01		
Start Date	7/23/21 →			→		
Start Time	0915	"1000"	0930	0985		
Start Canister Pressure (in Hg)	-29.17	-29.88	-29.58	-29.63		
Start Temperature (F)	66.4	66.4	66.6	67.3		
Start Atmospheric Pressure (in Hg)	29.43 →	→	→	29.43		
End Date	7/24/21 →			→		
End Time	0915	"1000"	0930	0935		
End Canister Pressure (in Hg)	-8.82	-7.97	-7.80	-7.98		
End Temperature (F)	66.2	66.2	66.6	66.7		
End Atmospheric Pressure (in Hg)	29.47 →		29.47 →			
Min/Max Temperature (F)	66.4/66.2 →		66.6	46/71		
Min/Max A. Pressure (in Hg)	29.43/29.53 →			→		
Air Speed Range (mph)	NA →		→	0-12		
Indoor/Outdoor	in →		→	out		
Canister ID	can1973	can1818	can3303	can2649		
Flow Control ID	fc01465	fc03080	fc01700	fc01375		
Sample Height (ft)	~4.5	~4.5	~3.5	~3.5		

Comments: PID cal = 0.0 + 100.7

PID inside readings ~0.4 ppm - 0.5

FD is from IA-01, actually collected over same period as IA-01

VERINA
Consulting Group, LLC

SOIL GAS SAMPLING LOG

Project Name: Former LO-58
Project Number: 2102.0108
Date: 7/20/21 + 7/24/21
Personnel: 7/20 SM, CP, JS / 7/24 - SM + CP
Weather: see notes
Canister Type: 6L Silonite 1Silocans
Atmospheric Pressure (in Hg): sampling 7/24 -
Air Temperature (°F): sampling 7/24 -

Helium Tracer Leak Test Field Data — PID cal = 0.0 + 100.4

Sample Location/ Sample ID	Time	Cumulative Volume Purged (mL)	Helium Beneath Shroud-Max (% or ppm)	Helium Beneath Shroud-Min (% or ppm)	Helium in Tedlar Bag (% or ppm)	Helium Shround-Min to Tedlar Bag Comparison (% or ppm)	PID reading from Tedlar Bag (ppm)	PID reading from sampling port (ppm)	Pass or Fail?
SV-01	13:22	1L	41.2	25.4	250	0.1	2.1	1.9	Pass
SV-02	13:42	↓	46.8	34.0	75	0.02	1.8	1.5	↓
SV-03	13:57		37.1	25.5	25	0.01	1.9	2.0	
SV-04	14:07		38.1	28.1	25	0.01	1.5	1.8	

Conversion: 1.0% = 10,000 ppm
Example: 8.9% x 10,000 = 89,000 ppm
There should be no more than 10% of the beneath shroud minimum He value within the Tedlar bag.
Example: At 20% minimum He beneath shroud, there should be no more than 2% (20,000 ppm) He in Tedlar bag.

Sample Information — PID cal = 0.0 + 100.8 — done on 7/24

Sample Location/ Sample ID	Start Time	End Time	Canister ID	Flow Controller #	Initial Vacuum (in Hg)	Final Vacuum (in Hg)	Lab	PID (pre-sample purge)
SV-01	1050	1850	can 264	fc01170	-29.47	-6.88	Alpha	1.1
SV-02	1105	1905	can 1548	fc01655	-29.60	-7.30	↓	0.5
SV-03	1034	1834	can 1604	fc00558	-29.64	-7.22		0.4
SV-04	1050	1850	can 332	fc01772	-29.42	-7.72		0.6
FD	"1035"	1835	can 1582	fc01632	-29.50	-7.11	↓	

Comments:

Leak test on 7/20, sampling on 7/24. All points purged 3L prior to sampling. FD from SV-01, false time given

7/20 pressure readings from points were all 0.00

Appendix D. Laboratory Analytical Reports

VERINA CONSULTING GROUP, LLC
LO-58 NIKE MISSILE
BATTERY LAUNCH SITE
SO4723

KATAHDIN ANALYTICAL SERVICES
600 TECHNOLOGY WAY
SCARBOROUGH, ME 04074

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SAMPLE DATA PACKAGE

NARRATIVE
KATAHDIN ANALYTICAL SERVICES
VERINA CONSULTING GROUP, LLC
LO-58 NIKE MISSILE BATTERY LAUNCH SITE
SO4723

Sample Receipt

The following samples were received on July 22, 2021 and were logged in under Katahdin Analytical Services work order number SO4723 for a hardcopy due date of August 10, 2021.

KATAHDIN Sample No.	VERINA CONSULTING Sample Identification
SO4723-1	MW-01-SUMMER2021
SO4723-2	MW-02-SUMMER2021
SO4723-3	MW-03-SUMMER2021
SO4723-4	MW-04-SUMMER2021
SO4723-5	MW-05-SUMMER2021
SO4723-6	MW-FD-SUMMER2021
SO4723-7	GW-TB-SUMMER2021
SO4723-8	GW-EB-SUMMER2021

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

We certify that the test results provided in this report are accredited under the laboratory's ISO/IEC 17025:2017 and DoD-ELAP accreditation issued by the ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation L2223.

Analytes which are reported but not listed on our ANAB scope of accreditation will be "^" flagged and the following language will be included in the case narrative for all DoD compliant work: "^" Indicates this analyte is not included on Katahdin Analytical Services DoD-ELAP Scope of Accreditation.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Ms. Heather Manz**. This narrative is an integral part of the Report of Analysis.

Organics Analysis

The samples of Work Order SO4723 were analyzed in accordance with Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, EPA publication SW-846, Third Edition, Final Updates I (1993), II (1995), IIA (1994), IIB (1995), III (1997), IIIA (1999), IIIB (2005), IV (2008), and V (2015), and/or Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), MADEP, May 2004, Revision 1.1, and/or for the specific methods listed below or on the Report of Analysis.

Sample SO4723-1 was used for the matrix spike (MS) and matrix spike duplicate (MSD), as requested by the client.

8270D SIM Analysis

The independent check standard (file N3624) associated with the initial calibration on the N instrument on 07/28/2021 had a low concentration for the target analyte benzo(a)pyrene, which exceeded the DoD QSM acceptance limit of ±20% of the expected value from the ICAL. The Independent Check Report consists of the full list of spiked analytes, but only the client's list of target analytes are evaluated.
Note: The Form VII has a column for %D that is set to 20%. The DoD QSM 5.0 criterion for an opening CV is 20%D and a closing CV is 50%D. All of the compounds in the CV's were evaluated to either 20% criteria for opening CVs or 50% criteria for closing CVs.

MA VPH Analysis

Samples SO4723-5 and 7 was manually integrated for the surrogate 2,5-dibromotoluene on the PID and/or FID. The specific reasons for the manual integrations are indicated on the raw data by the manual integration codes (M1-M11). These codes are further explained in the attachment following this narrative.

8260C Analysis

Sample SO4723-2 was initially analyzed within hold time but was reanalyzed two days out of hold time due to a low response of the target analyte tetrachloroethene in the opening CV. The results for both analyses are reported.

Samples SO4723-3, 5, and 6 were initially analyzed within hold time. The opening CV had a low response of the target analyte tetrachloroethene. These samples had high recoveries for one surrogate that were outside of the DoD QSM acceptance limits. The samples were reanalyzed one or two days out of hold time. The results for both analyses are reported.

The laboratory method blank WG303527-2 had a high recovery for one surrogate, which was outside the DoD QSM acceptance limits. The target analyte methylene chloride was also detected below ½ of the LOQ in the method blank. According to the DoD QSM, a method blank is considered to be contaminated if the concentration of any target analyte in the blank exceeds ½ the reporting limit and is greater than 1/10 the amount measured in any associated sample or 1/10 the regulatory limit (whichever is greater). The associated samples were reanalyzed.

The target analyte methylene chloride was detected below ½ of the LOQ in the method blank WG303781-2. According to the DoD QSM, a method blank is considered to be contaminated if the concentration of any target analyte in the blank exceeds ½ the reporting limit and is greater than 1/10 the amount measured in any associated sample or 1/10 the regulatory limit (whichever is greater). Since the method blank was acceptable, no further action was taken.

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCSs) are based on the DoD QSM for the full list of spiked compounds and laboratory established acceptance limits for all other analytes. The recoveries of the spiked analytes in the LCS, Laboratory Control Sample Duplicate (LCSD), Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are compared to these acceptance limits. Katahdin standard operating procedure is to take corrective action only if the number of spiked analytes in the LCS that are outside of the QC limits is greater than the DoD QSM allowable number of exceedances. If the associated MS/MSD has greater than the allowable number of exceedances, no corrective action is taken, as long as the LCS is acceptable.

The opening CV (file W9696) had a low response for the target analyte tetrachloroethene that resulted in a %D that exceeded the DoD QSM acceptance limit of ±20%. The associated samples were reanalyzed.

The independent check standard (file T2691A) associated with the initial calibration (ICAL) analyzed on 08/04/2021 had high concentrations for the target analytes acetone and 2-butanone. The independent check standard (file W9628A) associated with the initial calibration on 07/28/2021 had high concentrations for the target analytes chloroethane and carbon disulfide. These concentrations exceeded the DoD QSM acceptance limit of ±20% of the expected value from the ICAL. The Independent Check Report consists of the full list of spiked analytes, but only the client's list of target analytes are evaluated.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples associated with Katahdin Work Order SO4723 were prepared and analyzed for metals in accordance with "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA publication SW846, Third Edition, Final Updates I (1993), II (1995), IIA (1994), IIB (1995), III (1997), IIIA (1999), IIIB (2005), IV (2008), and V (2015), Office of Solid Waste and Emergency Response, U.S. EPA.

Inductively-Coupled Plasma Mass Spectrometric Analysis (ICP-MS)

Aqueous-matrix Katahdin Sample Numbers SO4723-(1-6 and 8) were originally digested for ICP-MS analysis on 07/29/21 (QC Batch OG29IMW2) in accordance with USEPA Method 3010A. Per client request, Katahdin Sample Number SO4723-1 was digested with duplicate matrix-spiked aliquots. Due to QC failures for copper, silver, and zinc, the samples were re-digested on 09/23/21 (QC Batch OI23IMW2). The measured copper concentration in the preparation blank associated with this re-digestion batch was above project acceptance criteria. After consultation with the client, the copper results were reported with narration and flagged with a "B" qualifier to indicate blank contamination. These re-digestates are identified on sample preparation logbooks, analysis run logs, and throughout the raw data by the suffix "R" appended to the Katahdin Sample Number, e.g. "SO4723-001R".

ICP-MS analyses of Katahdin Work Order SO4723 sample digestates were performed using an Agilent 7800 ICP-MS spectrometer in accordance with USEPA Method 6020A. Results for all standards and samples are reported using the mean of 3 replicate measurements. All sample digestates were diluted by a factor of 5 during analysis to reduce mass interferences from chlorine, which is present in the digestates from the hydrochloric acid used in digesting the samples. All samples were analyzed within holding times and all analytical run QC criteria were met, with the following exception:

The ICSA standard analyzed in analytical batch LOI24A was outside laboratory acceptance criteria for copper. After consultation with the client, the copper results were reported with narration.

Internal standard recoveries for ICP-MS analyses can be found in the raw data section of the accompanying data package. The following table indicates which analytes are associated with each internal standard element.

Internal Standard Element	**Associated Analytes**
Lithium	Beryllium, Boron
Scandium	Sodium, Magnesium, Aluminum, Potassium, Calcium
Germanium or Yttrium	Vanadium, Chromium, Manganese, Iron, Cobalt, Nickel, Copper, Zinc, Arsenic, Selenium, Silver, Cadmium, Strontium, Molybdenum
Terbium	Antimony, Barium, Tin, Tungsten
Bismuth	Lead, Thallium, Thorium, Uranium

Instrument tuning information can also be found in the raw data section in the reports labeled "USEPA Method Tune Report". For Method 6020A, the relative standard deviation was determined from 5 replicate measurements and the peak width was measured at 10% of the peak height.

Analysis of Mercury by Cold Vapor Atomic Absorption (CVAA)

Aqueous-matrix Katahdin Sample Numbers SO4723-(1-6 and 8) were digested for mercury analysis on 07/27/21 (QC Batch OG27HGW2) in accordance with USEPA Method 7470A. Per client request, Katahdin Sample Number SO4723-1 was digested with duplicate matrix-spiked aliquots.

Mercury analyses of the Katahdin Work Order SO4723 sample digestates were performed using a Cetac M6100 automated mercury analyzer in accordance with USEPA Method 7470A. All samples were analyzed within holding times and all analytical run QC criteria were met.

Matrix QC Summary

The measured recoveries of antimony, arsenic, calcium, chromium, lead, manganese, and nickel in one or both of the matrix spiked aliquots of Katahdin Sample Number SO4723-1 are outside the laboratory's acceptance limits. Because the recoveries of all analytes in the laboratory control sample are within acceptance limits, no corrective action was required.

The measured recoveries of calcium and mercury in the post-digestion spiked aliquot of Katahdin Sample Number SO4723-1 are outside laboratory acceptance criteria (80%-120% recovery of the added element).

Reporting of Metals Results

Per client request, analytical results for client samples on Form I and preparation blanks on Form IIIP have been reported using the laboratory's limits of detection (LOD). All results were evaluated down to the laboratory's method detection limits (MDLs). Results that fall between the MDL and the LOQ are flagged with "J" in the C-qualifier column, and the measured concentration appears in the concentration column. Results that are less than the MDL are flagged with "U" in the C-qualifier column, and the LOD is listed in the concentration column. These LOQs, MDLs and LODs have been adjusted for each sample based on the sample amounts used in preparation and analysis.

Analytical results on Forms VA, VD, VII, and IX for client samples, matrix QC samples (duplicates and matrix spikes), and laboratory control samples have been reported down to the laboratory's method detection limits (MDLs). Analytical results that are below the MDLs are flagged with "U" in the C-qualifier column, and the adjusted LOD is listed in the concentration column.

Analytical results for instrument run QC samples (ICVs, ICBs, etc.) have been reported down to the laboratory's instrument detection limits (IDLs).

IDLs, LODs, MDLs, and LOQs are listed on Form 10 of the accompanying data package.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Quality Assurance Officer, or their designee, as verified by the following signature.

Leslie Dimond ***Oct 01, 2021***

Leslie Dimond
Quality Assurance Officer

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

Katahdin Analytical Services, LLC. Sample Receipt Condition Report

Client: Verina / Nobis	KAS PM: HHM	Sampled By: Client
Project:	KIMS Entry By: GM	Delivered By: Client
KAS Work Order#: 504723 / 504724	KIMS Review By: HHM	Received By: MF
	Labeled By: GM	
SDG #:	Cooler: 1 of 4	Date/Time Rec.: 7-22-21 / 2030

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		✓			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 1.1 Thermometer ID: IR-1
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals (except Hg soil) analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) or insufficient ice may not meet certain regulatory requirements and may invalidate certain data.
If yes, was there sufficient ice to meet temperature requirements?	✓				
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals (except Hg soil) analysis.
6. Volatiles: **Aqueous:** No bubble larger than a pea?	✓				
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
D.I. Water - Received within 48 hour HT?				✓	
7. Trip Blank present in cooler?	✓				
8. Proper sample containers and volume?	✓			✓	
9. Samples within hold time upon receipt?	✓			✓	
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2	✓				
Sulfide - >9				✓	
Cyanide – pH >12				✓	
11. Bottleware Prepped on:					

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments.

DW-TB & GW-TB received VPH vials, VPH not checked off on COC.

Katahdin Analytical Services, LLC. Sample Receipt Condition Report

Client: Verina / Nobis	KAS PM: HHM	Sampled By: Client	
Project:	KIMS Entry By: GN	Delivered By: Client	
KAS Work Order#: 504723 / 504724	KIMS Review By: HHM	Received By: MF	
	Labeled By: GM		
SDG #:	Cooler: 2 of 4	Date/Time Rec.: 7-22-21 / 2030	

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		✓			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	/				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 4.0 — Thermometer ID: IR-1
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals (except Hg soil) analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) or insufficient ice may not meet certain regulatory requirements and may invalidate certain data.
If yes, was there sufficient ice to meet temperature requirements?	✓				
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals (except Hg soil) analysis.
6. Volatiles:					
Aqueous: No bubble larger than a pea?	✓				
Soil/Sediment:					
Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
D.I. Water - Received within 48 hour HT?				✓	
7. Trip Blank present in cooler?		✓			
8. Proper sample containers and volume?	/				
9. Samples within hold time upon receipt?	/				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2				/	
Sulfide - >9				/	
Cyanide – pH >12				/	
11. Bottleware Prepped on:					

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments.

Katahdin Analytical Services, LLC. — Sample Receipt Condition Report

Client: Verina / Nobis	KAS PM: HHM	Sampled By: Client
Project:	KIMS Entry By: GM	Delivered By: Client
KAS Work Order#: 504723 / 504724	KIMS Review By: HHM	Received By: MF
	Labeled By: GM	
SDG #:	Cooler: 3 of 4	Date/Time Rec.: 7-22-21 / 2030

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		✓			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	/				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 6.0 — Thermometer ID: IR-1
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals (except Hg soil) analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) or insufficient ice may not meet certain regulatory requirements and may invalidate certain data.
If yes, was there sufficient ice to meet temperature requirements?	✓				
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals (except Hg soil) analysis.
6. Volatiles: **Aqueous:** No bubble larger than a pea?	✓				
Soil/Sediment:					
Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
D.I. Water - Received within 48 hour HT?				✓	
7. Trip Blank present in cooler?		✓			
8. Proper sample containers and volume?	/				
9. Samples within hold time upon receipt?	/				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2	/				
Sulfide - >9				/	
Cyanide – pH >12				/	
11. Bottleware Prepped on:					

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments.

Katahdin Analytical Services, LLC. — Sample Receipt Condition Report

Client: Verina / Nobis	KAS PM: HHM	Sampled By: Client
Project:	KIMS Entry By: GN	Delivered By: Client
KAS Work Order#: 504723 / 504724	KIMS Review By: HHM	Received By: MF
	Labeled By: GN	
SDG #:	Cooler: 4 of 4	Date/Time Rec.: 7-22-21 / 2030

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		✓			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	/				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 3.1 — Thermometer ID: IR-1
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals (except Hg soil) analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) or insufficient ice may not meet certain regulatory requirements and may invalidate certain data.
If yes, was there sufficient ice to meet temperature requirements?	✓				
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals (except Hg soil) analysis.
6. Volatiles: **Aqueous:** No bubble larger than a pea?	✓				
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
D.I. Water - Received within 48 hour HT?				✓	
7. Trip Blank present in cooler?		✓			
8. Proper sample containers and volume?	/				
9. Samples within hold time upon receipt?	/				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2	/				
Sulfide - >9				/	
Cyanide – pH >12				/	
11. Bottleware Prepped on:					

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments.

CHAIN-OF-CUSTODY RECORD

Verina Consulting Group, LLC, Bridgewater, NJ
Robert Gan
1011 US-22, Bridgewater Township, NJ 08807
(908) 864-4400, RGan@vcg-llc.com

COC # 072021-GWDW

Project Name: D01ME0077-02, Nike 58 - SI in Launch Area	Laboratory: Katahdin Analytical Services, Scarborough, ME	Event: Nike 58 Summer Groundwater 2021 Sampling
Project Number: D01ME0077-02	POC: Heather Manz, (207) 874-2400, hmanz@katahdinlab.com	
WBS Code:	Ship to: 600 Technology Way, Scarborough, ME 04074	

Comments:
BNASIM (A) = PAH 8270 SIM
E524.2 (A) = VOCs DW
MADEPVP (A) = MADEP VPH
SW6020A (A) = 13 PP Metals
SW7470A (A) = Mercury Water
SW8260C (A) = VOCs GW

504724

Equipment:

Code	Matrix
WG	Ground Water
WP	Drinking Water

Code	Container/Preservative
1	3x 40 mL Vials with PTFE lined Septum Caps, HCL to pH < 2, Cool to 4degC ± 2 degC
6	2x 1 L Amber glass bottle with Teflon lined cap, Cool to 0deg to 6 degC, protected from light, in sealed vials with PTFE-lined septa
12	2x 40-mL vials w/Teflon lined septa screw caps, Add 3 to 4 drops of 1:1 HCL to pH < 2, Cool to 4degC ± 2 degC
13	1x 250 mL PTFE, plastic, HNO3 to pH < 2
13	1x Plastic or Glass, Aqueous samples must be acidified to a pH < 2 with HNO3
31	3x 40 mL Vials with PTFE lined Septum Caps, HCL to pH < 2, Cool to 4degC ± 2 degC

Event: Nike 58 Summer Groundwater 2021 Sampling

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: BNASIM (A)	E524.2 (A)	MADEPVP (A)	SW6020A (A)	SW7470A (A)	SW8260C (A)					Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						6	31	12	13	13	1										
1	DW-01-EFF-SUMMER2021	WP	7/20/2021	1652	CP	X	X	X	X	X						DW-01-EFF	N1	0.00	0.00	1	SDG - 1
2	DW-01-INF-SUMMER2021	WP	7/20/2021	1715	CP	X	X	X	X	X						DW-01-INF	N1	0.00	0.00	1	
3	DW-01-INF-SUMMER2021-MS	WP	7/20/2021	1715	CP	X	X	X	X	X						DW-01-INF	MS1	0.00	0.00	1	
4	DW-01-INF-SUMMER2021-MSD	WP	7/20/2021	1715	CP	X	X	X	X	X						DW-01-INF	SD1	0.00	0.00	1	
5	DW-01-MID-SUMMER2021	WP	7/20/2021	1705	CP	X	X	X	X	X						DW-01-MID	N1	0.00	0.00	1	
6	DW-02R-EFF-SUMMER2021	WP	7/21/2021	1400	JS	X	X	X	X	X						DW-02R-EFF	N1	0.00	0.00	1	
7	DW-02R-INF-SUMMER2021	WP	7/21/2021	1415	JS	X	X	X	X	X						DW-02R-INF	N1	0.00	0.00	1	
8	DW-FD-SUMMER2021	WP	7/21/2021	1430	JS	X	X	X	X	X							FD1	0.00	0.00	1	

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
[signature]	7-22-21		[signature]	7-22-21	8:30 pm

Shipping Date / Carrier / Airbill Number
Shipping Date:

Received by Laboratory: *(Signature, Date, Time)* **& condition**
[signature] 7-22-21 8:30 pm

00000012

CHAIN-OF-CUSTODY RECORD

Verina Consulting Group, LLC, Bridgewater, NJ
Robert Gan
1011 US-22, Bridgewater Township, NJ 08807
(908) 864-4400, RGan@vcg-llc.com

COC # 072021-GWDW

Project Name: D01ME0077-02, Nike 58 - SI in Launch Area	Laboratory: Katahdin Analytical Services, Scarborough, ME	Event: Nike 58 Summer Groundwater 2021 Sampling
Project Number: D01ME0077-02	POC: Heather Manz, (207) 874-2400, hmanz@katahdinlab.com	
WBS Code:	Ship to: 600 Technology Way, Scarborough, ME 04074	

Comments:
BNASIM (A) = PAH 8270 SIM
E524.2 (A) = VOCs DW
MADEPVP (A) = MADEP VPH
SW6020A (A) = 13 PP Metals
SW7470A (A) = Mercury Water
SW8260C (A) = VOCs GW

S04724

Equipment:

Code	Matrix
WG	Ground Water
WP	Drinking Water

Code	Container/Preservative
1	3x 40 mL Vials with PTFE lined Septum Caps, HCL to pH < 2, Cool to 4degC ± 2 degC
6	2x 1 L Amber glass bottle with Teflon lined cap, Cool to 0deg to 6 degC, protected from light, in sealed vials with PTFE-lined septa
12	2x 40-mL vials w/Teflon lined septa screw caps, Add 3 to 4 drops of 1:1 HCL to pH < 2, Cool to 4degC ± 2 degC
13	1x 250 mL PTFE, plastic, HNO3 to pH < 2
13	1x Plastic or Glass, Aqueous samples must be acidified to a pH < 2 with HNO3
31	3x 40 mL Vials with PTFE lined Septum Caps, HCL to pH < 2, Cool to 4degC ± 2 degC

Event: Nike 58 Summer Groundwater 2021 Sampling

						Analytical Test Method	BNASIM (A)	E524.2 (A)	MADEPVP (A)	SW6020A (A)	SW7470A (A)	SW8260C (A)						Sample	Depth (ft bgs)			
	Sample ID	Matrix	Date	Time	Samp Init.		6	31	12	13	13	1					Location ID	Type	Top	Bottom	Cooler	Comments
9	MW-01-SUMMER2021	WG	7/21/2021	1340	SM		X		X	X	X	X					MW-01	N1	131.00	141.00	1	SDG-2
10	MW-01-SUMMER2021-MS	WG	7/21/2021	1340	SM		X		X	X	X	X					MW-01	MS1	131.00	141.00	1	
11	MW-01-SUMMER2021-MSD	WG	7/21/2021	1340	SM		X		X	X	X	X					MW-01	SD1	131.00	141.00	1	
12	MW-02-SUMMER2021	WG	7/20/2021	1138	SM		X		X	X	X	X					MW-02	N1	50.00	60.00	1	
13	MW-03-SUMMER2021	WG	7/20/2021	1538	SM		X		X	X	X	X					MW-03	N1	36.00	46.00	1	
14	MW-04-SUMMER2021	WG	7/21/2021	1625	CP		X		X	X	X	X					MW-04	N1	70.00	80.00	1	
15	MW-05-SUMMER2021	WG	7/20/2021	1230	CP		X		X	X	X	X					MW-05	N1	70.00	80.00	1	
16	MW-FD-SUMMER2021	WG	7/20/2021	1215	SM		X		X	X	X	X						FD1	50.00	60.00	1	
17	DW-TB-SUMMER2021	WP	7/21/2021	0800	JS			X										TB				SDG-1
18	GW-TB-SUMMER2021	WG	7/21/2021	0800	JS							X						TB				SDG-2

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
	7-22-21			7-22-21	8:30 pm

Shipping Date / Carrier / Airbill Number
Shipping Date:

Received by Laboratory: *(Signature, Date, Time)* **& condition**
7/22/21 8:30 pm

CHAIN-OF-CUSTODY RECORD

Verina Consulting Group, LLC, Bridgewater, NJ
Robert Gan
1011 US-22, Bridgewater Township, NJ 08807
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COC # 072021-GWDW

Project Name: D01ME0077-02, Nike 58 - SI in Launch Area	Laboratory: Katahdin Analytical Services, Scarborough, ME	Event: Nike 58 Summer Groundwater 2021 Sampling
Project Number: D01ME0077-02	POC: Heather Manz, (207) 874-2400, hmanz@katahdinlab.com	
WBS Code:	Ship to: 600 Technology Way, Scarborough, ME 04074	

Comments:
BNASIM (A) = PAH 8270 SIM
E524.2 (A) = VOCs DW
MADEPVP (A) = MADEP VPH
SW6020A (A) = 13 PP Metals
SW7470A (A) = Mercury Water
SW8260C (A) = VOCs GW

504723

Equipment:

Code	Matrix
WG	Ground Water
WP	Drinking Water

Code	Container/Preservative
1	3x 40 mL Vials with PTFE lined Septum Caps, HCL to pH < 2, Cool to 4degC ± 2 degC
6	2x 1 L Amber glass bottle with Teflon lined cap, Cool to 0deg to 6 degC, protected from light, in sealed vials with PTFE-lined septa
12	2x 40-mL vials w/Teflon lined septa screw caps, Add 3 to 4 drops of 1:1 HCL to pH < 2, Cool to 4degC ± 2 degC
13	1x 250 mL PTFE, plastic, HNO3 to pH < 2
13	1x Plastic or Glass, Aqueous samples must be acidified to a pH < 2 with HNO3
31	3x 40 mL Vials with PTFE lined Septum Caps, HCL to pH < 2, Cool to 4degC ± 2 degC

Event: Nike 58 Summer Groundwater 2021 Sampling

					Samp Init.	Analytical Test Method: BNASIM (A)	E524.2 (A)	MADEPVP (A)	SW6020A (A)	SW7470A (A)	SW8260C (A)					Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
	Sample ID	Matrix	Date	Time		6	31	12	13	13	1										
19	GW-EB-SUMMER2021	WG	7/22/2021	1010	SM	X		X	X	X	X						EB				SOC-2

Turnaround Time: NA

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
	7-22-21			7-22-21	8:30pm

Shipping Date / Carrier / Airbill Number
Shipping Date:

Received by Laboratory: *(Signature, Date, Time)* **& condition**
7-22-21 8:30pm

00000144

Katahdin ANALYTICAL SERVICES

Katahdin Analytical Services

Login Chain of Custody Report (lno1)

Jul. 26, 2021
03:11 PM

Quote/Incoming: VERINA-LO58-NIKE

Login Number: SO4723

Account: VERINA001
Verina Consulting Group, LLC

Project: VERINA-LO58-NIKE
LO-58 Nike Battery Launch Site, Caribou,

Primary Report Address:

Michael Hansen
Verina Consulting
1011 US Highway 22
Suite 302
Bridgewater,NJ 08807
USA
mhansen@vcg-llc.com

Primary Invoice Address:

Michael Hansen
Verina Consulting
1011 US Highway 22
Suite 302
Bridgewater,NJ 08807
USA

Report CC Addresses:
Invoice CC Addresses:

Login Information:

ANALYSIS INSTRUCTIONS	:	DOD 5.3, ND to LOD w/ J flags. 8260C, 8270D. VPH report ranges & targets.
CHECK NO.	:	
CLIENT PO#	:	2102.0104-Katahdin-04272020
CLIENT PROJECT MANAGE	:	Robert Gan
CONTRACT	:	W912WJ19C0019
COOLER TEMPERATURE	:	1.1, 4.0, 6.0, 3.1
DELIVERY SERVICES	:	Client
EDD FORMAT	:	FUDSCHEM
LOGIN INITIALS	:	GN
PM	:	HHM
PROJECT NAME	:	LO-58 Nike Missile Battery Launch Site
QC LEVEL	:	IV
REPORT INSTRUCTIONS	:	Email PDF, EDD, & invoice to mhansen@vcg-llc.com. Invoice monthly.
SDG ID	:	
SDG STATUS	:	
VERBAL TAT	:	

HHM

3:16 pm, Jul 26, 2021

Login Number: SO4723

Quote/Incoming: VERINA-LO58-NIKE

Account: VERINA001
Verina Consulting Group, LLC

Project: VERINA-LO58-NIKE
LO-58 Nike Battery Launch Site, Caribou,

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SO4723-1	MW-01-SUMMER2021	21-JUL-21 13:40	22-JUL-21			10-AUG-21	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	MA-VPH-LOD	04-AUG-21	40mL Vial+HCl		**MS/MSD**
Aqueous	S	SW3010MS-PREP	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ANTIMONY	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ARSENIC	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-BERYLLIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CADMIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CALCIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CHROMIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-COPPER	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-LEAD	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-MANGANESE	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-NICKEL	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-SELENIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-SILVER	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-THALLIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ZINC	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW7470-MERCURY	18-AUG-21	500mL Plastic+HNO3		
Aqueous	S	SW8260-S	04-AUG-21	40mL Vial+HCl		
Aqueous	S	SW8270SIMPAH-S	28-JUL-21	1L N-Amber Glass		
Service	S	WASTE-DISPOSAL				

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SO4723-2	MW-02-SUMMER2021	20-JUL-21 11:38	22-JUL-21			10-AUG-21	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	MA-VPH-LOD	03-AUG-21	40mL Vial+HCl		
Aqueous	S	SW3010MS-PREP	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ANTIMONY	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ARSENIC	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-BERYLLIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CADMIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CALCIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CHROMIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-COPPER	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-LEAD	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-MANGANESE	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-NICKEL	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-SELENIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-SILVER	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-THALLIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ZINC	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW7470-MERCURY	17-AUG-21	500mL Plastic+HNO3		
Aqueous	S	SW8260-S	03-AUG-21	40mL Vial+HCl		
Aqueous	S	SW8270SIMPAH-S	27-JUL-21	1L N-Amber Glass		
Service	S	WASTE-DISPOSAL				

3:16 pm, Jul 26, 2021

Login Number: SO4723

Quote/Incoming: VERINA-LO58-NIKE

Account: VERINA001
Verina Consulting Group, LLC

Project: VERINA-LO58-NIKE
LO-58 Nike Battery Launch Site, Caribou,

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SO4723-3	MW-03-SUMMER2021	20-JUL-21 15:38	22-JUL-21			10-AUG-21	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	MA-VPH-LOD	03-AUG-21	40mL Vial+HCl		
Aqueous	S	SW3010MS-PREP	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ANTIMONY	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ARSENIC	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-BERYLLIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CADMIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CALCIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CHROMIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-COPPER	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-LEAD	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-MANGANESE	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-NICKEL	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-SELENIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-SILVER	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-THALLIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ZINC	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW7470-MERCURY	17-AUG-21	500mL Plastic+HNO3		
Aqueous	S	SW8260-S	03-AUG-21	40mL Vial+HCl		
Aqueous	S	SW8270SIMPAH-S	27-JUL-21	1L N-Amber Glass		
Service	S	WASTE-DISPOSAL				

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SO4723-4	MW-04-SUMMER2021	21-JUL-21 16:25	22-JUL-21			10-AUG-21	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	MA-VPH-LOD	04-AUG-21	40mL Vial+HCl		
Aqueous	S	SW3010MS-PREP	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ANTIMONY	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ARSENIC	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-BERYLLIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CADMIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CALCIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CHROMIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-COPPER	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-LEAD	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-MANGANESE	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-NICKEL	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-SELENIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-SILVER	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-THALLIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ZINC	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW7470-MERCURY	18-AUG-21	500mL Plastic+HNO3		
Aqueous	S	SW8260-S	04-AUG-21	40mL Vial+HCl		
Aqueous	S	SW8270SIMPAH-S	28-JUL-21	1L N-Amber Glass		
Service	S	WASTE-DISPOSAL				

3:16 pm, Jul 26, 2021

Login Number: SO4723

Quote/Incoming: VERINA-LO58-NIKE

Account: VERINA001
Verina Consulting Group, LLC

Project: VERINA-LO58-NIKE
LO-58 Nike Battery Launch Site, Caribou,

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SO4723-5	MW-05-SUMMER2021	20-JUL-21 12:30	22-JUL-21			10-AUG-21	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	MA-VPH-LOD	03-AUG-21	40mL Vial+HCl		
Aqueous	S	SW3010MS-PREP	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ANTIMONY	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ARSENIC	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-BERYLLIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CADMIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CALCIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CHROMIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-COPPER	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-LEAD	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-MANGANESE	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-NICKEL	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-SELENIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-SILVER	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-THALLIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ZINC	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW7470-MERCURY	17-AUG-21	500mL Plastic+HNO3		
Aqueous	S	SW8260-S	03-AUG-21	40mL Vial+HCl		
Aqueous	S	SW8270SIMPAH-S	27-JUL-21	1L N-Amber Glass		
Service	S	WASTE-DISPOSAL				

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SO4723-6	MW-FD-SUMMER2021	20-JUL-21 12:15	22-JUL-21			10-AUG-21	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	MA-VPH-LOD	03-AUG-21	40mL Vial+HCl		
Aqueous	S	SW3010MS-PREP	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ANTIMONY	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ARSENIC	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-BERYLLIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CADMIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CALCIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CHROMIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-COPPER	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-LEAD	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-MANGANESE	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-NICKEL	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-SELENIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-SILVER	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-THALLIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ZINC	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW7470-MERCURY	17-AUG-21	500mL Plastic+HNO3		
Aqueous	S	SW8260-S	03-AUG-21	40mL Vial+HCl		
Aqueous	S	SW8270SIMPAH-S	27-JUL-21	1L N-Amber Glass		
Service	S	WASTE-DISPOSAL				

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SO4723-7	GW-TB-SUMMER2021	21-JUL-21 08:00	22-JUL-21			10-AUG-21	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	MA-VPH-LOD	04-AUG-21	40mL Vial+HCl		
Aqueous	S	SW8260-S	04-AUG-21	40mL Vial+HCl		
Service	S	WASTE-DISPOSAL				

3:16 pm, Jul 26, 2021

Katahdin Analytical Services

Login Chain of Custody Report (lno1)

Jul. 26, 2021
03:11 PM

Login Number: SO4723

Quote/Incoming: VERINA-LO58-NIKE

Account: VERINA001
Verina Consulting Group, LLC

Project: VERINA-LO58-NIKE
LO-58 Nike Battery Launch Site, Caribou,

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SO4723-8	GW-EB-SUMMER2021	22-JUL-21 10:10	22-JUL-21			10-AUG-21	

Matrix		*Product*	*Hold Date (shortest)*	*Bottle Type*	*Bottle Count*	*Comments*
Aqueous	S	MA-VPH-LOD	05-AUG-21	40mL Vial+HCl		
Aqueous	S	SW3010MS-PREP	18-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ANTIMONY	18-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ARSENIC	18-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-BERYLLIUM	18-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CADMIUM	18-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CALCIUM	18-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CHROMIUM	18-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-COPPER	18-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-LEAD	18-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-MANGANESE	18-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-NICKEL	18-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-SELENIUM	18-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-SILVER	18-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-THALLIUM	18-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ZINC	18-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW7470-MERCURY	19-AUG-21	500mL Plastic+HNO3		
Aqueous	S	SW8260-S	05-AUG-21	40mL Vial+HCl		
Aqueous	S	SW8270SIMPAH-S	29-JUL-21	1L N-Amber Glass		
Service	S	WASTE-DISPOSAL				

Total Samples: 8 ***Total Analyses: 143***

3:16 pm, Jul 26, 2021

SAMPLE DATA SUMMARY PACKAGE

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

* Compound recovery or percent RPD (relative percent difference) was outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

C Indicates that the flagged compound did not meet DoD criteria in the corresponding daily calibration verification (CV).

L Indicates that the flagged compound did not meet DoD criteria in the corresponding Laboratory Control Sample (LCS) and/or Laboratory Control Sample Duplicate (LCSD) prepared and/or analyzed concurrently with the sample.

M Indicates that the flagged compound did not meet DoD criteria in the Matrix Spike and/or Matrix Spike Duplicate prepared and/or analyzed concurrently with the native sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

METALS SAMPLE FLAGGING

FLAG	SPECIFIED MEANING
E	The reported value is estimated because of the presence of interference (as indicated by serial dilution).
N	The pre-digestion spiked sample recovery is not within control limits.
*	The duplicate sample analysis relative percent difference (RPD) is not within control limits.
B	Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.
A	The post-digestion spiked sample recovery is not within control limits.
•	Analytical run QC sample (e.g. ICV, CCV, ICB, CCB, ICSA, ICSAB) not within control limits.
U	The analyte was not detected above the specified level. This level may be the Limit of Quantitation (LOQ) (previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client. Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.
J	The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ) (previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).
Q	One or more quality control criteria failed (e.g., LCS recovery, surrogate spike recovery or CCV).

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-1RA
Client ID: MW-01-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2698.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 04-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303684

Analysis Date: 04-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	UL	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	UL	2.5	ug/L	1	5	5.0	1.3	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Xylenes (Total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-1RA
Client ID: MW-01-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2698.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 04-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303684

Analysis Date: 04-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		102.	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4		102.	%					
Dibromofluoromethane		99.4	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-2
Client ID: MW-02-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: W9707.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 02-AUG-21
Extracted By: CR/ES
Extraction Method: SW846 5030
Lab Prep Batch: WG303527

Analysis Date: 02-AUG-21
Analyst: CR/ES
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Xylenes (Total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-2
Client ID: MW-02-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: W9707.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 02-AUG-21
Extracted By: CR/ES
Extraction Method: SW846 5030
Lab Prep Batch: WG303527

Analysis Date: 02-AUG-21
Analyst: CR/ES
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		103.	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4		116.	%					
Dibromofluoromethane		110.	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-2RA
Client ID: MW-02-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2717.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 05-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303781

Analysis Date: 05-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	J	1.2	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Xylenes (Total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-2RA
Client ID: MW-02-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2717.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 05-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303781

Analysis Date: 05-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		101.	%					
Toluene-d8		101.	%					
1,2-Dichloroethane-d4		102.	%					
Dibromofluoromethane		99.0	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-3
Client ID: MW-03-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: W9708.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 02-AUG-21
Extracted By: CR/ES
Extraction Method: SW846 5030
Lab Prep Batch: WG303527

Analysis Date: 02-AUG-21
Analyst: CR/ES
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Xylenes (Total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-3
Client ID: MW-03-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: W9708.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 02-AUG-21
Extracted By: CR/ES
Extraction Method: SW846 5030
Lab Prep Batch: WG303527

Analysis Date: 02-AUG-21
Analyst: CR/ES
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		101.	%					
Toluene-d8		103.	%					
1,2-Dichloroethane-d4	*	120.	%					
Dibromofluoromethane		112.	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-3RA
Client ID: MW-03-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2718.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 05-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303781

Analysis Date: 05-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	J	1.2	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Xylenes (Total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-3RA
Client ID: MW-03-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2718.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 05-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303781

Analysis Date: 05-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		103.	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4		102.	%					
Dibromofluoromethane		99.5	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-4RA
Client ID: MW-04-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2697.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 04-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303684

Analysis Date: 04-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	UL	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	UL	2.5	ug/L	1	5	5.0	1.3	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Xylenes (Total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-4RA
Client ID: MW-04-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2697.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 04-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303684

Analysis Date: 04-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		102.	%					
Toluene-d8		101.	%					
1,2-Dichloroethane-d4		99.8	%					
Dibromofluoromethane		99.6	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-5
Client ID: MW-05-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: W9710.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 02-AUG-21
Extracted By: CR/ES
Extraction Method: SW846 5030
Lab Prep Batch: WG303527

Analysis Date: 02-AUG-21
Analyst: CR/ES
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	J	1.6	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	J	0.31	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Xylenes (Total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-5
Client ID: MW-05-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: W9710.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 02-AUG-21
Extracted By: CR/ES
Extraction Method: SW846 5030
Lab Prep Batch: WG303527

Analysis Date: 02-AUG-21
Analyst: CR/ES
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		106.	%					
Toluene-d8		104.	%					
1,2-Dichloroethane-d4	*	125.	%					
Dibromofluoromethane		117.	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-5RA
Client ID: MW-05-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2719.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 05-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303781

Analysis Date: 05-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	J	1.2	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Xylenes (Total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-5RA
Client ID: MW-05-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2719.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 05-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303781

Analysis Date: 05-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		103.	%					
Toluene-d8		101.	%					
1,2-Dichloroethane-d4		102.	%					
Dibromofluoromethane		99.1	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-6
Client ID: MW-FD-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: W9711.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 02-AUG-21
Extracted By: CR/ES
Extraction Method: SW846 5030
Lab Prep Batch: WG303527

Analysis Date: 02-AUG-21
Analyst: CR/ES
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	J	1.3	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Xylenes (Total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-6
Client ID: MW-FD-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: W9711.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 02-AUG-21
Extracted By: CR/ES
Extraction Method: SW846 5030
Lab Prep Batch: WG303527

Analysis Date: 02-AUG-21
Analyst: CR/ES
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		102.	%					
Toluene-d8		104.	%					
1,2-Dichloroethane-d4	*	123.	%					
Dibromofluoromethane		114.	%					

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Tel:(207) 874-2400 Fax:(207) 775-4029
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Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-6RA
Client ID: MW-FD-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2696.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 04-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303684

Analysis Date: 04-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	UL	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	UL	2.5	ug/L	1	5	5.0	1.3	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Xylenes (Total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-6RA
Client ID: MW-FD-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2696.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 04-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303684

Analysis Date: 04-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		102.	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4		101.	%					
Dibromofluoromethane		100.	%					

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-7RA
Client ID: GW-TB-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2695.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 04-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303684

Analysis Date: 04-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chloromethane	J	1.7	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride		6.1	ug/L	1	5	5.0	1.1	2.5
Acetone	UL	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	UL	2.5	ug/L	1	5	5.0	1.3	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Xylenes (Total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-7RA
Client ID: GW-TB-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2695.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 04-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303684

Analysis Date: 04-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		102.	%					
Toluene-d8		101.	%					
1,2-Dichloroethane-d4		100.	%					
Dibromofluoromethane		98.3	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-8RA
Client ID: GW-EB-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2714.D

Sample Date: 22-JUL-21
Received Date: 22-JUL-21
Extract Date: 05-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303781

Analysis Date: 05-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	J	1.2	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Xylenes (Total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-8RA
Client ID: GW-EB-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2714.D

Sample Date: 22-JUL-21
Received Date: 22-JUL-21
Extract Date: 05-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303781

Analysis Date: 05-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		104.	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4		101.	%					
Dibromofluoromethane		97.0	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-1
Client ID: MW-01-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: N3627.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 28-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 29-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.11	ug/L	1	.2	0.22	0.069	0.11
2-Methylnaphthalene	U	0.11	ug/L	1	.2	0.22	0.083	0.11
1-Methylnaphthalene	U	0.11	ug/L	1	.2	0.22	0.073	0.11
Acenaphthylene	U	0.11	ug/L	1	.2	0.22	0.058	0.11
Acenaphthene	U	0.11	ug/L	1	.2	0.22	0.069	0.11
Fluorene	U	0.11	ug/L	1	.2	0.22	0.066	0.11
Phenanthrene	U	0.11	ug/L	1	.2	0.22	0.055	0.11
Anthracene	U	0.11	ug/L	1	.2	0.22	0.047	0.11
Fluoranthene	U	0.11	ug/L	1	.2	0.22	0.078	0.11
Pyrene	U	0.11	ug/L	1	.2	0.22	0.063	0.11
Benzo(a)anthracene	UM	0.11	ug/L	1	.2	0.22	0.049	0.11
Chrysene	U	0.11	ug/L	1	.2	0.22	0.039	0.11
Benzo(b)Fluoranthene	UM	0.11	ug/L	1	.2	0.22	0.096	0.11
Benzo(k)fluoranthene	UMM	0.11	ug/L	1	.2	0.22	0.053	0.11
Benzo(a)pyrene	UMM	0.11	ug/L	1	.2	0.22	0.071	0.11
Indeno(1,2,3-cd)pyrene	UMM	0.11	ug/L	1	.2	0.22	0.056	0.11
Dibenzo(a,h)anthracene	UMM	0.11	ug/L	1	.2	0.22	0.075	0.11
Benzo(g,h,i)perylene	UMM	0.11	ug/L	1	.2	0.22	0.070	0.11
2-Methylnaphthalene-D10		69.6	%					
Fluorene-D10		64.4	%					
Pyrene-D10		90.8	%					

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-2
Client ID: MW-02-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: N3630.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 28-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 29-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.10	ug/L	1	.2	0.21	0.067	0.10
2-Methylnaphthalene	U	0.10	ug/L	1	.2	0.21	0.081	0.10
1-Methylnaphthalene	U	0.10	ug/L	1	.2	0.21	0.072	0.10
Acenaphthylene	U	0.10	ug/L	1	.2	0.21	0.057	0.10
Acenaphthene	U	0.10	ug/L	1	.2	0.21	0.067	0.10
Fluorene	U	0.10	ug/L	1	.2	0.21	0.064	0.10
Phenanthrene	U	0.10	ug/L	1	.2	0.21	0.054	0.10
Anthracene	U	0.10	ug/L	1	.2	0.21	0.046	0.10
Fluoranthene	U	0.10	ug/L	1	.2	0.21	0.077	0.10
Pyrene	U	0.10	ug/L	1	.2	0.21	0.062	0.10
Benzo(a)anthracene	U	0.10	ug/L	1	.2	0.21	0.048	0.10
Chrysene	U	0.10	ug/L	1	.2	0.21	0.038	0.10
Benzo(b)Fluoranthene	U	0.10	ug/L	1	.2	0.21	0.094	0.10
Benzo(k)fluoranthene	U	0.10	ug/L	1	.2	0.21	0.052	0.10
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.21	0.069	0.10
Indeno(1,2,3-cd)pyrene	U	0.10	ug/L	1	.2	0.21	0.055	0.10
Dibenzo(a,h)anthracene	U	0.10	ug/L	1	.2	0.21	0.074	0.10
Benzo(g,h,i)perylene	U	0.10	ug/L	1	.2	0.21	0.068	0.10
2-Methylnaphthalene-D10		71.0	%					
Fluorene-D10		65.5	%					
Pyrene-D10		82.5	%					

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Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-3
Client ID: MW-03-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: N3631.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 28-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 29-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.11	ug/L	1	.2	0.22	0.069	0.11
2-Methylnaphthalene	U	0.11	ug/L	1	.2	0.22	0.083	0.11
1-Methylnaphthalene	U	0.11	ug/L	1	.2	0.22	0.073	0.11
Acenaphthylene	U	0.11	ug/L	1	.2	0.22	0.058	0.11
Acenaphthene	U	0.11	ug/L	1	.2	0.22	0.069	0.11
Fluorene	U	0.11	ug/L	1	.2	0.22	0.066	0.11
Phenanthrene	U	0.11	ug/L	1	.2	0.22	0.055	0.11
Anthracene	U	0.11	ug/L	1	.2	0.22	0.047	0.11
Fluoranthene	U	0.11	ug/L	1	.2	0.22	0.078	0.11
Pyrene	U	0.11	ug/L	1	.2	0.22	0.063	0.11
Benzo(a)anthracene	U	0.11	ug/L	1	.2	0.22	0.049	0.11
Chrysene	U	0.11	ug/L	1	.2	0.22	0.039	0.11
Benzo(b)Fluoranthene	U	0.11	ug/L	1	.2	0.22	0.096	0.11
Benzo(k)fluoranthene	U	0.11	ug/L	1	.2	0.22	0.053	0.11
Benzo(a)pyrene	U	0.11	ug/L	1	.2	0.22	0.071	0.11
Indeno(1,2,3-cd)pyrene	U	0.11	ug/L	1	.2	0.22	0.056	0.11
Dibenzo(a,h)anthracene	U	0.11	ug/L	1	.2	0.22	0.075	0.11
Benzo(g,h,i)perylene	U	0.11	ug/L	1	.2	0.22	0.070	0.11
2-Methylnaphthalene-D10		64.4	%					
Fluorene-D10		61.1	%					
Pyrene-D10		83.4	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-4
Client ID: MW-04-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: N3632.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 28-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 29-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.093	ug/L	1	.2	0.19	0.060	0.093
2-Methylnaphthalene	U	0.093	ug/L	1	.2	0.19	0.072	0.093
1-Methylnaphthalene	U	0.093	ug/L	1	.2	0.19	0.064	0.093
Acenaphthylene	U	0.093	ug/L	1	.2	0.19	0.050	0.093
Acenaphthene	U	0.093	ug/L	1	.2	0.19	0.060	0.093
Fluorene	U	0.093	ug/L	1	.2	0.19	0.057	0.093
Phenanthrene	U	0.093	ug/L	1	.2	0.19	0.048	0.093
Anthracene	U	0.093	ug/L	1	.2	0.19	0.041	0.093
Fluoranthene	U	0.093	ug/L	1	.2	0.19	0.068	0.093
Pyrene	U	0.093	ug/L	1	.2	0.19	0.055	0.093
Benzo(a)anthracene	U	0.093	ug/L	1	.2	0.19	0.043	0.093
Chrysene	U	0.093	ug/L	1	.2	0.19	0.034	0.093
Benzo(b)Fluoranthene	U	0.093	ug/L	1	.2	0.19	0.083	0.093
Benzo(k)fluoranthene	U	0.093	ug/L	1	.2	0.19	0.046	0.093
Benzo(a)pyrene	U	0.093	ug/L	1	.2	0.19	0.062	0.093
Indeno(1,2,3-cd)pyrene	U	0.093	ug/L	1	.2	0.19	0.048	0.093
Dibenzo(a,h)anthracene	U	0.093	ug/L	1	.2	0.19	0.065	0.093
Benzo(g,h,i)perylene	U	0.093	ug/L	1	.2	0.19	0.061	0.093
2-Methylnaphthalene-D10		70.6	%					
Fluorene-D10		66.5	%					
Pyrene-D10		90.7	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-5
Client ID: MW-05-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: N3633.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 29-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 29-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.093	ug/L	1	.2	0.19	0.060	0.093
2-Methylnaphthalene	U	0.093	ug/L	1	.2	0.19	0.072	0.093
1-Methylnaphthalene	J	0.16	ug/L	1	.2	0.19	0.064	0.093
Acenaphthylene	U	0.093	ug/L	1	.2	0.19	0.050	0.093
Acenaphthene	J	0.18	ug/L	1	.2	0.19	0.060	0.093
Fluorene		0.44	ug/L	1	.2	0.19	0.057	0.093
Phenanthrene		0.24	ug/L	1	.2	0.19	0.048	0.093
Anthracene	J	0.047	ug/L	1	.2	0.19	0.041	0.093
Fluoranthene	U	0.093	ug/L	1	.2	0.19	0.068	0.093
Pyrene	U	0.093	ug/L	1	.2	0.19	0.055	0.093
Benzo(a)anthracene	U	0.093	ug/L	1	.2	0.19	0.043	0.093
Chrysene	U	0.093	ug/L	1	.2	0.19	0.034	0.093
Benzo(b)Fluoranthene	U	0.093	ug/L	1	.2	0.19	0.083	0.093
Benzo(k)fluoranthene	U	0.093	ug/L	1	.2	0.19	0.046	0.093
Benzo(a)pyrene	U	0.093	ug/L	1	.2	0.19	0.062	0.093
Indeno(1,2,3-cd)pyrene	U	0.093	ug/L	1	.2	0.19	0.048	0.093
Dibenzo(a,h)anthracene	U	0.093	ug/L	1	.2	0.19	0.065	0.093
Benzo(g,h,i)perylene	U	0.093	ug/L	1	.2	0.19	0.061	0.093
2-Methylnaphthalene-D10		70.8	%					
Fluorene-D10		72.6	%					
Pyrene-D10		88.5	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-6
Client ID: MW-FD-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: N3634.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 29-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 29-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.10	ug/L	1	.2	0.20	0.064	0.10
2-Methylnaphthalene	U	0.10	ug/L	1	.2	0.20	0.077	0.10
1-Methylnaphthalene	U	0.10	ug/L	1	.2	0.20	0.068	0.10
Acenaphthylene	U	0.10	ug/L	1	.2	0.20	0.054	0.10
Acenaphthene	U	0.10	ug/L	1	.2	0.20	0.064	0.10
Fluorene	U	0.10	ug/L	1	.2	0.20	0.061	0.10
Phenanthrene	U	0.10	ug/L	1	.2	0.20	0.051	0.10
Anthracene	U	0.10	ug/L	1	.2	0.20	0.044	0.10
Fluoranthene	U	0.10	ug/L	1	.2	0.20	0.073	0.10
Pyrene	U	0.10	ug/L	1	.2	0.20	0.059	0.10
Benzo(a)anthracene	U	0.10	ug/L	1	.2	0.20	0.046	0.10
Chrysene	U	0.10	ug/L	1	.2	0.20	0.036	0.10
Benzo(b)Fluoranthene	U	0.10	ug/L	1	.2	0.20	0.089	0.10
Benzo(k)fluoranthene	U	0.10	ug/L	1	.2	0.20	0.049	0.10
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.20	0.066	0.10
Indeno(1,2,3-cd)pyrene	U	0.10	ug/L	1	.2	0.20	0.052	0.10
Dibenzo(a,h)anthracene	U	0.10	ug/L	1	.2	0.20	0.070	0.10
Benzo(g,h,i)perylene	U	0.10	ug/L	1	.2	0.20	0.065	0.10
2-Methylnaphthalene-D10		70.4	%					
Fluorene-D10		64.9	%					
Pyrene-D10		75.3	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-8
Client ID: GW-EB-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: N3635.D

Sample Date: 22-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 29-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 29-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.10	ug/L	1	.2	0.20	0.065	0.10
2-Methylnaphthalene	U	0.10	ug/L	1	.2	0.20	0.078	0.10
1-Methylnaphthalene	U	0.10	ug/L	1	.2	0.20	0.069	0.10
Acenaphthylene	U	0.10	ug/L	1	.2	0.20	0.055	0.10
Acenaphthene	U	0.10	ug/L	1	.2	0.20	0.065	0.10
Fluorene	U	0.10	ug/L	1	.2	0.20	0.062	0.10
Phenanthrene	U	0.10	ug/L	1	.2	0.20	0.052	0.10
Anthracene	U	0.10	ug/L	1	.2	0.20	0.045	0.10
Fluoranthene	U	0.10	ug/L	1	.2	0.20	0.074	0.10
Pyrene	U	0.10	ug/L	1	.2	0.20	0.060	0.10
Benzo(a)anthracene	U	0.10	ug/L	1	.2	0.20	0.047	0.10
Chrysene	U	0.10	ug/L	1	.2	0.20	0.037	0.10
Benzo(b)Fluoranthene	U	0.10	ug/L	1	.2	0.20	0.091	0.10
Benzo(k)fluoranthene	U	0.10	ug/L	1	.2	0.20	0.050	0.10
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.20	0.067	0.10
Indeno(1,2,3-cd)pyrene	U	0.10	ug/L	1	.2	0.20	0.053	0.10
Dibenzo(a,h)anthracene	U	0.10	ug/L	1	.2	0.20	0.071	0.10
Benzo(g,h,i)perylene	U	0.10	ug/L	1	.2	0.20	0.066	0.10
2-Methylnaphthalene-D10		54.8	%					
Fluorene-D10		53.9	%					
Pyrene-D10		74.0	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-1
Client ID: MW-01-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: 2OG10069.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		92.5	%					
2,5-Dibromotoluene (PID)		81.4	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-2
Client ID: MW-02-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: 2OG10070.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		95.6	%					
2,5-Dibromotoluene (PID)		85.3	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-3
Client ID: MW-03-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: 2OG10071.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		96.5	%					
2,5-Dibromotoluene (PID)		86.4	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-4
Client ID: MW-04-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: 2OG10072.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		89.6	%					
2,5-Dibromotoluene (PID)		80.4	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-5
Client ID: MW-05-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: 2OG10073.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	J	82	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	J	76	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		94.2	%					
2,5-Dibromotoluene (PID)		88.8	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-6
Client ID: MW-FD-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: 2OG10074.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		98.2	%					
2,5-Dibromotoluene (PID)		87.8	%					

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Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-7
Client ID: GW-TB-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: 2OG10067.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		76.5	%					
2,5-Dibromotoluene (PID)		70.4	%					

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Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-8
Client ID: GW-EB-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: 2OG10068.D

Sample Date: 22-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		84.3	%					
2,5-Dibromotoluene (PID)		75.4	%					

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INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** MW-01-SUMMER2021

Matrix: WATER **SDG Name:** SO4723

Percent Solids: 0.00 **Lab Sample ID:** SO4723-001

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-36-0	ANTIMONY, TOTAL	0.26	J	N	MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U	N	MS	5	5.0	2.3	4.0
7440-41-7	BERYLLIUM, TOTAL	0.072	J		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.063	J		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	67500		NA	MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	1.2	J	N	MS	5	5.0	0.22	4.0
7440-50-8	COPPER, TOTAL	3.29		B	MS	5	3.0	0.19	2.0
7439-92-1	LEAD, TOTAL	0.21	J	N	MS	5	1.0	0.075	0.50
7439-96-5	MANGANESE, TOTAL	2.3		N	MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.10	U	A	CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	0.70	J	N	MS	5	2.0	0.15	1.2
7782-49-2	SELENIUM, TOTAL	3.0	U		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-28-0	THALLIUM, TOTAL	0.099	J		MS	5	1.0	0.060	0.40
7440-66-6	ZINC, TOTAL	4.8	J		MS	5	10	3.9	8.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** MW-02-SUMMER2021

Matrix: WATER **SDG Name:** SO4723

Percent Solids: 0.00 **Lab Sample ID:** SO4723-002

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-36-0	ANTIMONY, TOTAL	0.17	J		MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	2.3	4.0
7440-41-7	BERYLLIUM, TOTAL	0.10	J		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.069	J		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	95000			MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	2.24	J		MS	5	5.0	0.22	4.0
7440-50-8	COPPER, TOTAL	3.49		B	MS	5	3.0	0.19	2.0
7439-92-1	LEAD, TOTAL	0.17	J		MS	5	1.0	0.075	0.50
7439-96-5	MANGANESE, TOTAL	0.78	J		MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	0.75	J		MS	5	2.0	0.15	1.2
7782-49-2	SELENIUM, TOTAL	0.26	J		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-28-0	THALLIUM, TOTAL	0.092	J		MS	5	1.0	0.060	0.40
7440-66-6	ZINC, TOTAL	8.0	U		MS	5	10	3.9	8.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** MW-03-SUMMER2021

Matrix: WATER **SDG Name:** SO4723

Percent Solids: 0.00 **Lab Sample ID:** SO4723-003

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-36-0	ANTIMONY, TOTAL	0.087	J		MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	2.3	4.0
7440-41-7	BERYLLIUM, TOTAL	0.079	J		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.074	J		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	75300			MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	1.2	J		MS	5	5.0	0.22	4.0
7440-50-8	COPPER, TOTAL	3.82		B	MS	5	3.0	0.19	2.0
7439-92-1	LEAD, TOTAL	0.13	J		MS	5	1.0	0.075	0.50
7439-96-5	MANGANESE, TOTAL	0.88	J		MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	0.66	J		MS	5	2.0	0.15	1.2
7782-49-2	SELENIUM, TOTAL	3.0	U		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	1.0	0.060	0.40
7440-66-6	ZINC, TOTAL	8.0	U		MS	5	10	3.9	8.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** MW-04-SUMMER2021

Matrix: WATER **SDG Name:** SO4723

Percent Solids: 0.00 **Lab Sample ID:** SO4723-004

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-36-0	ANTIMONY, TOTAL	0.057	J		MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	2.3	4.0
7440-41-7	BERYLLIUM, TOTAL	0.052	J		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.053	J		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	93500			MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	1.4	J		MS	5	5.0	0.22	4.0
7440-50-8	COPPER, TOTAL	3.57		B	MS	5	3.0	0.19	2.0
7439-92-1	LEAD, TOTAL	0.15	J		MS	5	1.0	0.075	0.50
7439-96-5	MANGANESE, TOTAL	1.8	J		MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	1.0	J		MS	5	2.0	0.15	1.2
7782-49-2	SELENIUM, TOTAL	3.0	U		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	1.0	0.060	0.40
7440-66-6	ZINC, TOTAL	8.0	U		MS	5	10	3.9	8.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** MW-05-SUMMER2021

Matrix: WATER **SDG Name:** SO4723

Percent Solids: 0.00 **Lab Sample ID:** SO4723-005

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-36-0	ANTIMONY, TOTAL	0.50	U		MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	2.3	4.0
7440-41-7	BERYLLIUM, TOTAL	0.053	J		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.739	J		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	103000			MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	0.79	J		MS	5	5.0	0.22	4.0
7440-50-8	COPPER, TOTAL	6.26		B	MS	5	3.0	0.19	2.0
7439-92-1	LEAD, TOTAL	0.11	J		MS	5	1.0	0.075	0.50
7439-96-5	MANGANESE, TOTAL	621			MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	1.0	J		MS	5	2.0	0.15	1.2
7782-49-2	SELENIUM, TOTAL	3.0	U		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	1.0	0.060	0.40
7440-66-6	ZINC, TOTAL	6.5	J		MS	5	10	3.9	8.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** MW-FD-SUMMER2021

Matrix: WATER **SDG Name:** SO4723

Percent Solids: 0.00 **Lab Sample ID:** SO4723-006

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-36-0	ANTIMONY, TOTAL	0.078	J		MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	2.3	4.0
7440-41-7	BERYLLIUM, TOTAL	0.071	J		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.039	J		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	88400			MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	1.8	J		MS	5	5.0	0.22	4.0
7440-50-8	COPPER, TOTAL	3.84		B	MS	5	3.0	0.19	2.0
7439-92-1	LEAD, TOTAL	0.50	U		MS	5	1.0	0.075	0.50
7439-96-5	MANGANESE, TOTAL	0.58	J		MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.017	J		CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	0.50	J		MS	5	2.0	0.15	1.2
7782-49-2	SELENIUM, TOTAL	3.0	U		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	1.0	0.060	0.40
7440-66-6	ZINC, TOTAL	8.0	U		MS	5	10	3.9	8.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** GW-EB-SUMMER2021

Matrix: WATER **SDG Name:** SO4723

Percent Solids: 0.00 **Lab Sample ID:** SO4723-008

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-36-0	ANTIMONY, TOTAL	0.50	U		MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	2.3	4.0
7440-41-7	BERYLLIUM, TOTAL	0.20	U		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.20	U		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	130			MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	0.88	J		MS	5	5.0	0.22	4.0
7440-50-8	COPPER, TOTAL	5.01		B	MS	5	3.0	0.19	2.0
7439-92-1	LEAD, TOTAL	0.50	U		MS	5	1.0	0.075	0.50
7439-96-5	MANGANESE, TOTAL	0.36	J		MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	0.78	J		MS	5	2.0	0.15	1.2
7782-49-2	SELENIUM, TOTAL	3.0	U		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	1.0	0.060	0.40
7440-66-6	ZINC, TOTAL	8.0	U		MS	5	10	3.9	8.0

Comments:

VOLATILES DATA

QC Summary Section

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** LO-58 Nike Missile Battery Launch Site **Matrix:** AQ
Lab Code: KAS **SDG:** SO4723

Client Sample ID	Lab Sample ID	Col. ID	BFB	#	DBF	#	DCA	#	TOL	#
MW-01-SUMMER2021	SO4723-1RA		102.		99.4		102.		102.	
MW-02-SUMMER2021	SO4723-2		103.		110.		116.		102.	
MW-02-SUMMER2021	SO4723-2RA		101.		99.0		102.		101.	
MW-03-SUMMER2021	SO4723-3		101.		112.		120.	*	103.	
MW-03-SUMMER2021	SO4723-3RA		103.		99.5		102.		102.	
MW-04-SUMMER2021	SO4723-4RA		102.		99.6		99.8		101.	
MW-05-SUMMER2021	SO4723-5		106.		117.		125.	*	104.	
MW-05-SUMMER2021	SO4723-5RA		103.		99.1		102.		101.	
MW-FD-SUMMER2021	SO4723-6		102.		114.		123.	*	104.	
MW-FD-SUMMER2021	SO4723-6RA		102.		100.		101.		102.	
GW-TB-SUMMER2021	SO4723-7RA		102.		98.3		100.		101.	
GW-EB-SUMMER2021	SO4723-8RA		104.		97.0		101.		102.	
Laboratory Control S	WG303527-1		102.		102.		103.		100.	
Method Blank	WG303527-2		100.		112.		119.	*	102.	
Laboratory Control S	WG303684-9		100.		98.6		98.8		100.	
Method Blank	WG303684-10		101.		97.8		100.		101.	
Matrix Spike	WG303684-14		102.		102.		99.4		101.	
Matrix Spike Duplica	WG303684-15		99.6		102.		101.		99.5	
Laboratory Control S	WG303781-1		99.8		100.		100.		99.9	
Method Blank	WG303781-2		102.		101.		102.		102.	
Laboratory Control S	WG303781-6		101.		102.		101.		99.6	

		QC Limits
BFB	P-BROMOFLUOROBENZENE	85-114
DBF	DIBROMOFLUOROMETHANE	80-119
DCA	1,2-DICHLOROETHANE-D4	81-118
TOL	TOLUENE-D8	89-112

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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Katahdin
ANALYTICAL SERVICES

Form 4
Method Blank Summary - VOA

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site
Lab File ID : T2693.D
Instrument ID : GCMS-T
Heated Purge : No

SDG : SO4723
Lab Sample ID : WG303684-10
Date Analyzed : 04-AUG-21
Time Analyzed : 14:13

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG303684-9	T2691.D	08/04/21	13:03
GW-TB-SUMMER2021	SO4723-7RA	T2695.D	08/04/21	15:19
MW-FD-SUMMER2021	SO4723-6RA	T2696.D	08/04/21	15:51
MW-04-SUMMER2021	SO4723-4RA	T2697.D	08/04/21	16:24
MW-01-SUMMER2021	SO4723-1RA	T2698.D	08/04/21	16:57
Matrix Spike	WG303684-14	T2700.D	08/04/21	18:03
Matrix Spike Duplica	WG303684-15	T2701.D	08/04/21	18:35

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Form 4
Method Blank Summary - VOA

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site
Lab File ID : T2712.D
Instrument ID : GCMS-T
Heated Purge : No

SDG : SO4723
Lab Sample ID : WG303781-2
Date Analyzed : 05-AUG-21
Time Analyzed : 10:35

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG303781-1	T2709.D	08/05/21	08:53
Laboratory Control S	WG303781-6	T2710.D	08/05/21	09:29
GW-EB-SUMMER2021	SO4723-8RA	T2714.D	08/05/21	11:40
MW-02-SUMMER2021	SO4723-2RA	T2717.D	08/05/21	13:19
MW-03-SUMMER2021	SO4723-3RA	T2718.D	08/05/21	13:51
MW-05-SUMMER2021	SO4723-5RA	T2719.D	08/05/21	14:24

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Form 4
Method Blank Summary - VOA

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site
Lab File ID : W9699.D
Instrument ID : GCMS-W
Heated Purge : No

SDG : SO4723
Lab Sample ID : WG303527-2
Date Analyzed : 02-AUG-21
Time Analyzed : 09:06

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG303527-1	W9697.D	08/02/21	07:56
MW-02-SUMMER2021	SO4723-2	W9707.D	08/02/21	13:12
MW-03-SUMMER2021	SO4723-3	W9708.D	08/02/21	13:42
MW-05-SUMMER2021	SO4723-5	W9710.D	08/02/21	14:44
MW-FD-SUMMER2021	SO4723-6	W9711.D	08/02/21	15:14

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Form 5
Volatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site
Lab File ID : TB535A.D
Instrument ID : GCMS-T

SDG : SO4723
Date Analyzed : 04-AUG-21
Time Analyzed : 07:30
Heated Purge : No

m/e	Ion Abundance Criteria	% Relative Abundance		
50	15.0 - 40.0% of mass 95	20.3		
75	30.0 - 60.0% of mass 95	51.4		
95	Base Peak, 100% relative abundance	100		
96	5.0 - 9.0% of mass 95	6.8		
173	Less than 2.0% of mass 174	0.3	0.41	1
174	Greater than 50.0% of mass 95	75.8		
175	5.0 - 9.0% of mass 174	5.6	7.34	1
176	95.0 - 101.0% of mass 174	73.4	96.87	1
177	5.0 - 9.0% of mass 176	4.8	6.55	2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Initial Calibration	WG303684-1	T2683.D	08/04/21	08:24
Initial Calibration	WG303684-2	T2684.D	08/04/21	08:57
Initial Calibration	WG303684-3	T2685.D	08/04/21	09:30
Initial Calibration	WG303684-4	T2686.D	08/04/21	10:02
Initial Calibration	WG303684-7	T2687.D	08/04/21	10:35
Initial Calibration	WG303684-5	T2688.D	08/04/21	11:08
Initial Calibration	WG303684-6	T2690.D	08/04/21	12:24
Laboratory Control S	WG303684-9	T2691.D	08/04/21	13:03
Independent Source	WG303684-8	T2691A.D	08/04/21	13:03
Method Blank	WG303684-10	T2693.D	08/04/21	14:13
GW-TB-SUMMER2021	SO4723-7RA	T2695.D	08/04/21	15:19
MW-FD-SUMMER2021	SO4723-6RA	T2696.D	08/04/21	15:51
MW-04-SUMMER2021	SO4723-4RA	T2697.D	08/04/21	16:24
MW-01-SUMMER2021	SO4723-1RA	T2698.D	08/04/21	16:57
Matrix Spike	WG303684-14	T2700.D	08/04/21	18:03
Matrix Spike Duplica	WG303684-15	T2701.D	08/04/21	18:35
Continuing Calibrati	WG303684-12	T2702.D	08/04/21	19:08

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Form 5
Volatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site
Lab File ID : TB536A.D
Instrument ID : GCMS-T

SDG : SO4723
Date Analyzed : 05-AUG-21
Time Analyzed : 07:11
Heated Purge : No

m/e	Ion Abundance Criteria	% Relative Abundance		
50	15.0 - 40.0% of mass 95	19.9		
75	30.0 - 60.0% of mass 95	47.0		
95	Base Peak, 100% relative abundance	100		
96	5.0 - 9.0% of mass 95	7.0		
173	Less than 2.0% of mass 174	0.0	0.0	1
174	Greater than 50.0% of mass 95	72.6		
175	5.0 - 9.0% of mass 174	5.7	7.87	1
176	95.0 - 101.0% of mass 174	71.2	98.08	1
177	5.0 - 9.0% of mass 176	4.9	6.85	2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Continuing Calibrati	WG303781-4	T2708.D	08/05/21	08:12
Laboratory Control S	WG303781-1	T2709.D	08/05/21	08:53
Laboratory Control S	WG303781-6	T2710.D	08/05/21	09:29
Method Blank	WG303781-2	T2712.D	08/05/21	10:35
GW-EB-SUMMER2021	SO4723-8RA	T2714.D	08/05/21	11:40
MW-02-SUMMER2021	SO4723-2RA	T2717.D	08/05/21	13:19
MW-03-SUMMER2021	SO4723-3RA	T2718.D	08/05/21	13:51
MW-05-SUMMER2021	SO4723-5RA	T2719.D	08/05/21	14:24
Continuing Calibrati	WG303781-5	T2727.D	08/05/21	18:46

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Form 5
Volatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site
Lab File ID : WB615A.D
Instrument ID : GCMS-W

SDG : SO4723
Date Analyzed : 28-JUL-21
Time Analyzed : 07:38
Heated Purge : No

m/e	Ion Abundance Criteria	% Relative Abundance		
50	15.0 - 40.0% of mass 95	15.2		
75	30.0 - 60.0% of mass 95	45.1		
95	Base Peak, 100% relative abundance	100		
96	5.0 - 9.0% of mass 95	7.1		
173	Less than 2.0% of mass 174	0.0	0.0	1
174	Greater than 50.0% of mass 95	79.0		
175	5.0 - 9.0% of mass 174	5.5	7.01	1
176	95.0 - 101.0% of mass 174	76.5	96.79	1
177	5.0 - 9.0% of mass 176	5.1	6.68	2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Initial Calibration	WG303228-1	W9619.D	07/28/21	08:00
Initial Calibration	WG303228-2	W9620.D	07/28/21	08:31
Initial Calibration	WG303228-8	W9621.D	07/28/21	09:01
Initial Calibration	WG303228-3	W9622.D	07/28/21	09:32
Initial Calibration	WG303228-4	W9623.D	07/28/21	10:02
Initial Calibration	WG303228-7	W9624.D	07/28/21	10:33
Initial Calibration	WG303228-5	W9625.D	07/28/21	11:04
Initial Calibration	WG303228-6	W9626.D	07/28/21	11:34
Independent Source	WG303228-9	W9628A.D	07/28/21	13:02

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Form 5
Volatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site
Lab File ID : WB618A.D
Instrument ID : GCMS-W

SDG : SO4723
Date Analyzed : 02-AUG-21
Time Analyzed : 06:47
Heated Purge : No

m/e	Ion Abundance Criteria	% Relative Abundance		
50	15.0 - 40.0% of mass 95	16.3		
75	30.0 - 60.0% of mass 95	45.6		
95	Base Peak, 100% relative abundance	100		
96	5.0 - 9.0% of mass 95	6.6		
173	Less than 2.0% of mass 174	0.4	0.56	1
174	Greater than 50.0% of mass 95	78.0		
175	5.0 - 9.0% of mass 174	5.5	7.03	1
176	95.0 - 101.0% of mass 174	74.1	95.12	1
177	5.0 - 9.0% of mass 176	5.1	6.88	2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Continuing Calibrati	WG303527-4	W9696.D	08/02/21	07:14
Laboratory Control S	WG303527-1	W9697.D	08/02/21	07:56
Method Blank	WG303527-2	W9699.D	08/02/21	09:06
MW-02-SUMMER2021	SO4723-2	W9707.D	08/02/21	13:12
MW-03-SUMMER2021	SO4723-3	W9708.D	08/02/21	13:42
MW-05-SUMMER2021	SO4723-5	W9710.D	08/02/21	14:44
MW-FD-SUMMER2021	SO4723-6	W9711.D	08/02/21	15:14
Continuing Calibrati	WG303527-5	W9715.D	08/02/21	17:17

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Lau
Lab ID : WG303684-4
Lab File ID : T2686.D

SDG: SO4723
Analytical Date: 08/04/21 10:02
Instrument ID: GCMS-T

		PENTAFLUOROBENZENE			1,4-DIFLUOROBENZENE			CHLOROBENZENE-D5		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	431478		5.30		721841		6.13		623824		10.27	
	Upper Limit	862956		5.47		1443682		6.30		1247648		10.44	
	Lower Limit	215739		5.13		360920.5		5.96		311912		10.11	
Client Sample ID	Lab Sample ID												
Laboratory Control S	WG303684-9	442979		5.30		726083		6.13		628965		10.27	
Method Blank	WG303684-10	414949		5.30		689256		6.13		603494		10.27	
GW-TB-SUMMER202	SO4723-7RA	414475		5.30		691371		6.14		605401		10.27	
MW-FD-SUMMER202	SO4723-6RA	416372		5.30		695417		6.13		616303		10.27	
MW-04-SUMMER202	SO4723-4RA	407606		5.30		673349		6.14		592913		10.27	
MW-01-SUMMER202	SO4723-1RA	411216		5.30		684159		6.14		602714		10.27	
Matrix Spike	WG303684-14	430622		5.30		715890		6.14		623961		10.27	
Matrix Spike Duplica	WG303684-15	416269		5.30		702297		6.14		603158		10.27	
Continuing Calibrati	WG303684-12	422729		5.30		706156		6.14		612229		10.27	
Continuing Calibrati	WG303781-4	426146		5.30		709191		6.14		613547		10.27	
Laboratory Control S	WG303781-1	428289		5.30		712376		6.14		615873		10.27	
Laboratory Control S	WG303781-6	413525		5.30		699739		6.14		606749		10.27	
Method Blank	WG303781-2	411001		5.30		689730		6.14		611919		10.27	
GW-EB-SUMMER202	SO4723-8RA	409694		5.30		682081		6.14		607338		10.27	
MW-02-SUMMER202	SO4723-2RA	405265		5.30		686821		6.13		608895		10.27	
MW-03-SUMMER202	SO4723-3RA	398394		5.30		675700		6.14		594975		10.27	
MW-05-SUMMER202	SO4723-5RA	402595		5.30		671074		6.13		596143		10.27	
Continuing Calibrati	WG303781-5	405879		5.30		673515		6.14		585674		10.27	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Lau
Lab ID : WG303684-4
Lab File ID : T2686.D

SDG: SO4723
Analytical Date: 08/04/21 10:02
Instrument ID: GCMS-T

		1,4-DICHLOROBENZENE-D4			
		Area	#	RT	#
	Std .	286206		13.34	
	Upper Limit	572412		13.50	
	Lower Limit	143103		13.17	
Client Sample ID	Lab Sample ID				
Laboratory Control S	WG303684-9	286200		13.34	
Method Blank	WG303684-10	270677		13.34	
GW-TB-SUMMER202	SO4723-7RA	272903		13.34	
MW-FD-SUMMER202	SO4723-6RA	280131		13.34	
MW-04-SUMMER202	SO4723-4RA	262894		13.34	
MW-01-SUMMER202	SO4723-1RA	270494		13.34	
Matrix Spike	WG303684-14	279294		13.34	
Matrix Spike Duplica	WG303684-15	272730		13.34	
Continuing Calibrati	WG303684-12	279627		13.34	
Continuing Calibrati	WG303781-4	278788		13.34	
Laboratory Control S	WG303781-1	282101		13.34	
Laboratory Control S	WG303781-6	274183		13.34	
Method Blank	WG303781-2	276027		13.34	
GW-EB-SUMMER202	SO4723-8RA	273663		13.34	
MW-02-SUMMER202	SO4723-2RA	276860		13.34	
MW-03-SUMMER202	SO4723-3RA	266851		13.34	
MW-05-SUMMER202	SO4723-5RA	271884		13.34	
Continuing Calibrati	WG303781-5	265774		13.34	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Lau
Lab ID : WG303228-4
Lab File ID : W9623.D

SDG: SO4723
Analytical Date: 07/28/21 10:02
Instrument ID: GCMS-W

		PENTAFLUOROBENZENE			1,4-DIFLUOROBENZENE			CHLOROBENZENE-D5		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	941510		5.78		1488981		6.56		1436663		10.40	
	Upper Limit	1883020		5.95		2977962		6.72		2873326		10.56	
	Lower Limit	470755		5.61		744490.5		6.39		718331.5		10.23	
Client Sample ID	Lab Sample ID												
Continuing Calibrati	WG303527-4	823295		5.78		1311426		6.56		1284465		10.40	
Laboratory Control S	WG303527-1	837781		5.78		1341146		6.56		1303795		10.40	
Method Blank	WG303527-2	704085		5.79		1205398		6.55		1181428		10.40	
MW-02-SUMMER202	SO4723-2	727451		5.78		1247627		6.56		1243431		10.40	
MW-03-SUMMER202	SO4723-3	700493		5.78		1219445		6.56		1202226		10.40	
MW-05-SUMMER202	SO4723-5	668188		5.78		1190034		6.55		1212371		10.40	
MW-FD-SUMMER202	SO4723-6	675547		5.78		1176868		6.55		1170724		10.40	
Continuing Calibrati	WG303527-5	784781		5.78		1286072		6.56		1276454		10.40	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Lau
Lab ID : WG303228-4
Lab File ID : W9623.D

SDG: SO4723
Analytical Date: 07/28/21 10:02
Instrument ID: GCMS-W

		1,4-DICHLOROBENZENE-D4			
		Area	#	RT	#
	Std .	823599		13.14	
	Upper Limit	1647198		13.31	
	Lower Limit	411799.5		12.98	
Client Sample ID	Lab Sample ID				
Continuing Calibrati	WG303527-4	736440		13.14	
Laboratory Control S	WG303527-1	755345		13.14	
Method Blank	WG303527-2	613159		13.14	
MW-02-SUMMER202	SO4723-2	671763		13.14	
MW-03-SUMMER202	SO4723-3	641141		13.14	
MW-05-SUMMER202	SO4723-5	651487		13.14	
MW-FD-SUMMER202	SO4723-6	612551		13.15	
Continuing Calibrati	WG303527-5	738609		13.15	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Sample Data Section

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

* Compound recovery or percent RPD (relative percent difference) was outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

C Indicates that the flagged compound did not meet DoD criteria in the corresponding daily calibration verification (CV).

L Indicates that the flagged compound did not meet DoD criteria in the corresponding Laboratory Control Sample (LCS) and/or Laboratory Control Sample Duplicate (LCSD) prepared and/or analyzed concurrently with the sample.

M Indicates that the flagged compound did not meet DoD criteria in the Matrix Spike and/or Matrix Spike Duplicate prepared and/or analyzed concurrently with the native sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-1RA
Client ID: MW-01-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2698.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 04-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303684

Analysis Date: 04-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	UL	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	UL	2.5	ug/L	1	5	5.0	1.3	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Xylenes (Total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-1RA
Client ID: MW-01-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2698.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 04-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303684

Analysis Date: 04-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		102.	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4		102.	%					
Dibromofluoromethane		99.4	%					

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Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2698.D
Report Date: 10-Aug-2021 11:00

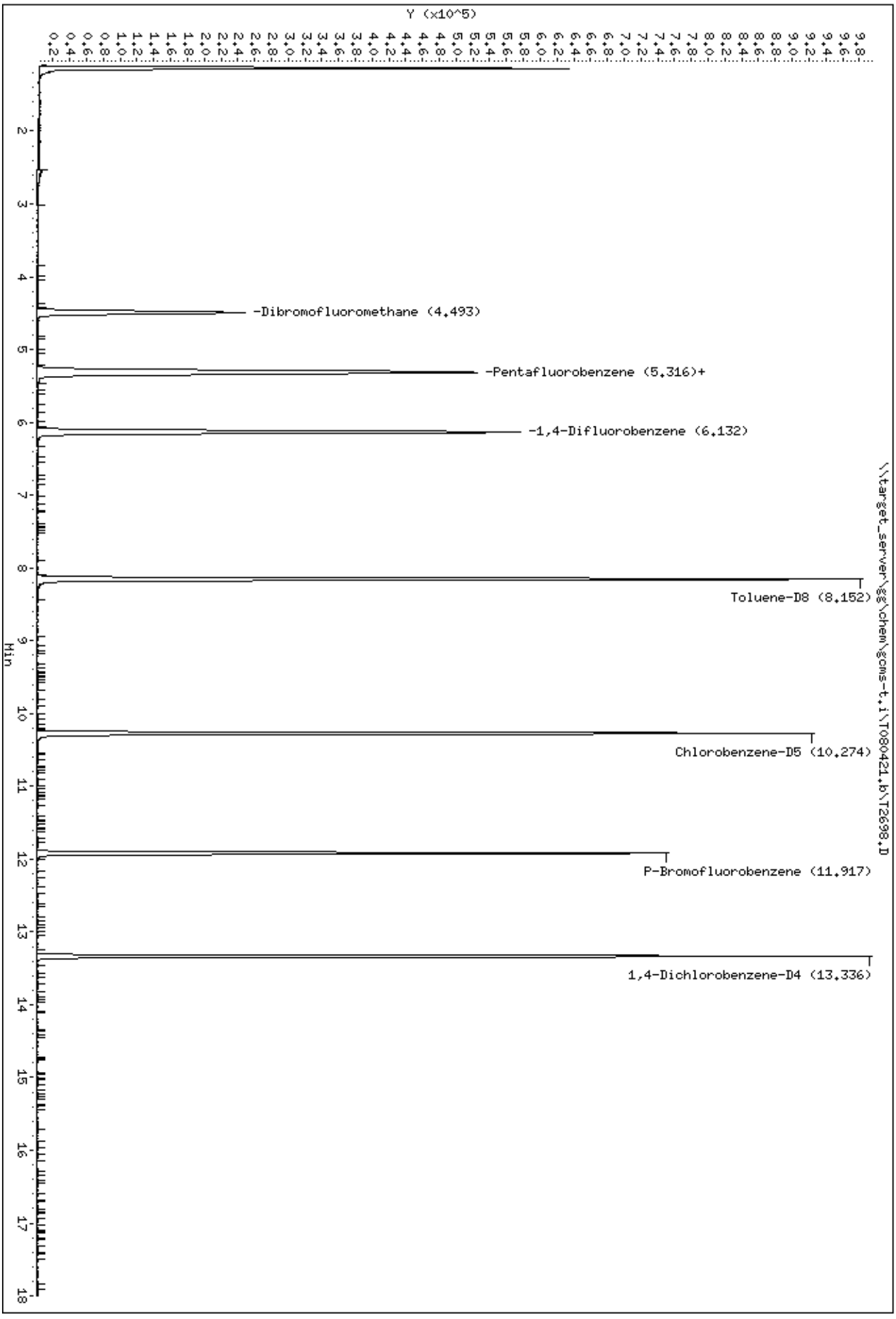
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-t.i\T080421.b\T2698.D
Lab Smp Id: SO4723-1RA Client Smp ID: MW-01-SUMMER2021
Inj Date : 04-AUG-2021 16:57
Operator : HG Inst ID: gcms-t.i
Smp Info : SO4723-1RA
Misc Info : WG303684,WG303684-4
Comment : SW846 5030
Method : \\target_server\gg\chem\gcms-t.i\T080421.b\T8A05(66)D.m
Meth Date : 10-Aug-2021 10:55 croy Quant Type: ISTD
Cal Date : 04-AUG-2021 12:24 Cal File: T2690.D
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)	REVIEW CODE
$ 34 Dibromofluoromethane	113	4.492	4.489	(0.847)	221688	49.7017	49.7	
* 41 Pentafluorobenzene	168	5.304	5.301	(1.000)	411216	50.0000		
$ 42 1,2-Dichloroethane-D4	65	5.323	5.323	(1.004)	272236	50.9317	50.9	
* 48 1,4-Difluorobenzene	114	6.139	6.132	(1.000)	684159	50.0000		
$ 56 Toluene-D8	98	8.152	8.153	(1.328)	793146	51.1156	51.1	
* 68 Chlorobenzene-D5	117	10.270	10.274	(1.000)	602714	50.0000		
$ 77 P-Bromofluorobenzene	95	11.917	11.921	(1.941)	287537	51.0687	51.1	
* 93 1,4-Dichlorobenzene-D4	152	13.335	13.336	(1.000)	270494	50.0000		


Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2698.D
Date : 04-AUG-2021 16:57
Client ID: MW-01-SUMMER2021
Sample Info: SD4723-1RA
Instrument: gcms-t.i
Y (x10^5)
-Dibromofluoromethane (4.493)
-Pentafluorobenzene (5.316)+
-1,4-Difluorobenzene (6.132)
Toluene-D8 (8.152)
Chlorobenzene-D5 (10.274)
P-Bromofluorobenzene (11.917)
1,4-Dichlorobenzene-D4 (13.336)
\\target_server\gg\chem\gcms-t.i\T080421.b\T2698.D
Min

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-2
Client ID: MW-02-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: W9707.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 02-AUG-21
Extracted By: CR/ES
Extraction Method: SW846 5030
Lab Prep Batch: WG303527

Analysis Date: 02-AUG-21
Analyst: CR/ES
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Xylenes (Total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-2
Client ID: MW-02-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: W9707.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 02-AUG-21
Extracted By: CR/ES
Extraction Method: SW846 5030
Lab Prep Batch: WG303527

Analysis Date: 02-AUG-21
Analyst: CR/ES
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		103.	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4		116.	%					
Dibromofluoromethane		110.	%					

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Data File: \\target_server\gg\chem\gcms-w.i\W080221.b\W9707.D
Report Date: 10-Aug-2021 11:24

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Data file : \\target_server\gg\chem\gcms-w.i\W080221.b\W9707.D
Lab Smp Id: SO4723-2 Client Smp ID: MW-02-SUMMER2021
Inj Date : 02-AUG-2021 13:12
Operator : CR/ES Inst ID: gcms-w.i
Smp Info : SO4723-2
Misc Info : WG303527,WG303228-4
Comment : SW846 5030
Method : \\target_server\gg\chem\gcms-w.i\W080221.b\W8A05(03).m
Meth Date : 03-Aug-2021 06:45 hgould Quant Type: ISTD
Cal Date : 28-JUL-2021 11:04 Cal File: W9625.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

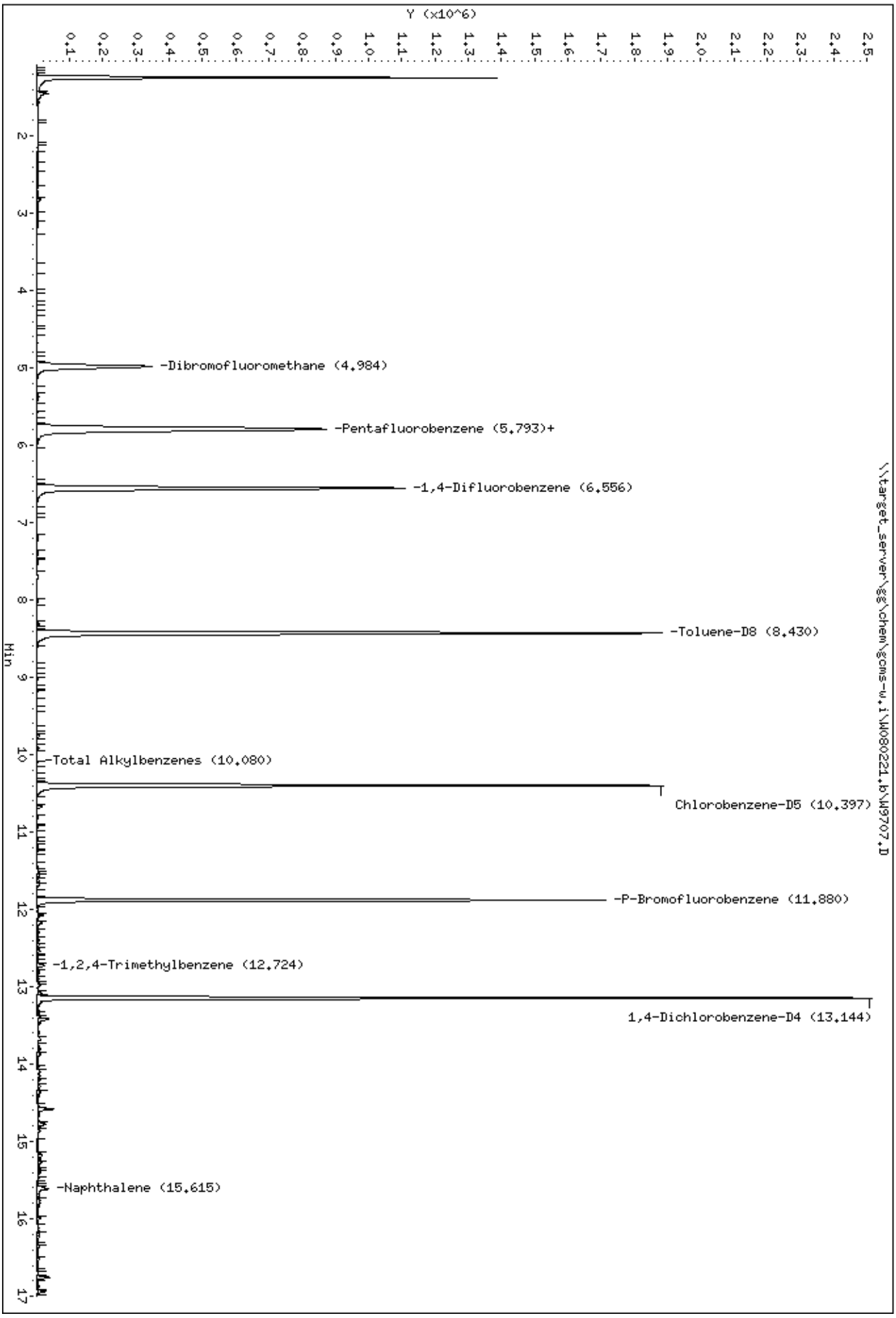
Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

CR
11:31 am, Aug 10, 2021

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)	REVIEW CODE
$ 34 Dibromofluoromethane	113	4.984	4.981	(0.862)	357154	54.7961	54.8	
* 41 Pentafluorobenzene	168	5.783	5.780	(1.000)	727451	50.0000		
$ 42 1,2-Dichloroethane-D4	65	5.808	5.809	(1.004)	422517	57.9105	57.9	
* 48 1,4-Difluorobenzene	114	6.556	6.556	(1.000)	1247627	50.0000		
M 55 Total Alkylbenzenes	100				12460	0.42573	0.42(a)	
$ 58 Toluene-D8	98	8.430	8.427	(1.286)	1547745	51.0833	51.1	
* 68 Chlorobenzene-D5	117	10.397	10.397	(1.000)	1243431	50.0000		
$ 77 P-Bromofluorobenzene	95	11.879	11.880	(1.812)	641847	51.5623	51.6	
89 1,2,4-Trimethylbenzene	105	12.723	12.727	(0.968)	12460	0.42573	0.42(aMH)	M10
* 93 1,4-Dichlorobenzene-D4	152	13.144	13.144	(1.000)	671763	50.0000		
103 Naphthalene	128	15.595	15.596	(1.187)	14129	0.73033	0.73(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.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Date : 02-AUG-2021 13:12
Client ID: MW-02-SUMMER2021
Sample Info: SD4723-2
Instrument: gcms-w.i
\\target_server\gg\chem\gcms-w.i\W080221.b\W9707.D
Y (x10^6)
Min
-Dibromofluoromethane (4.984)
-Pentafluorobenzene (5.793)+
-1,4-Difluorobenzene (6.556)
-Toluene-D8 (8.430)
-Total Alkylbenzenes (10.080)
Chlorobenzene-D5 (10.397)
-P-Bromofluorobenzene (11.880)
-1,2,4-Trimethylbenzene (12.724)
1,4-Dichlorobenzene-D4 (13.144)
-Naphthalene (15.615)

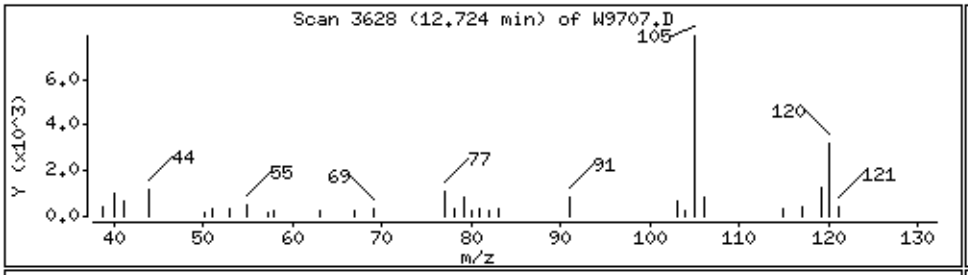
Data File: \\target_server\gg\chem\gcms-w.i\W080221.b\W9707.D

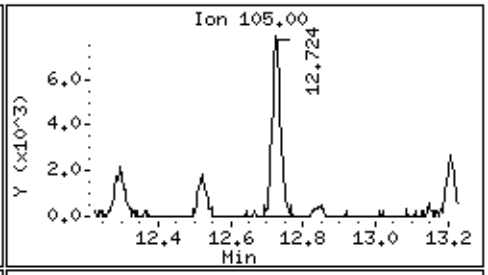
Date : 02-AUG-2021 13:12

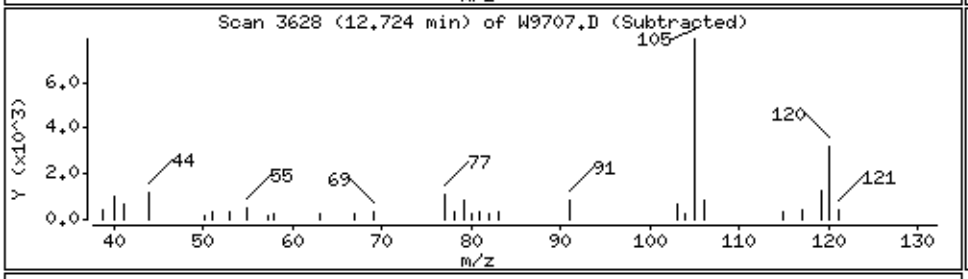
Client ID: MW-02-SUMMER2021 Instrument: gcms-w.i

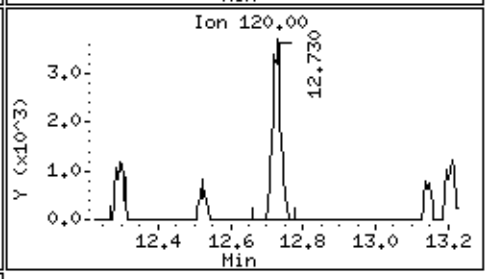
Sample Info: S04723-2

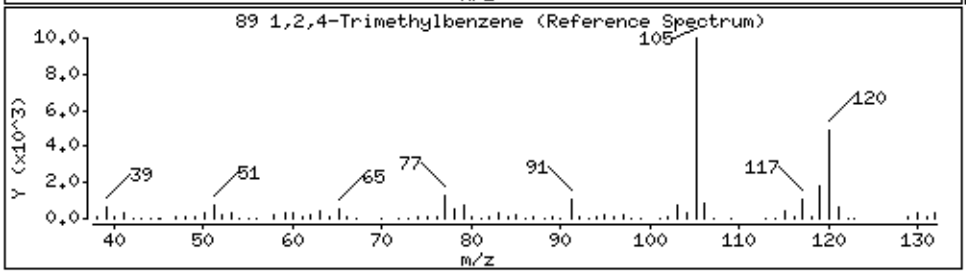
89 1,2,4-Trimethylbenzene Concentration: 0.42 ug/l



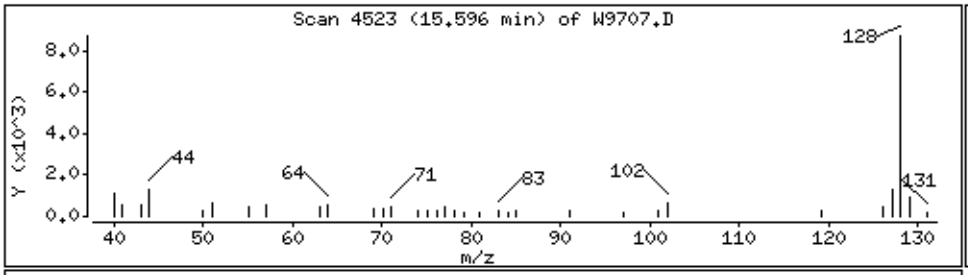


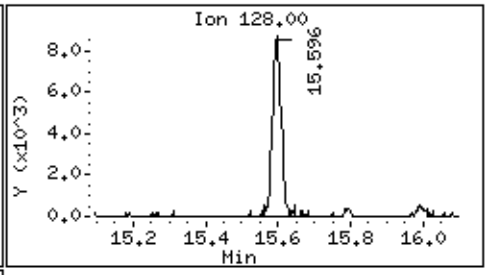


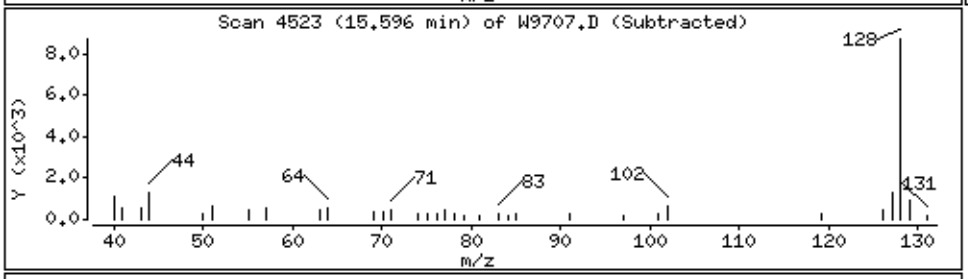


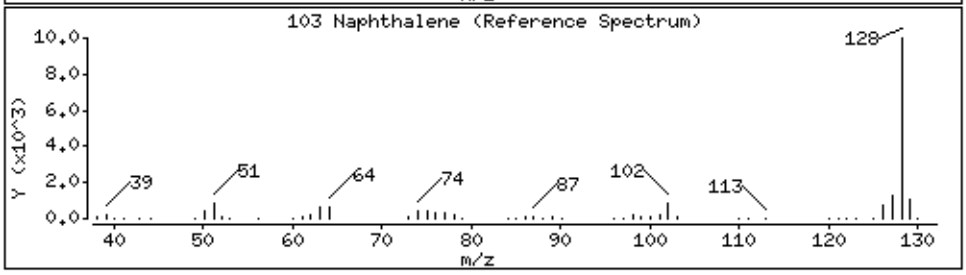


103 Naphthalene Concentration: 0.73 ug/l









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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-2RA
Client ID: MW-02-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2717.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 05-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303781

Analysis Date: 05-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	J	1.2	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Xylenes (Total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-2RA
Client ID: MW-02-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2717.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 05-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303781

Analysis Date: 05-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		101.	%					
Toluene-d8		101.	%					
1,2-Dichloroethane-d4		102.	%					
Dibromofluoromethane		99.0	%					

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Data File: \\target_server\gg\chem\gcms-t.i\T080521.b\T2717.D
Report Date: 10-Aug-2021 11:11

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-t.i\T080521.b\T2717.D
Lab Smp Id: SO4723-2RA Client Smp ID: MW-02-SUMMER2021
Inj Date : 05-AUG-2021 13:19
Operator : HG Inst ID: gcms-t.i
Smp Info : SO4723-2RA
Misc Info : WG303781,WG303684-4
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-t.i\T080521.b\T8A05(66)D.m
Meth Date : 06-Aug-2021 05:48 hgould Quant Type: ISTD
Cal Date : 04-AUG-2021 12:24 Cal File: T2690.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

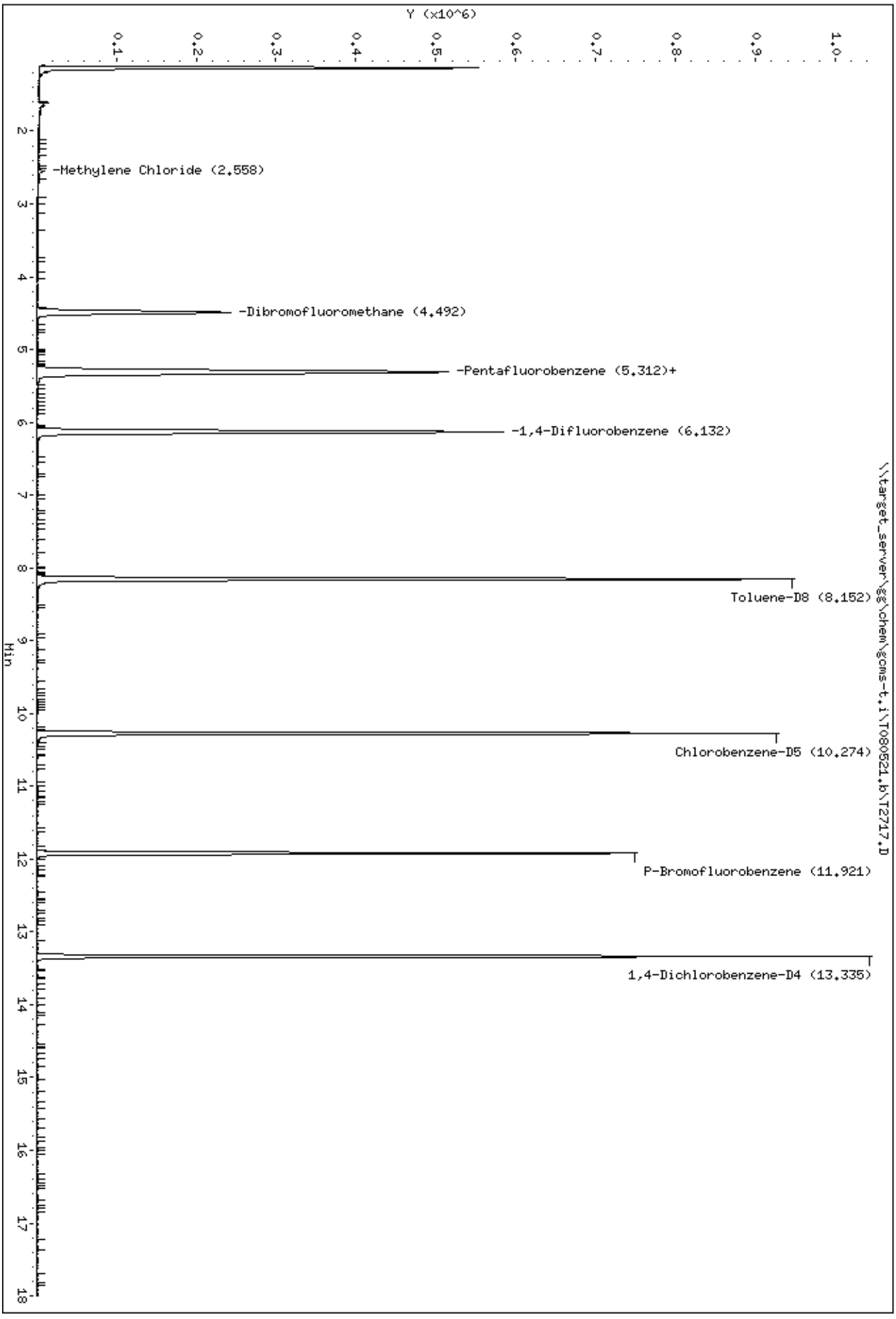
Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)	REVIEW CODE
	14 Methylene Chloride	84	2.553	2.554	(0.482)	2893	1.20005	1.2(a)	
$	34 Dibromofluoromethane	113	4.484	4.489	(0.847)	217546	49.4893	49.5	
*	41 Pentafluorobenzene	168	5.297	5.301	(1.000)	405265	50.0000		
$	42 1,2-Dichloroethane-D4	65	5.323	5.323	(1.005)	269257	51.1141	51.1	
*	48 1,4-Difluorobenzene	114	6.131	6.132	(1.000)	686821	50.0000		
$	56 Toluene-D8	98	8.148	8.153	(1.329)	785755	50.4430	50.4	
*	68 Chlorobenzene-D5	117	10.274	10.274	(1.000)	608895	50.0000		
$	77 P-Bromofluorobenzene	95	11.917	11.921	(1.944)	286510	50.6890	50.7	
*	93 1,4-Dichlorobenzene-D4	152	13.339	13.336	(1.000)	276860	50.0000		

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).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Date : 05-AUG-2021 13:19
Client ID: MW-02-SUMMER2021
Sample Info: SD4723-2RA
Instrument: gcms-t.i
\\target_server\gg\chem\gcms-t.i\T080521.b\T2717.D
Y (x10^6)
Min
-Methylene Chloride (2.558)
-Dibromofluoromethane (4.492)
-Pentafluorobenzene (5.312)+
-1,4-Difluorobenzene (6.132)
Toluene-D8 (8.152)
Chlorobenzene-D5 (10.274)
P-Bromofluorobenzene (11.921)
1,4-Dichlorobenzene-D4 (13.335)

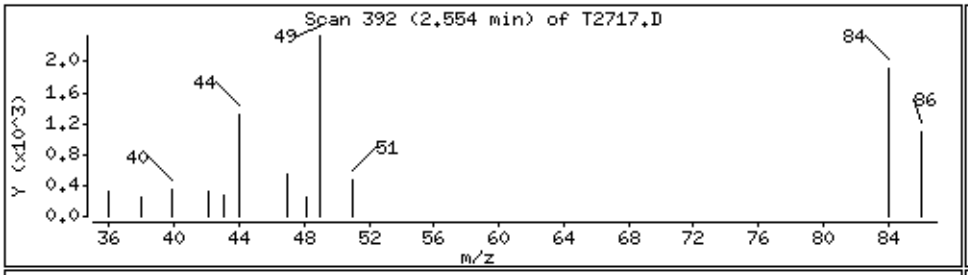
Data File: \\target_server\gg\chem\gcms-t.i\T080521.b\T2717.D

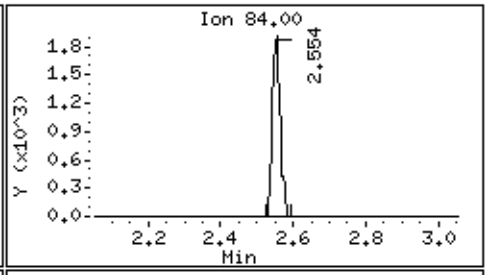
Date : 05-AUG-2021 13:19

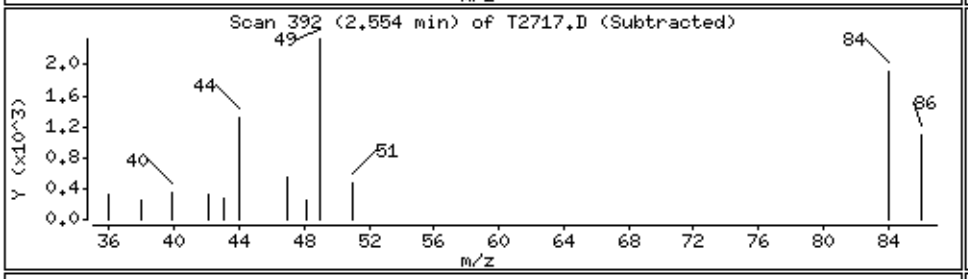
Client ID: MW-02-SUMMER2021 Instrument: gcms-t.i

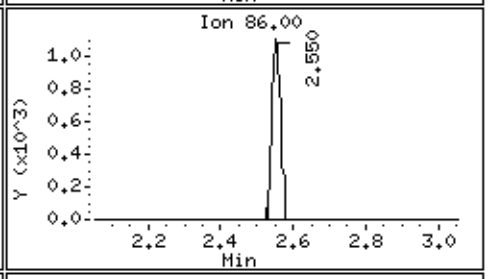
Sample Info: S04723-2RA

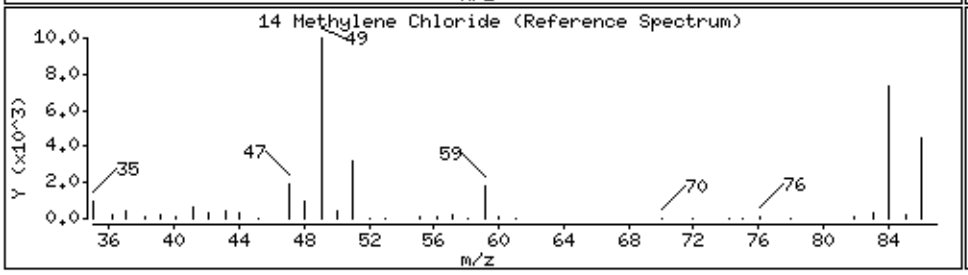
14 Methylene Chloride Concentration: 1.2 ug/l

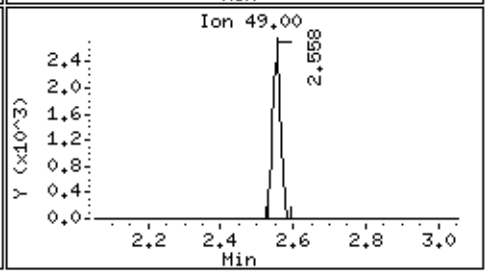












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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-3
Client ID: MW-03-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: W9708.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 02-AUG-21
Extracted By: CR/ES
Extraction Method: SW846 5030
Lab Prep Batch: WG303527

Analysis Date: 02-AUG-21
Analyst: CR/ES
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Xylenes (Total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-3
Client ID: MW-03-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: W9708.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 02-AUG-21
Extracted By: CR/ES
Extraction Method: SW846 5030
Lab Prep Batch: WG303527

Analysis Date: 02-AUG-21
Analyst: CR/ES
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		101.	%					
Toluene-d8		103.	%					
1,2-Dichloroethane-d4	*	120.	%					
Dibromofluoromethane		112.	%					

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Data File: \\target_server\gg\chem\gcms-w.i\W080221.b\W9708.D
Report Date: 10-Aug-2021 11:24

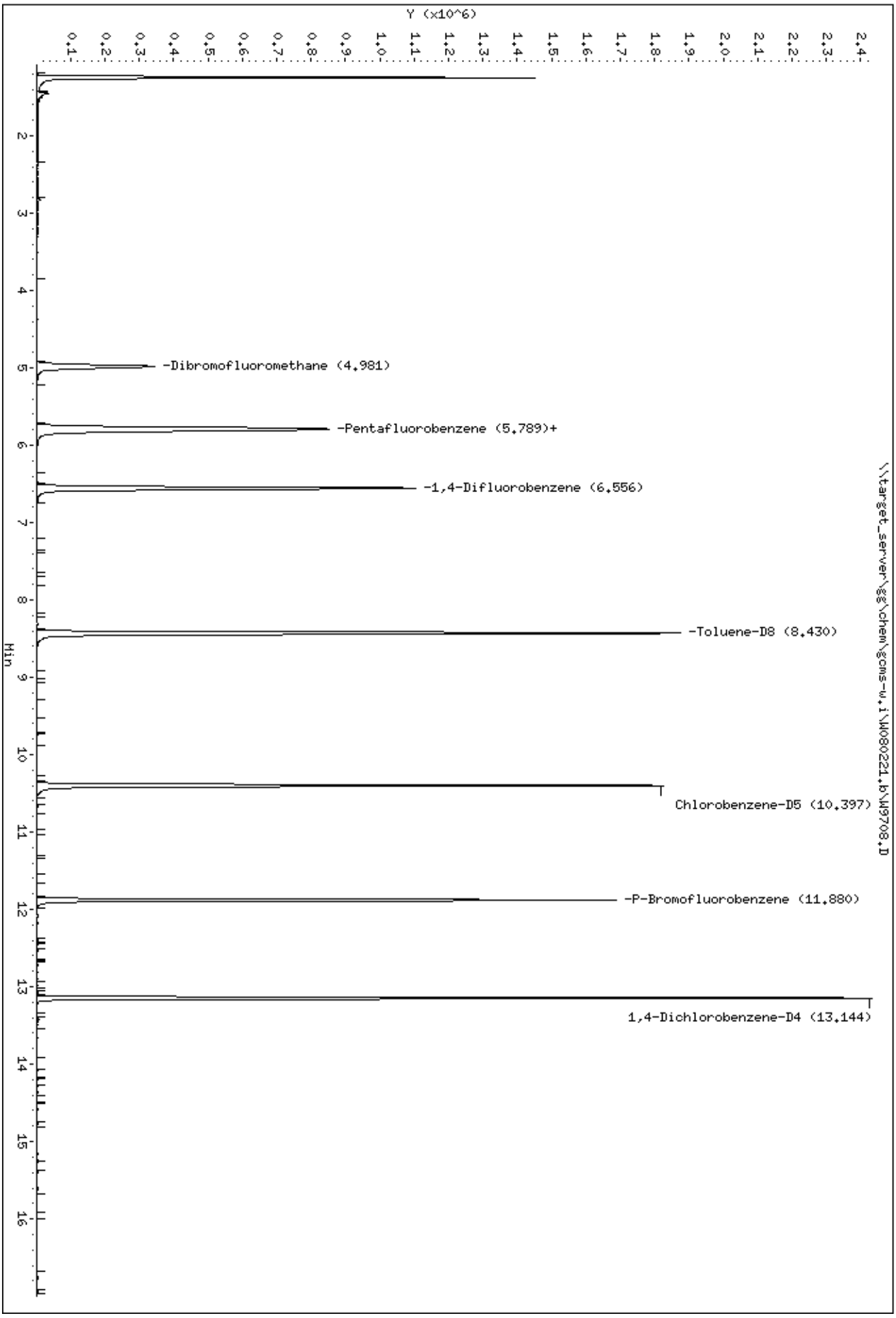
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W080221.b\W9708.D
Lab Smp Id: SO4723-3 Client Smp ID: MW-03-SUMMER2021
Inj Date : 02-AUG-2021 13:42
Operator : CR/ES Inst ID: gcms-w.i
Smp Info : SO4723-3
Misc Info : WG303527,WG303228-4
Comment : SW846 5030
Method : \\target_server\gg\chem\gcms-w.i\W080221.b\W8A05(03).m
Meth Date : 03-Aug-2021 06:45 hgould Quant Type: ISTD
Cal Date : 28-JUL-2021 11:04 Cal File: W9625.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)	REVIEW CODE
$ 34 Dibromofluoromethane	113	4.980	4.981	(0.862)	351566	56.0146	56.0	
* 41 Pentafluorobenzene	168	5.779	5.780	(1.000)	700493	50.0000		
$ 42 1,2-Dichloroethane-D4	65	5.808	5.809	(1.005)	422653	60.1585	60.2	
* 48 1,4-Difluorobenzene	114	6.556	6.556	(1.000)	1219445	50.0000		
$ 58 Toluene-D8	98	8.430	8.427	(1.286)	1519928	51.3245	51.3	
* 68 Chlorobenzene-D5	117	10.397	10.397	(1.000)	1202226	50.0000		
$ 77 P-Bromofluorobenzene	95	11.879	11.880	(1.812)	616104	50.6381	50.6	
* 93 1,4-Dichlorobenzene-D4	152	13.144	13.144	(1.000)	641141	50.0000		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Date : 02-AUG-2021 13:42
Client ID: MW-03-SUMMER2021
Sample Info: SD4723-3
Instrument: gcms-w.i
\\target_server\gg\chem\gcms-w.i\W080221.b\W9708.D
Y (x10^6)
Min
-Dibromofluoromethane (4.981)
-Pentafluorobenzene (5.789)+
-1,4-Difluorobenzene (6.556)
-Toluene-D8 (8.430)
Chlorobenzene-D5 (10.397)
-P-Bromofluorobenzene (11.880)
1,4-Dichlorobenzene-D4 (13.144)

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-3RA
Client ID: MW-03-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2718.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 05-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303781

Analysis Date: 05-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	J	1.2	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Xylenes (Total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50

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Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-3RA
Client ID: MW-03-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2718.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 05-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303781

Analysis Date: 05-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		103.	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4		102.	%					
Dibromofluoromethane		99.5	%					

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http://www.katahdinlab.com

Data File: \\target_server\gg\chem\gcms-t.i\T080521.b\T2718.D
Report Date: 10-Aug-2021 11:11

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-t.i\T080521.b\T2718.D
Lab Smp Id: SO4723-3RA Client Smp ID: MW-03-SUMMER2021
Inj Date : 05-AUG-2021 13:51
Operator : HG Inst ID: gcms-t.i
Smp Info : SO4723-3RA
Misc Info : WG303781,WG303684-4
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-t.i\T080521.b\T8A05(66)D.m
Meth Date : 06-Aug-2021 05:48 hgould Quant Type: ISTD
Cal Date : 04-AUG-2021 12:24 Cal File: T2690.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

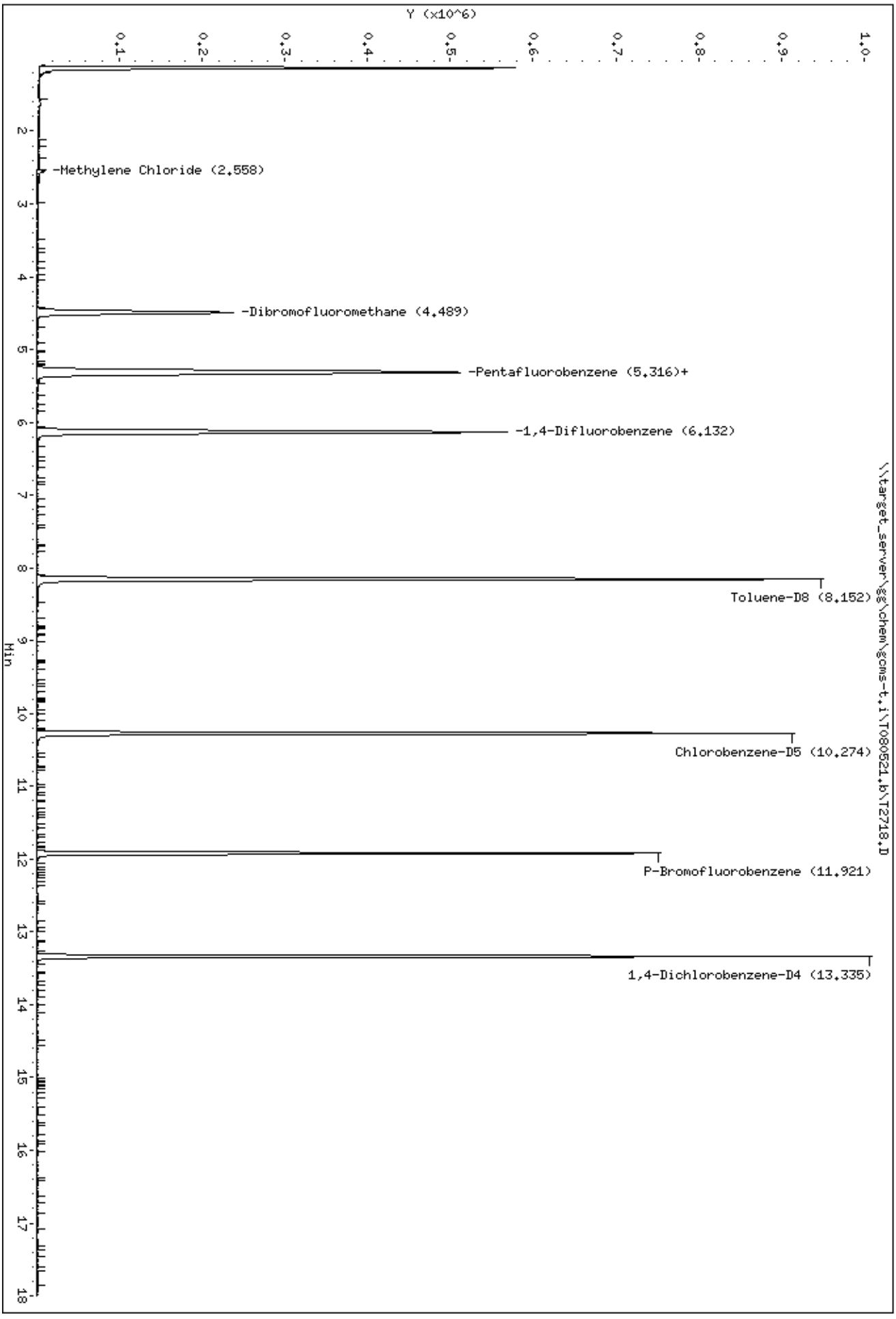
Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)	REVIEW CODE
	14 Methylene Chloride	84	2.557	2.554	(0.482)	2933	1.23763	1.2(a)	
$	34 Dibromofluoromethane	113	4.496	4.489	(0.848)	214914	49.7337	49.7	
*	41 Pentafluorobenzene	168	5.304	5.301	(1.000)	398394	50.0000		
$	42 1,2-Dichloroethane-D4	65	5.327	5.323	(1.004)	262969	50.7814	50.8	
*	48 1,4-Difluorobenzene	114	6.135	6.132	(1.000)	675700	50.0000		
$	56 Toluene-D8	98	8.152	8.153	(1.329)	778466	50.7976	50.8	
*	68 Chlorobenzene-D5	117	10.274	10.274	(1.000)	594975	50.0000		
$	77 P-Bromofluorobenzene	95	11.920	11.921	(1.943)	286302	51.4859	51.5	
*	93 1,4-Dichlorobenzene-D4	152	13.335	13.336	(1.000)	266851	50.0000		

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).


Y (x10^6)
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Min
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
-Methylene Chloride (2.558)
-Dibromofluoromethane (4.489)
-Pentafluorobenzene (5.316)+
-1,4-Difluorobenzene (6.132)
Toluene-D8 (8.152)
Chlorobenzene-D5 (10.274)
P-Bromofluorobenzene (11.921)
1,4-Dichlorobenzene-D4 (13.335)
\\target_server\gg\chem\gcms-t.i\T080521.b\T2718.D
Data File: \\target_server\gg\chem\gcms-t.i\T080521.b\T2718.D
Date : 05-AUG-2021 13:51
Client ID: MW-03-SUMMER2021
Sample Info: SD4723-3RA
Instrument: gcms-t.i

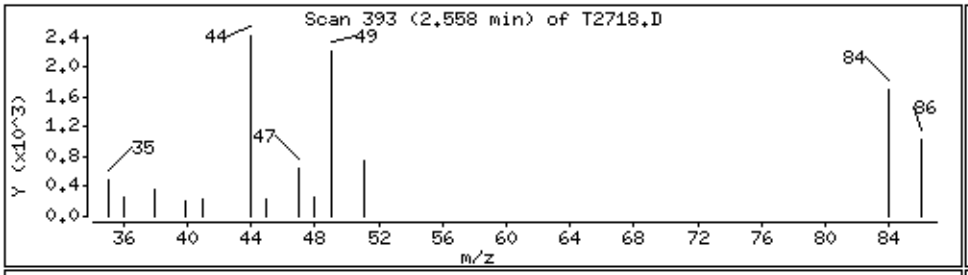
Data File: \\target_server\gg\chem\gcms-t.i\T080521.b\T2718.D

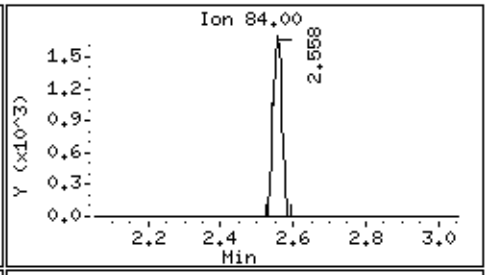
Date : 05-AUG-2021 13:51

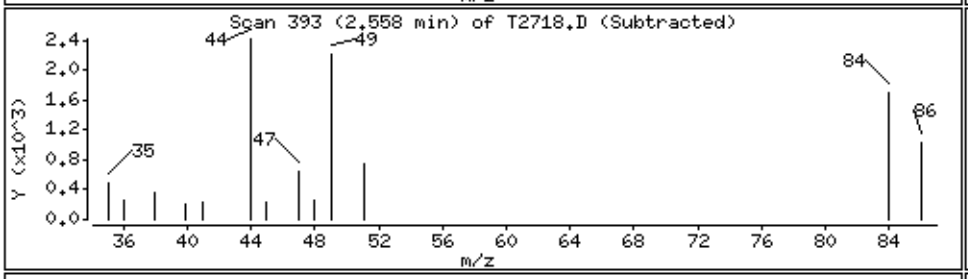
Client ID: MW-03-SUMMER2021 Instrument: gcms-t.i

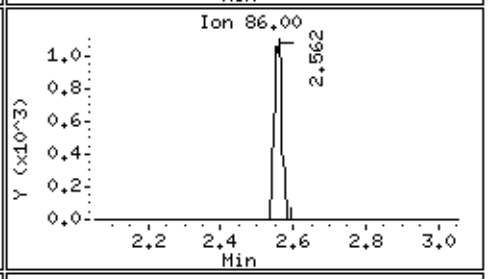
Sample Info: S04723-3RA

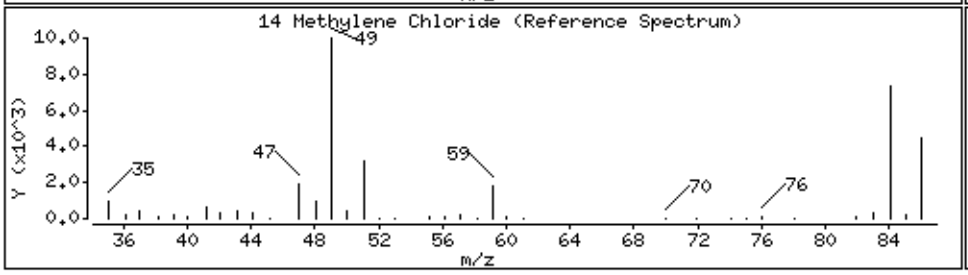
14 Methylene Chloride Concentration: 1.2 ug/l

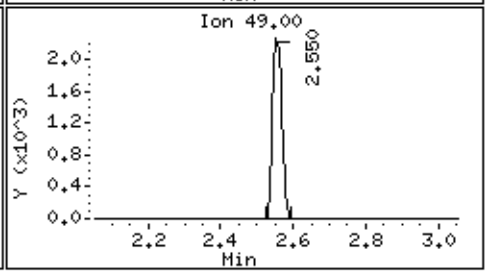












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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-4RA
Client ID: MW-04-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2697.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 04-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303684

Analysis Date: 04-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	UL	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	UL	2.5	ug/L	1	5	5.0	1.3	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Xylenes (Total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-4RA
Client ID: MW-04-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2697.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 04-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303684

Analysis Date: 04-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		102.	%					
Toluene-d8		101.	%					
1,2-Dichloroethane-d4		99.8	%					
Dibromofluoromethane		99.6	%					

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Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2697.D
Report Date: 10-Aug-2021 11:00

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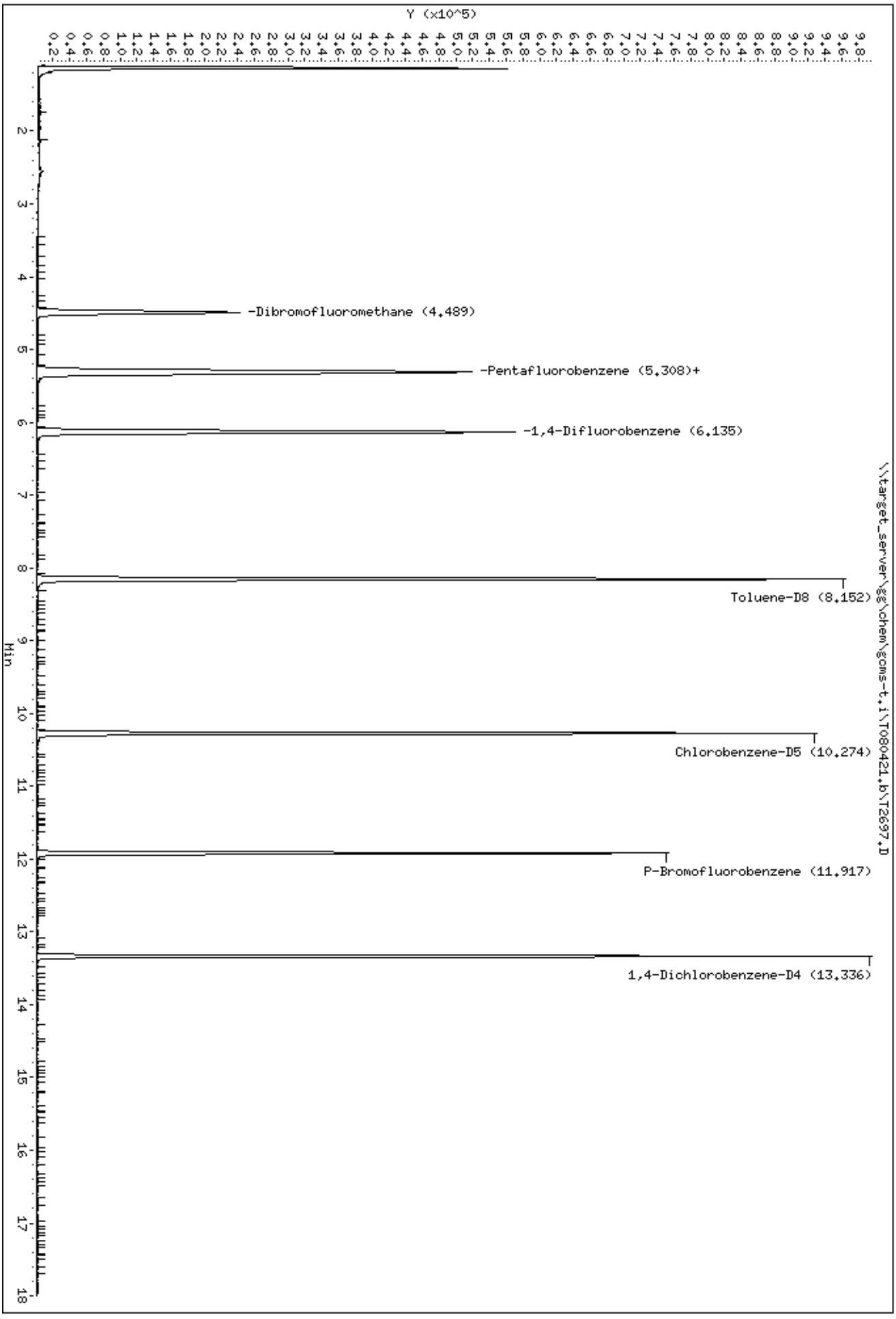
Data file : \\target_server\gg\chem\gcms-t.i\T080421.b\T2697.D
Lab Smp Id: SO4723-4RA Client Smp ID: MW-04-SUMMER2021
Inj Date : 04-AUG-2021 16:24
Operator : HG Inst ID: gcms-t.i
Smp Info : SO4723-4RA
Misc Info : WG303684,WG303684-4
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-t.i\T080421.b\T8A05(66)D.m
Meth Date : 10-Aug-2021 10:55 croy Quant Type: ISTD
Cal Date : 04-AUG-2021 12:24 Cal File: T2690.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
$ 34 Dibromofluoromethane	113	4.488	4.489	(0.847)	220076	49.7773	49.8	
* 41 Pentafluorobenzene	168	5.300	5.301	(1.000)	407606	50.0000		
$ 42 1,2-Dichloroethane-D4	65	5.323	5.323	(1.004)	264358	49.8959	49.9	
* 48 1,4-Difluorobenzene	114	6.135	6.132	(1.000)	673349	50.0000		
$ 56 Toluene-D8	98	8.152	8.153	(1.329)	774626	50.7235	50.7	
* 68 Chlorobenzene-D5	117	10.274	10.274	(1.000)	592913	50.0000		
$ 77 P-Bromofluorobenzene	95	11.917	11.921	(1.942)	283247	51.1144	51.1	
* 93 1,4-Dichlorobenzene-D4	152	13.335	13.336	(1.000)	262894	50.0000		


Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2697.D
Date : 04-AUG-2021 16:24
Client ID: MW-04-SUMMER2021
Sample Info: SD4723-4RA
Instrument: gcms-t.i
\\target_server\gg\chem\gcms-t.i\T080421.b\T2697.D
Y (x10^5)
Min
-Dibromofluoromethane (4.489)
-Pentafluorobenzene (5.308)+
-1,4-Difluorobenzene (6.135)
Toluene-D8 (8.152)
Chlorobenzene-D5 (10.274)
P-Bromofluorobenzene (11.917)
1,4-Dichlorobenzene-D4 (13.336)

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-5
Client ID: MW-05-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: W9710.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 02-AUG-21
Extracted By: CR/ES
Extraction Method: SW846 5030
Lab Prep Batch: WG303527

Analysis Date: 02-AUG-21
Analyst: CR/ES
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	J	1.6	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	J	0.31	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Xylenes (Total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-5
Client ID: MW-05-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: W9710.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 02-AUG-21
Extracted By: CR/ES
Extraction Method: SW846 5030
Lab Prep Batch: WG303527

Analysis Date: 02-AUG-21
Analyst: CR/ES
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		106.	%					
Toluene-d8		104.	%					
1,2-Dichloroethane-d4	*	125.	%					
Dibromofluoromethane		117.	%					

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Data File: \\target_server\gg\chem\gcms-w.i\W080221.b\W9710.D
Report Date: 10-Aug-2021 11:24

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W080221.b\W9710.D
Lab Smp Id: SO4723-5 Client Smp ID: MW-05-SUMMER2021
Inj Date : 02-AUG-2021 14:44
Operator : CR/ES Inst ID: gcms-w.i
Smp Info : SO4723-5
Misc Info : WG303527,WG303228-4
Comment : SW846 5030
Method : \\target_server\gg\chem\gcms-w.i\W080221.b\W8A05(03).m
Meth Date : 03-Aug-2021 06:45 hgould Quant Type: ISTD
Cal Date : 28-JUL-2021 11:04 Cal File: W9625.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

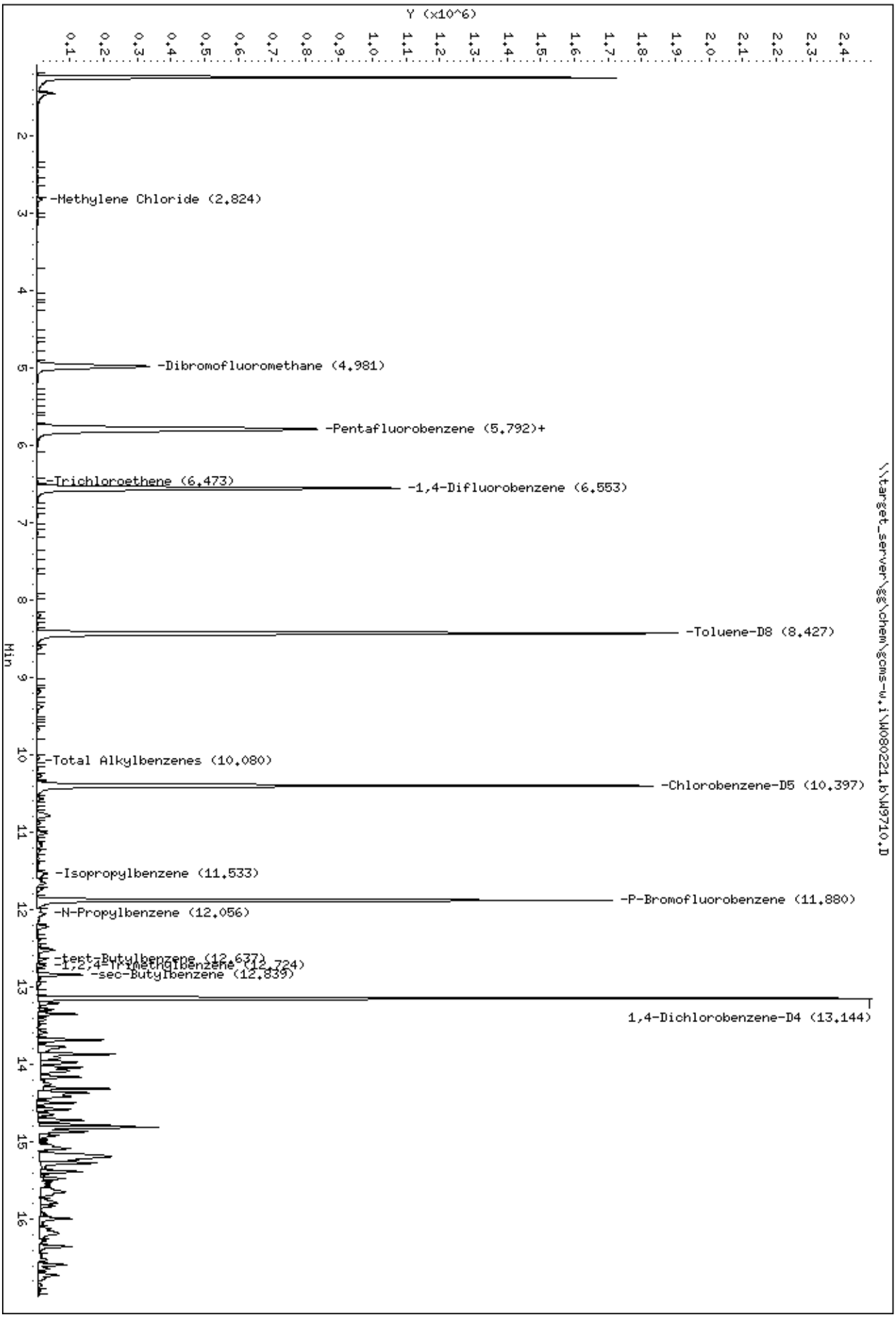
Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)	REVIEW CODE
	14 Methylene Chloride	84	2.824	2.824	(0.489)	6769	1.58989	1.6(a)	
$	34 Dibromofluoromethane	113	4.980	4.981	(0.862)	350989	58.6263	58.6	
*	41 Pentafluorobenzene	168	5.779	5.780	(1.000)	668188	50.0000		
$	42 1,2-Dichloroethane-D4	65	5.805	5.809	(1.004)	419083	62.5343	62.5	
	47 Trichloroethene	95	6.466	6.473	(0.987)	2408	0.31497	0.31(a)	
*	48 1,4-Difluorobenzene	114	6.552	6.556	(1.000)	1190034	50.0000		
M	55 Total Alkylbenzenes	100				94029	2.76363	2.8(a)	
$	58 Toluene-D8	98	8.426	8.427	(1.286)	1500221	51.9111	51.9	
*	68 Chlorobenzene-D5	117	10.397	10.397	(1.000)	1212371	50.0000		
	76 Isopropylbenzene	105	11.571	11.569	(0.880)	10091	0.30626	0.31(a)	
$	77 P-Bromofluorobenzene	95	11.879	11.880	(1.813)	630920	53.1374	53.1	
	80 N-Propylbenzene	91	12.056	12.053	(0.917)	17131	0.41412	0.41(a)	
	87 tert-Butylbenzene	119	12.643	12.640	(0.962)	11907	0.48080	0.48(a)	
	89 1,2,4-Trimethylbenzene	105	12.726	12.727	(0.968)	14534	0.51205	0.51(a)	
	90 sec-Butylbenzene	105	12.842	12.843	(0.977)	50457	1.35666	1.4	
*	93 1,4-Dichlorobenzene-D4	152	13.144	13.144	(1.000)	651487	50.0000		

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).


Y (x10^6)
0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3 2.4
Min
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
-Methylene Chloride (2.824)
-Dibromofluoromethane (4.981)
-Pentafluorobenzene (5.792)+
-Trichloroethene (6.473)
-1,4-Difluorobenzene (6.553)
-Toluene-D8 (8.427)
-Total Alkylbenzenes (10.080)
-Chlorobenzene-D5 (10.397)
-Isopropylbenzene (11.533)
-P-Bromofluorobenzene (11.880)
-N-Propylbenzene (12.056)
-test-Butylbenzene (12.637)
-1,2,4-Trimethylbenzene (12.724)
-sec-Butylbenzene (12.839)
1,4-Dichlorobenzene-D4 (13.144)
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Data File: \\target_server\gg\chem\gcms-w.i\W080221.b\W9710.D
Date : 02-AUG-2021 14:44
Client ID: MW-05-SUMMER2021
Sample Info: SD4723-5
Instrument: gcms-w.i

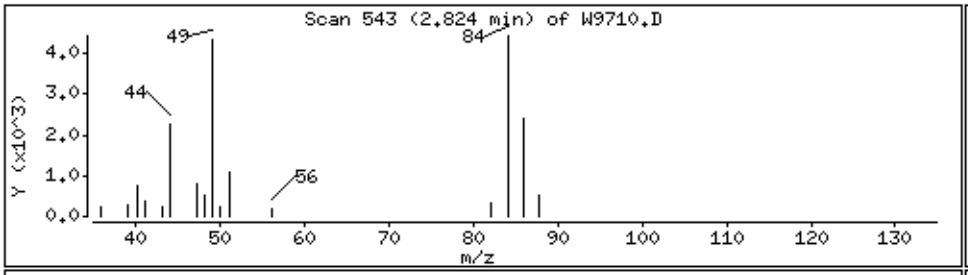
Data File: \\target_server\gg\chem\gcms-w.i\W080221.b\W9710.D

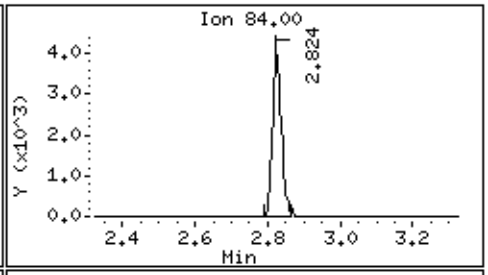
Date : 02-AUG-2021 14:44

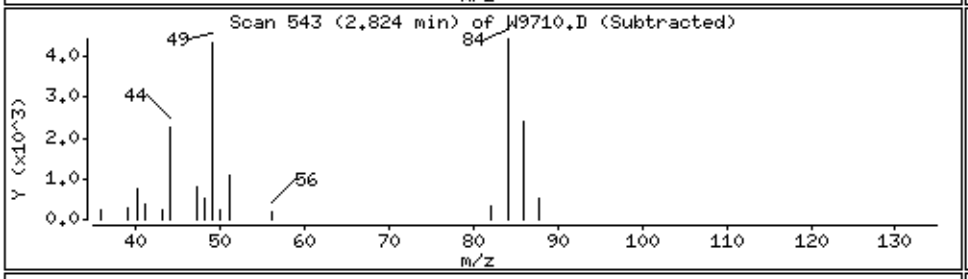
Client ID: MW-05-SUMMER2021 Instrument: gcms-w.i

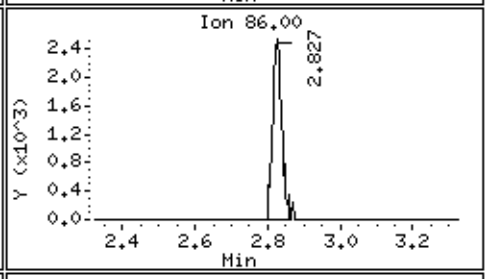
Sample Info: S04723-5

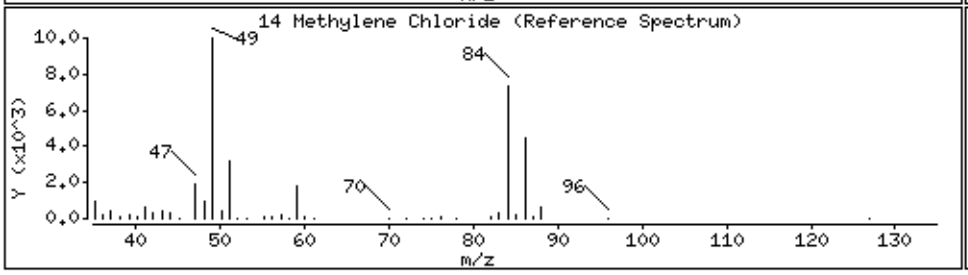
14 Methylene Chloride Concentration: 1.6 ug/l

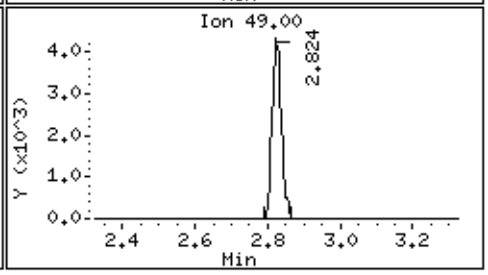




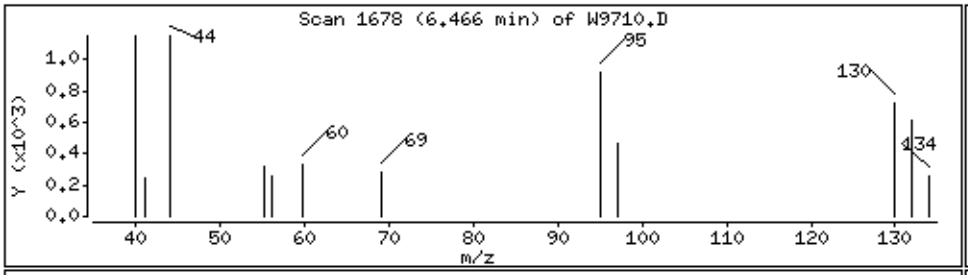


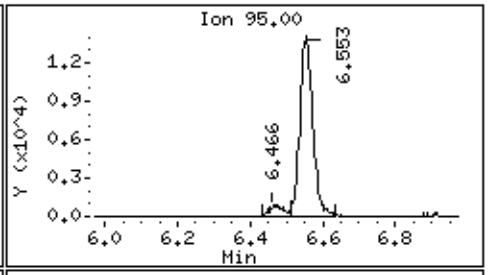


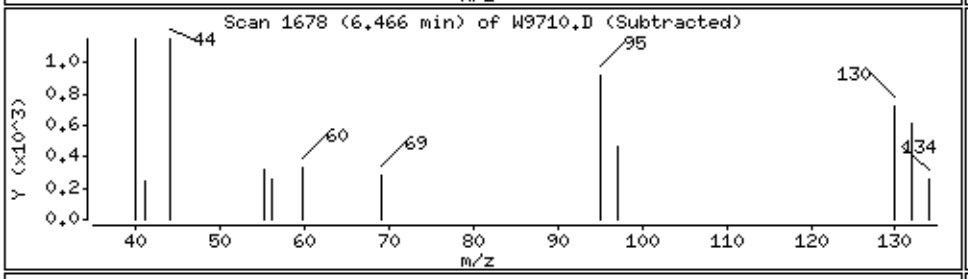


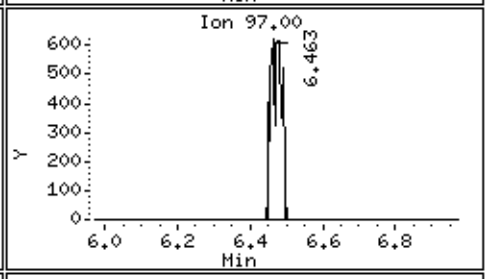


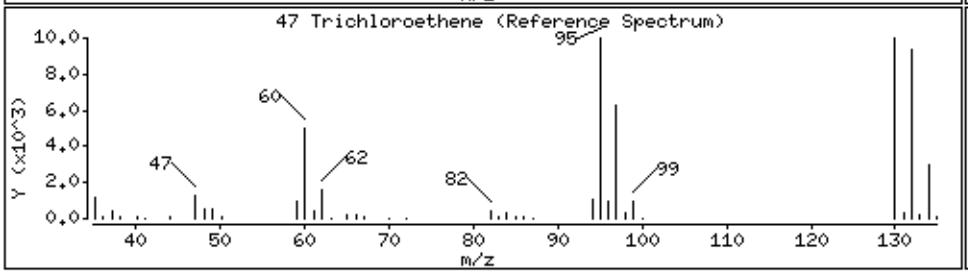
47 Trichloroethene Concentration: 0.31 ug/l

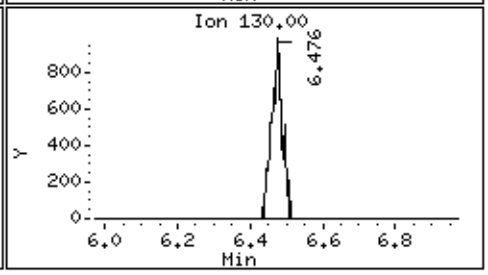












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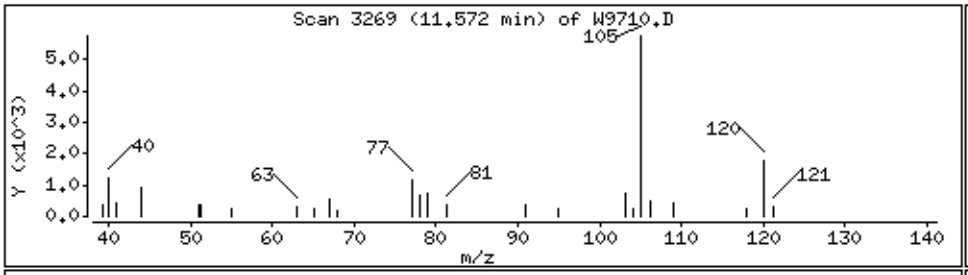
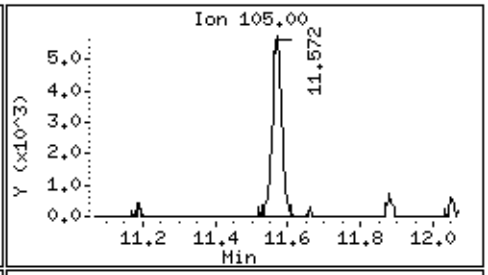
Date : 02-AUG-2021 14:44

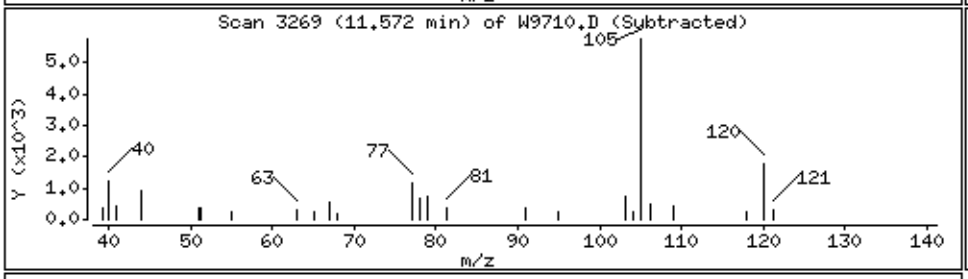
Client ID: MW-05-SUMMER2021 Instrument: gcms-w.i

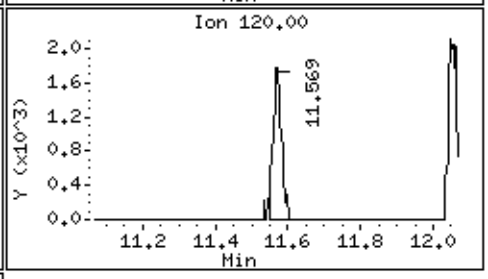
Sample Info: S04723-5

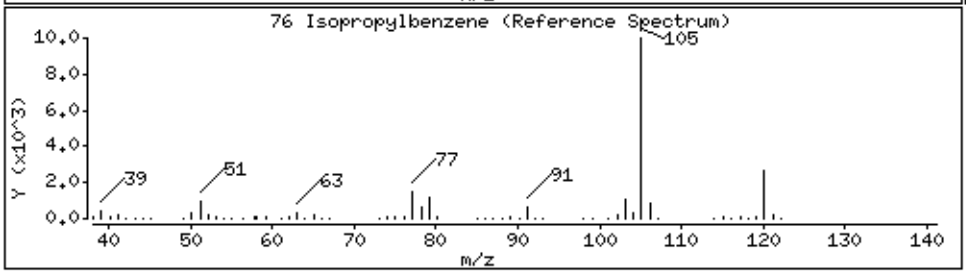
76 Isopropylbenzene Concentration: 0.31 ug/l



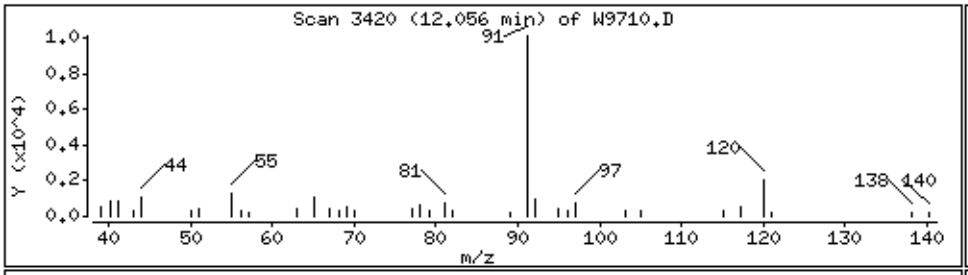


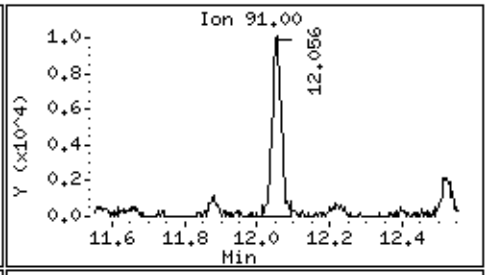


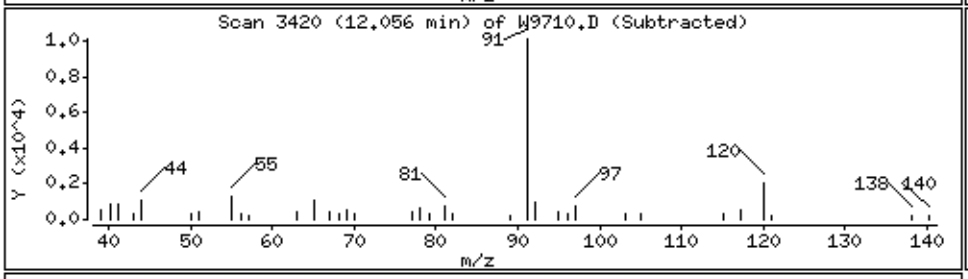


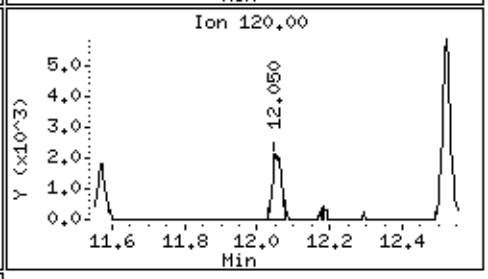


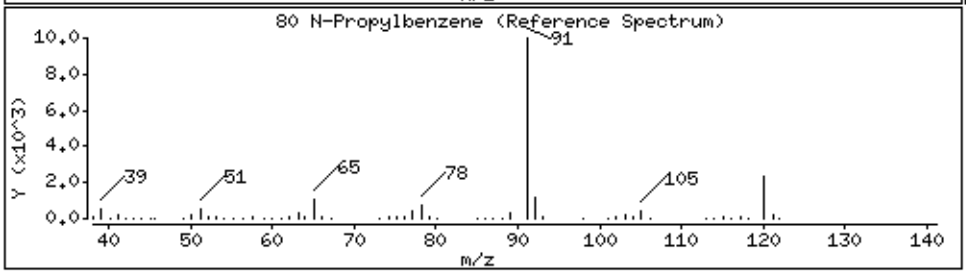
80 N-Propylbenzene Concentration: 0.41 ug/l











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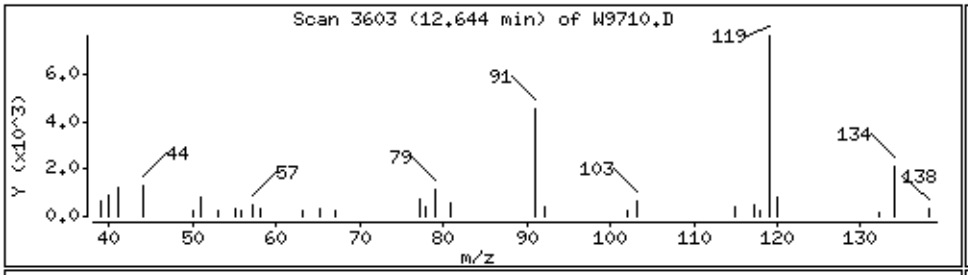
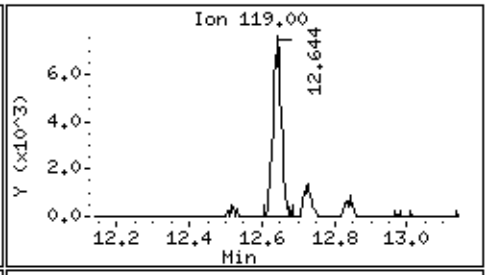
Date : 02-AUG-2021 14:44

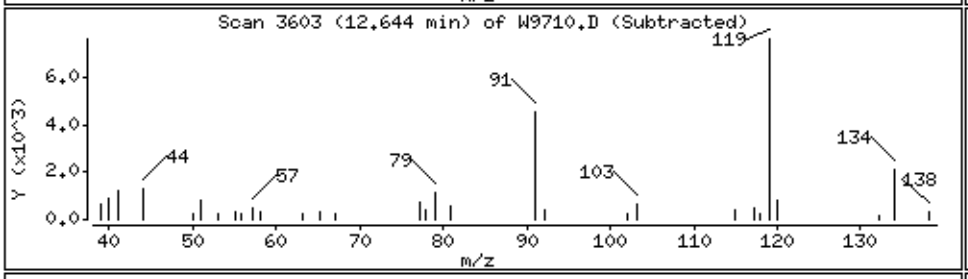
Client ID: MW-05-SUMMER2021 Instrument: gcms-w.i

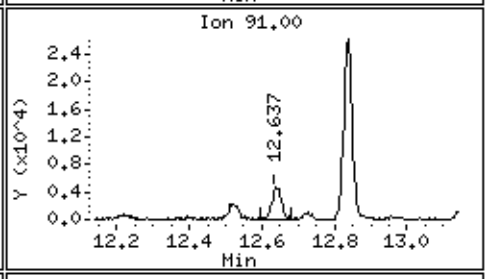
Sample Info: S04723-5

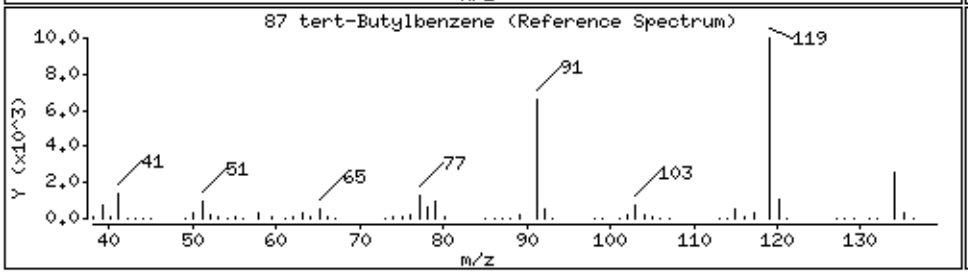
87 tert-Butylbenzene Concentration: 0.48 ug/l

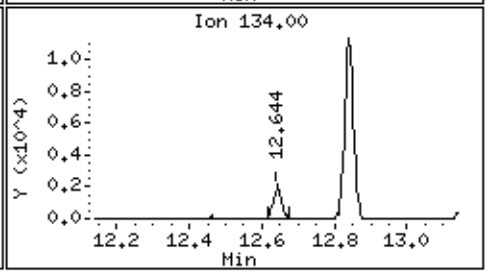




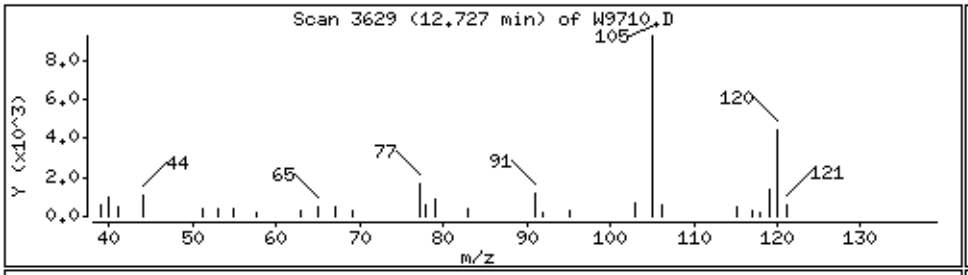


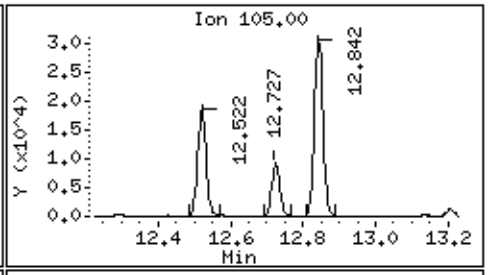


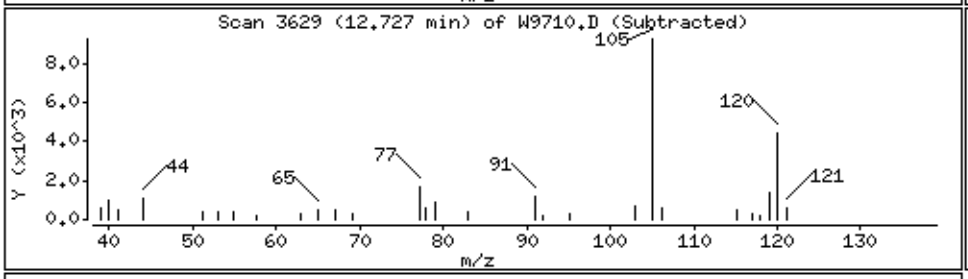


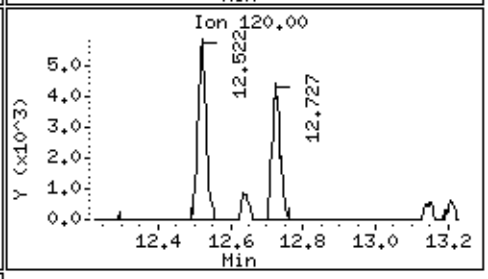


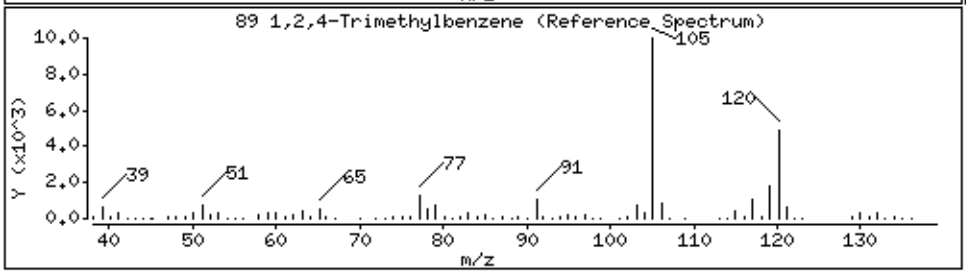
89 1,2,4-Trimethylbenzene Concentration: 0.51 ug/l











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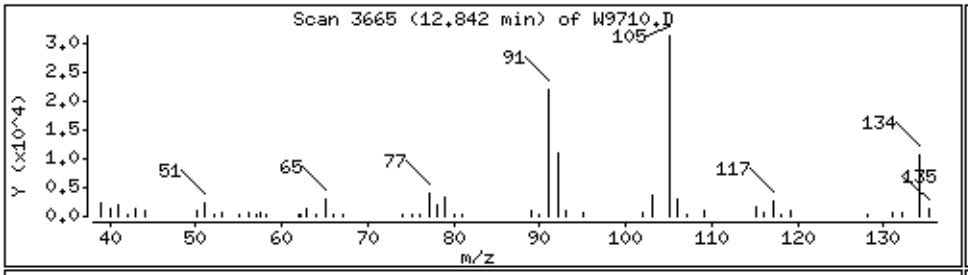
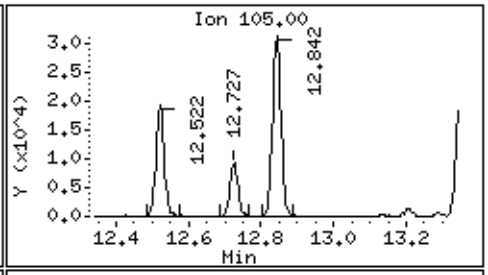
Date : 02-AUG-2021 14:44

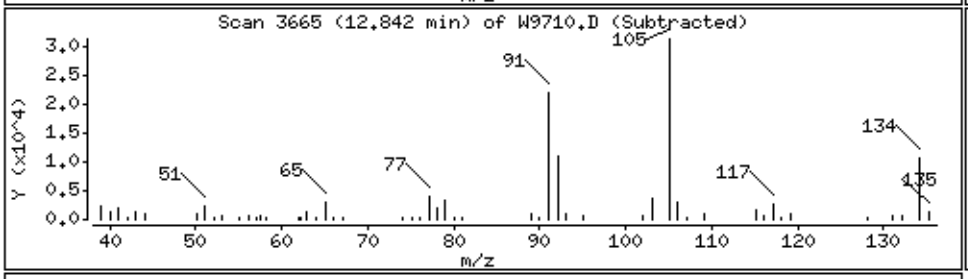
Client ID: MW-05-SUMMER2021 Instrument: gcms-w.i

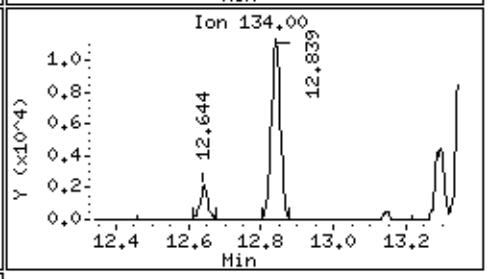
Sample Info: S04723-5

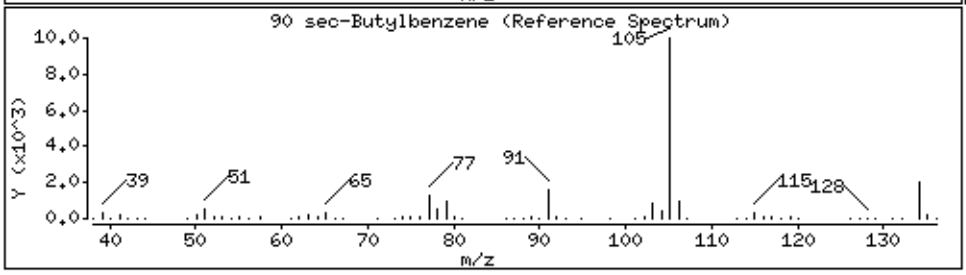
90 sec-Butylbenzene Concentration: 1.4 ug/l











Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-5RA
Client ID: MW-05-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2719.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 05-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303781

Analysis Date: 05-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	J	1.2	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Xylenes (Total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029
http://www.katahdinlab.com

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-5RA
Client ID: MW-05-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2719.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 05-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303781

Analysis Date: 05-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		103.	%					
Toluene-d8		101.	%					
1,2-Dichloroethane-d4		102.	%					
Dibromofluoromethane		99.1	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029
http://www.katahdinlab.com

Data File: \\target_server\gg\chem\gcms-t.i\T080521.b\T2719.D
Report Date: 10-Aug-2021 11:11

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-t.i\T080521.b\T2719.D
Lab Smp Id: SO4723-5RA Client Smp ID: MW-05-SUMMER2021
Inj Date : 05-AUG-2021 14:24
Operator : HG Inst ID: gcms-t.i
Smp Info : SO4723-5RA
Misc Info : WG303781,WG303684-4
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-t.i\T080521.b\T8A05(66)D.m
Meth Date : 06-Aug-2021 05:48 hgould Quant Type: ISTD
Cal Date : 04-AUG-2021 12:24 Cal File: T2690.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

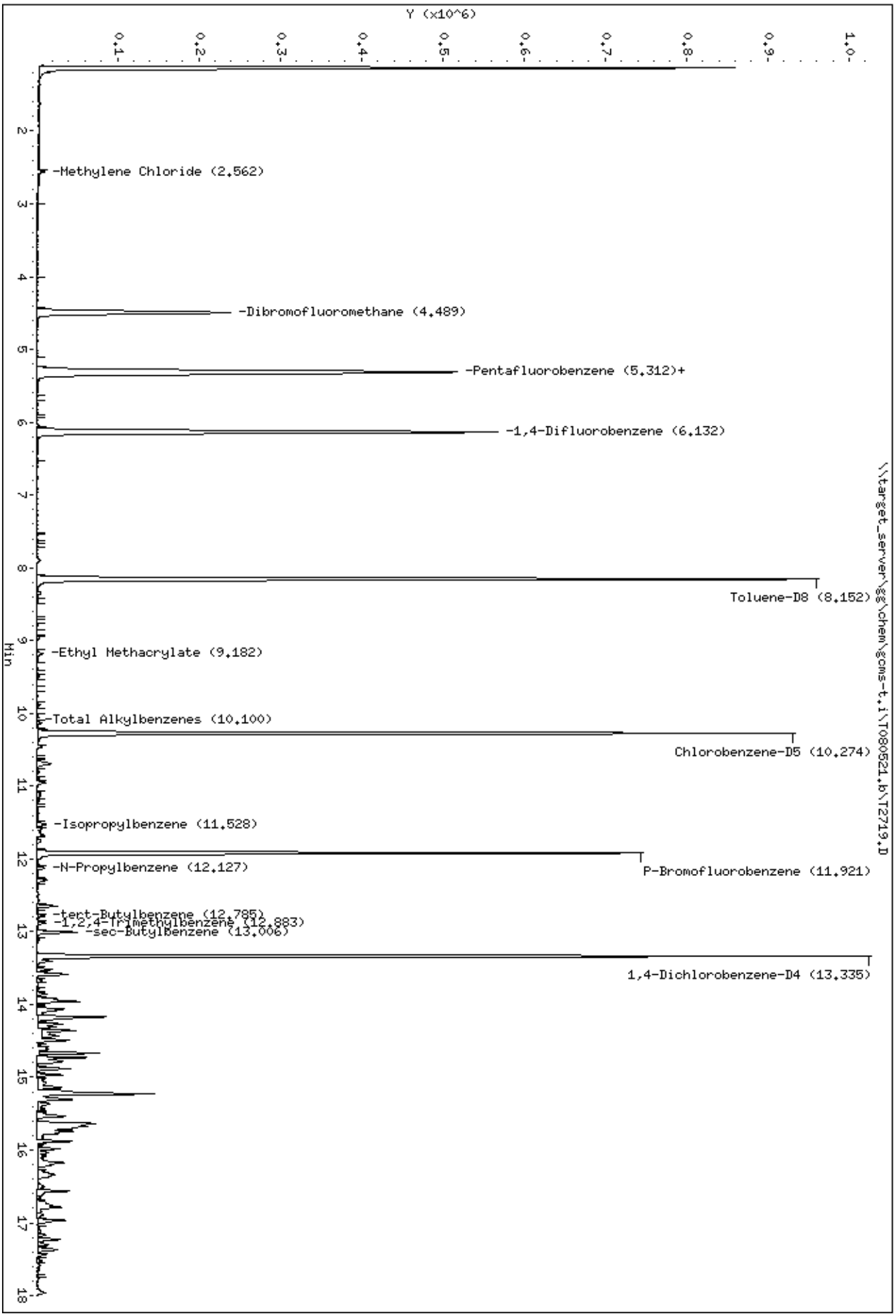
Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)	REVIEW CODE
	14 Methylene Chloride	84	2.561	2.554	(0.483)	2860	1.19423	1.2(a)	
$	34 Dibromofluoromethane	113	4.488	4.489	(0.846)	216482	49.5738	49.6	
*	41 Pentafluorobenzene	168	5.304	5.301	(1.000)	402595	50.0000		
$	42 1,2-Dichloroethane-D4	65	5.327	5.323	(1.004)	267664	51.1487	51.1	
*	48 1,4-Difluorobenzene	114	6.131	6.132	(1.000)	671074	50.0000		
$	56 Toluene-D8	98	8.152	8.153	(1.330)	771786	50.7088	50.7	
	62 Ethyl Methacrylate	69	9.181	9.148	(1.497)	3842	0.99778	1.00	
M	66 Total Alkylbenzenes	100				43212	3.10434	3.1(a)	
*	68 Chlorobenzene-D5	117	10.274	10.274	(1.000)	596143	50.0000		
	76 Isopropylbenzene	105	11.584	11.584	(0.869)	5329	0.35311	0.35(a)	
$	77 P-Bromofluorobenzene	95	11.920	11.921	(1.944)	283417	51.3184	51.3	
	80 N-Propylbenzene	91	12.119	12.123	(0.909)	7498	0.42148	0.42(a)	
	87 tert-Butylbenzene	119	12.785	12.785	(0.959)	5866	0.56966	0.57(a)	
	89 1,2,4-Trimethylbenzene	105	12.882	12.879	(0.966)	7356	0.61548	0.62(a)	
	90 sec-Butylbenzene	105	13.006	13.010	(0.975)	22492	1.49772	1.5	
*	93 1,4-Dichlorobenzene-D4	152	13.335	13.336	(1.000)	271884	50.0000		

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).



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Date : 05-AUG-2021 14:24
Client ID: MW-05-SUMMER2021
Sample Info: SD4723-5RA

Instrument: gcms-t.i

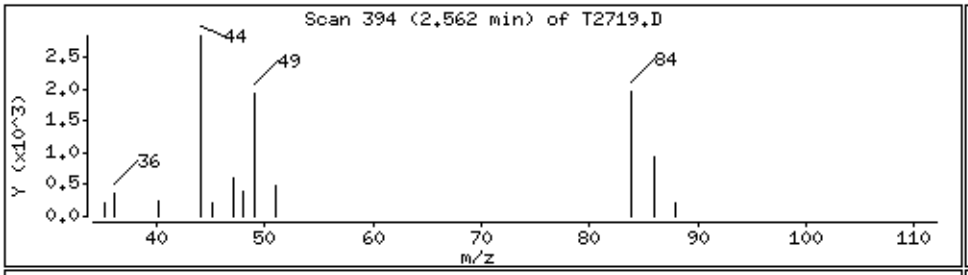
Data File: \\target_server\gg\chem\gcms-t.i\T080521.b\T2719.D

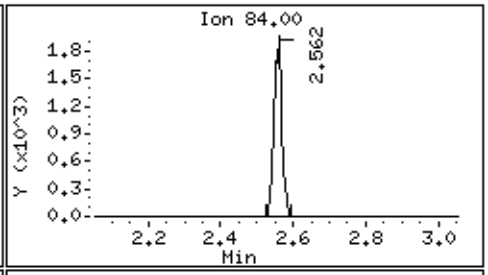
Date : 05-AUG-2021 14:24

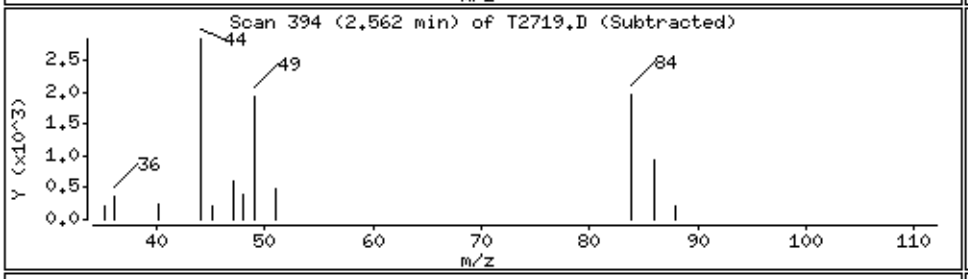
Client ID: MW-05-SUMMER2021 Instrument: gcms-t.i

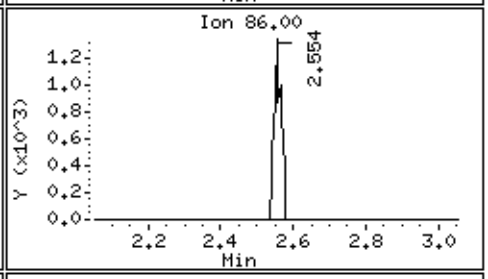
Sample Info: S04723-5RA

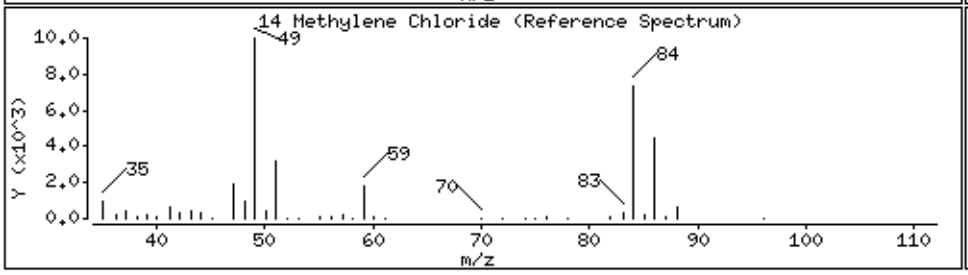
14 Methylene Chloride Concentration: 1.2 ug/l

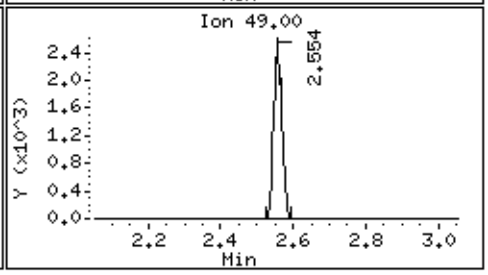




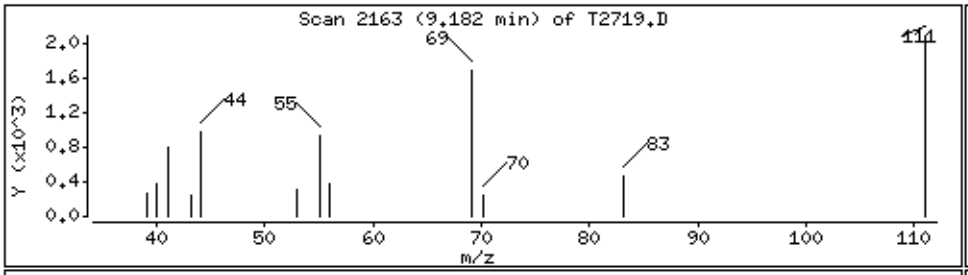


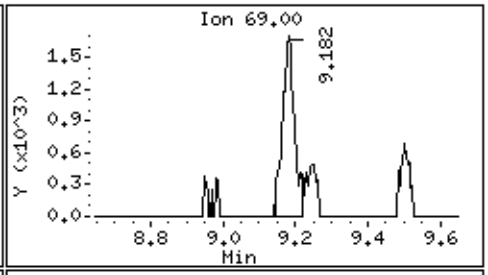


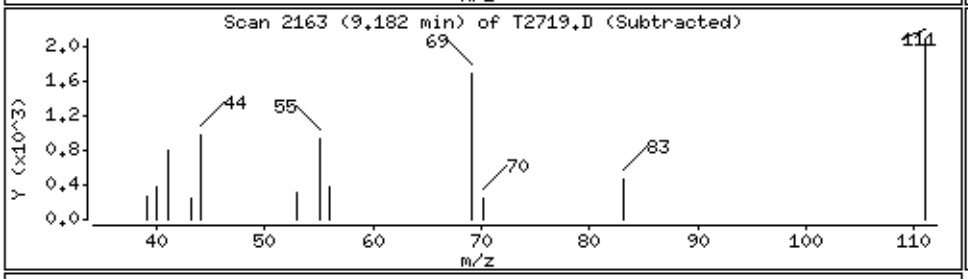


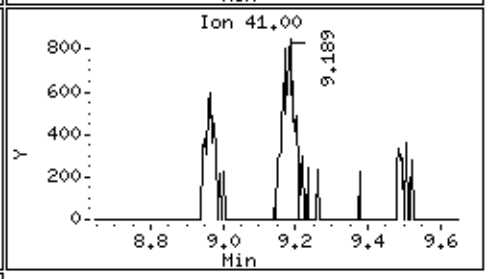


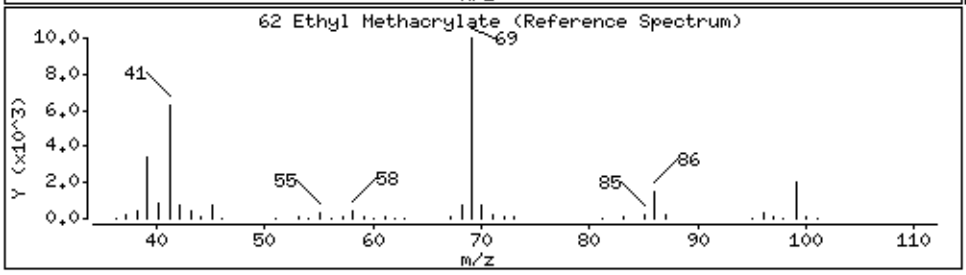
62 Ethyl Methacrylate Concentration: 1.00 ug/l











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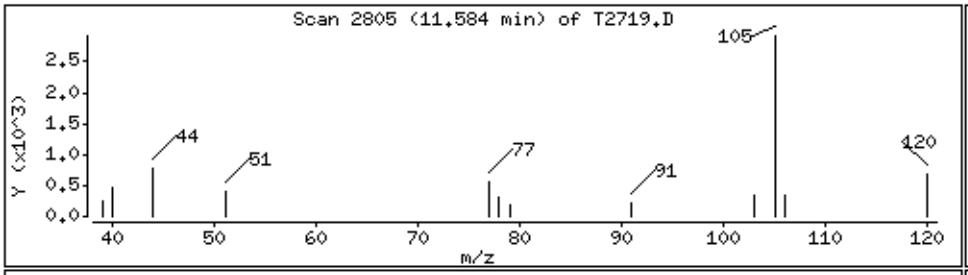
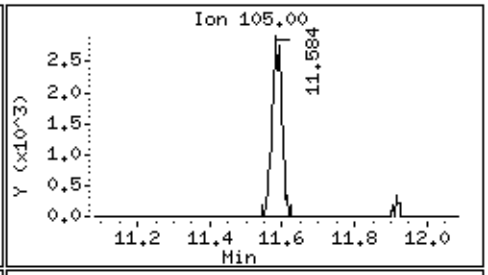
Date : 05-AUG-2021 14:24

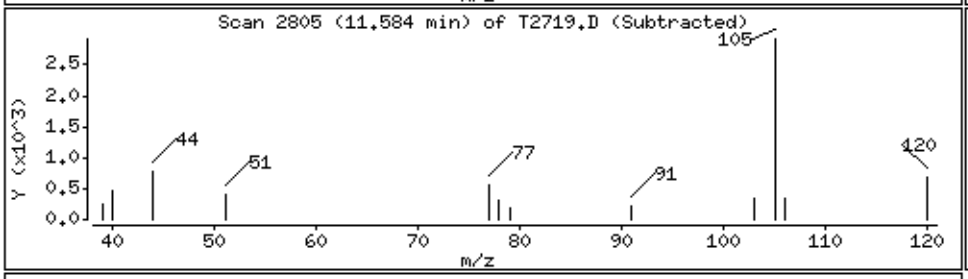
Client ID: MW-05-SUMMER2021 Instrument: gcms-t.i

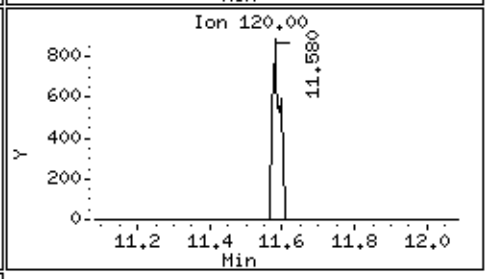
Sample Info: S04723-5RA

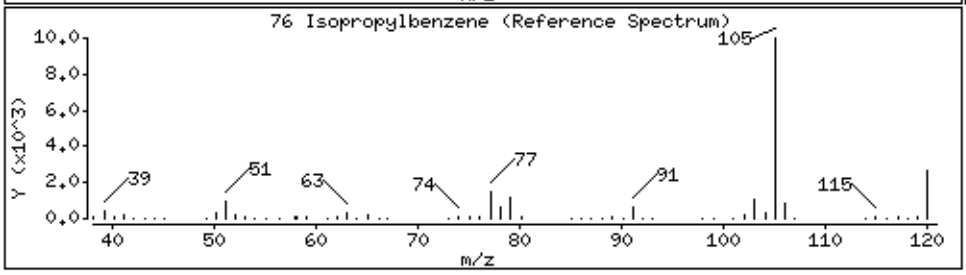
76 Isopropylbenzene Concentration: 0.35 ug/l



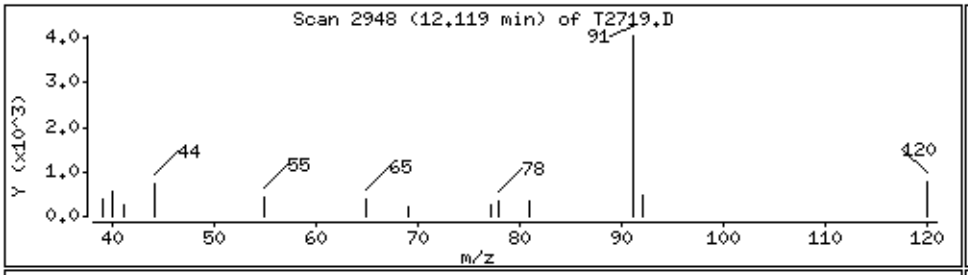


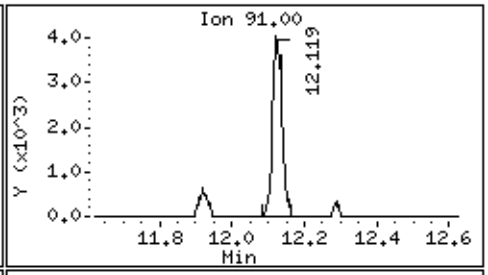


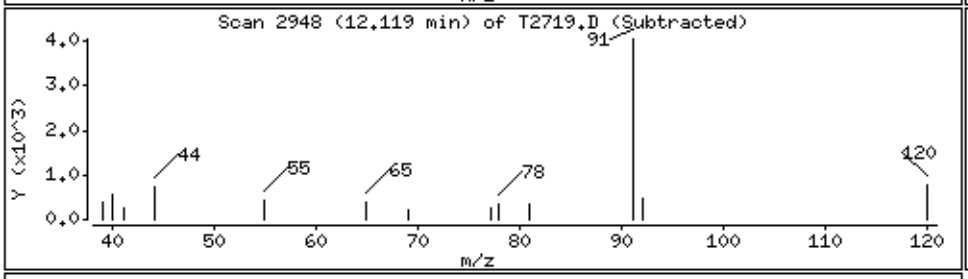


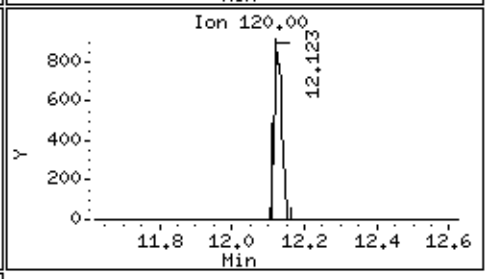


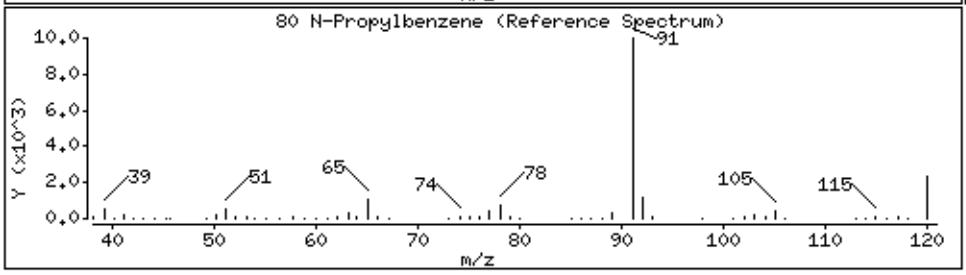
80 N-Propylbenzene Concentration: 0.42 ug/l











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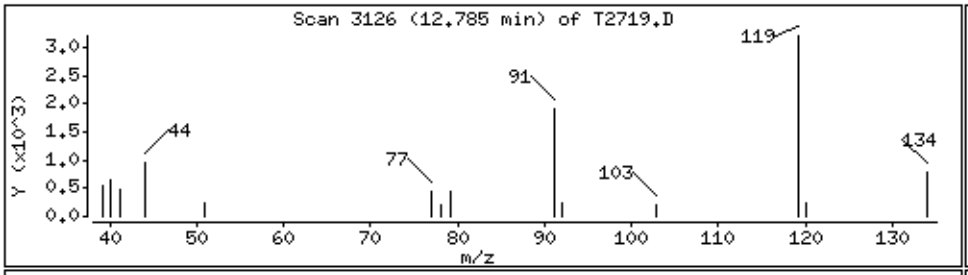
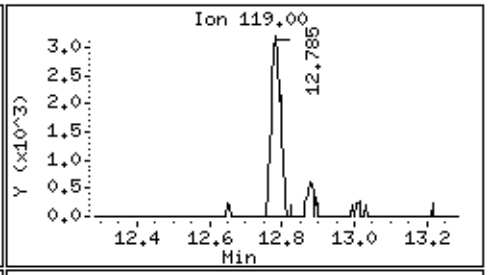
Date : 05-AUG-2021 14:24

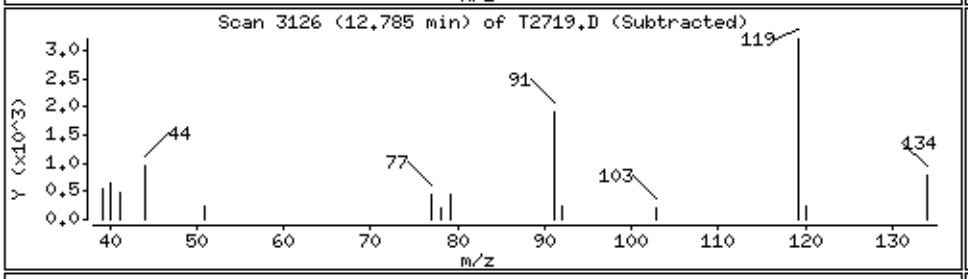
Client ID: MW-05-SUMMER2021 Instrument: gcms-t.i

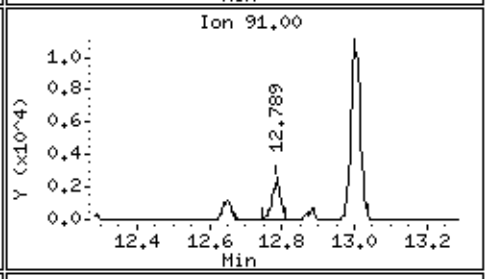
Sample Info: S04723-5RA

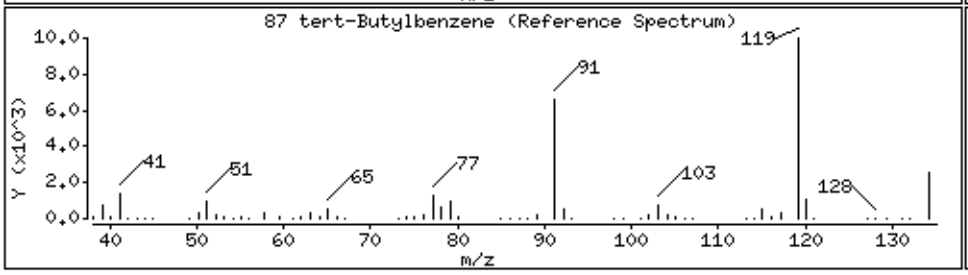
87 tert-Butylbenzene Concentration: 0.57 ug/l

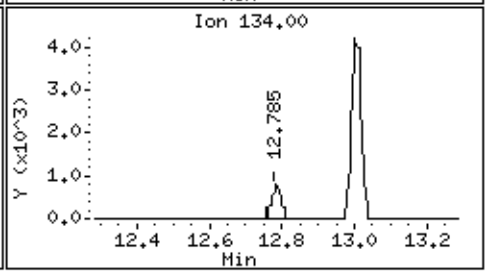




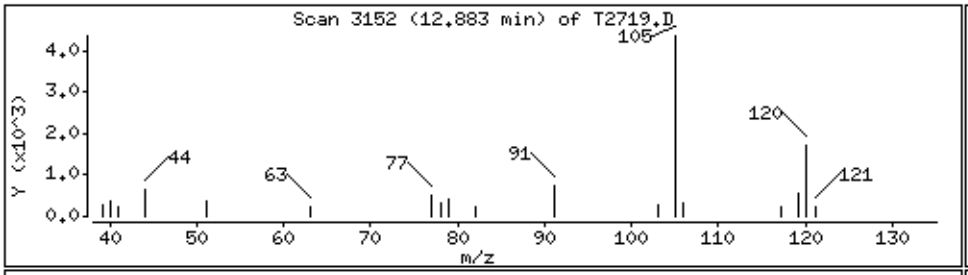


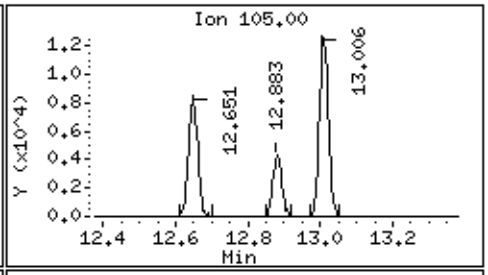


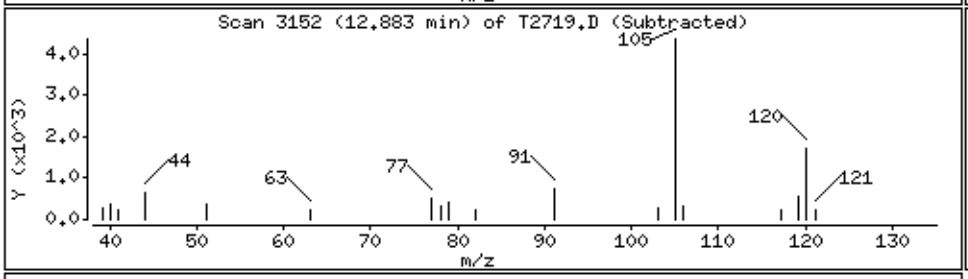


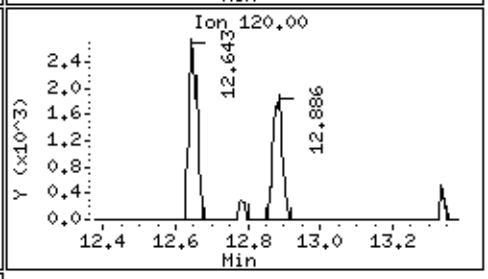


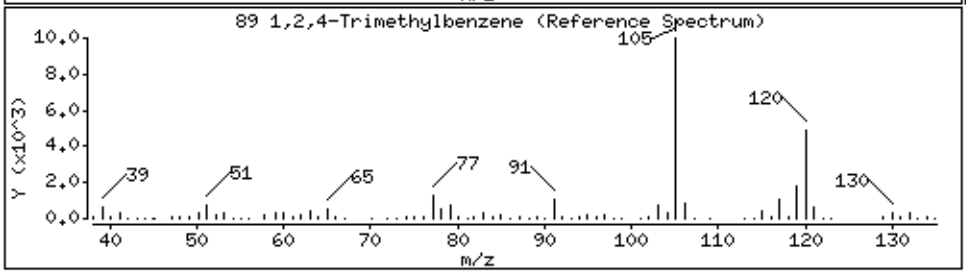
89 1,2,4-Trimethylbenzene Concentration: 0.62 ug/l











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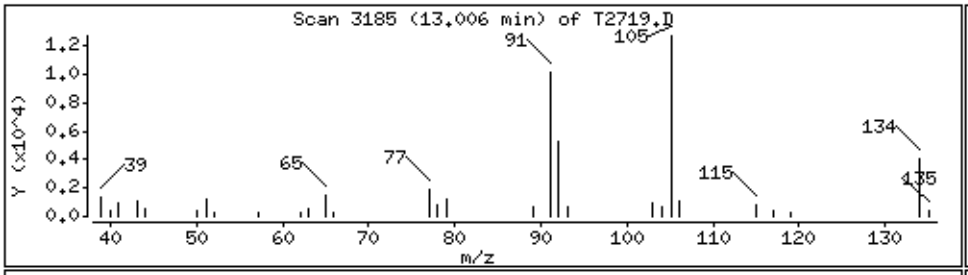
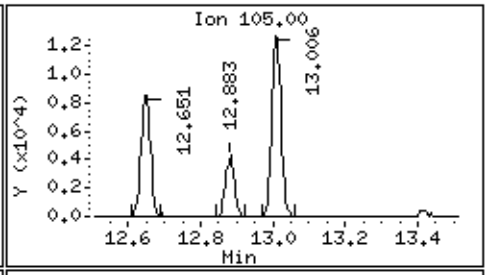
Date : 05-AUG-2021 14:24

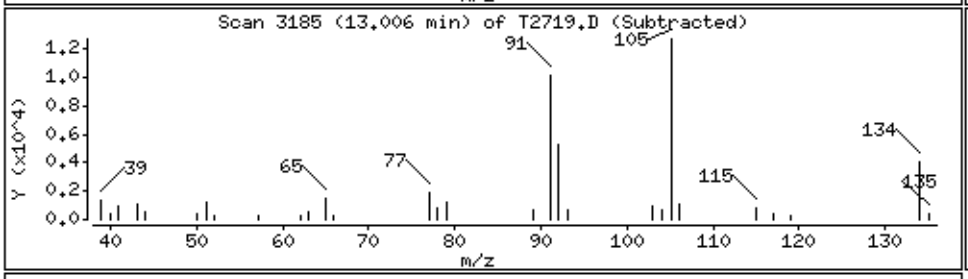
Client ID: MW-05-SUMMER2021 Instrument: gcms-t.i

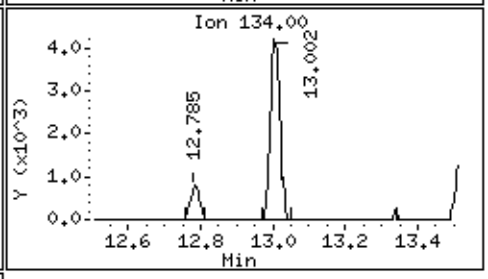
Sample Info: S04723-5RA

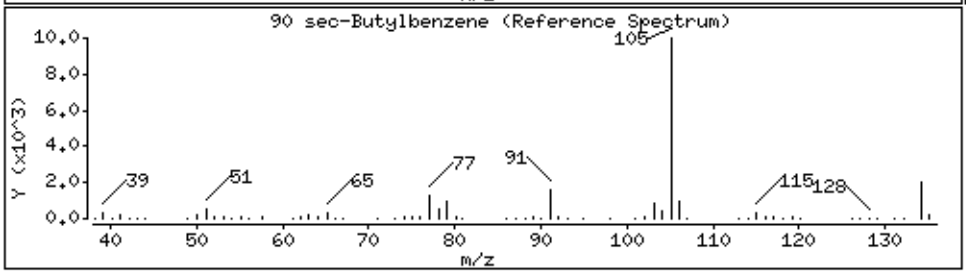
90 sec-Butylbenzene Concentration: 1.5 ug/l











Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-6
Client ID: MW-FD-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: W9711.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 02-AUG-21
Extracted By: CR/ES
Extraction Method: SW846 5030
Lab Prep Batch: WG303527

Analysis Date: 02-AUG-21
Analyst: CR/ES
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	J	1.3	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Xylenes (Total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-6
Client ID: MW-FD-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: W9711.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 02-AUG-21
Extracted By: CR/ES
Extraction Method: SW846 5030
Lab Prep Batch: WG303527

Analysis Date: 02-AUG-21
Analyst: CR/ES
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		102.	%					
Toluene-d8		104.	%					
1,2-Dichloroethane-d4	*	123.	%					
Dibromofluoromethane		114.	%					

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Data File: \\target_server\gg\chem\gcms-w.i\W080221.b\W9711.D
Report Date: 10-Aug-2021 11:24

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W080221.b\W9711.D
Lab Smp Id: SO4723-6 Client Smp ID: MW-FD-SUMMER2021
Inj Date : 02-AUG-2021 15:14
Operator : CR/ES Inst ID: gcms-w.i
Smp Info : SO4723-6
Misc Info : WG303527,WG303228-4
Comment : SW846 5030
Method : \\target_server\gg\chem\gcms-w.i\W080221.b\W8A05(03).m
Meth Date : 03-Aug-2021 06:45 hgould Quant Type: ISTD
Cal Date : 28-JUL-2021 11:04 Cal File: W9625.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

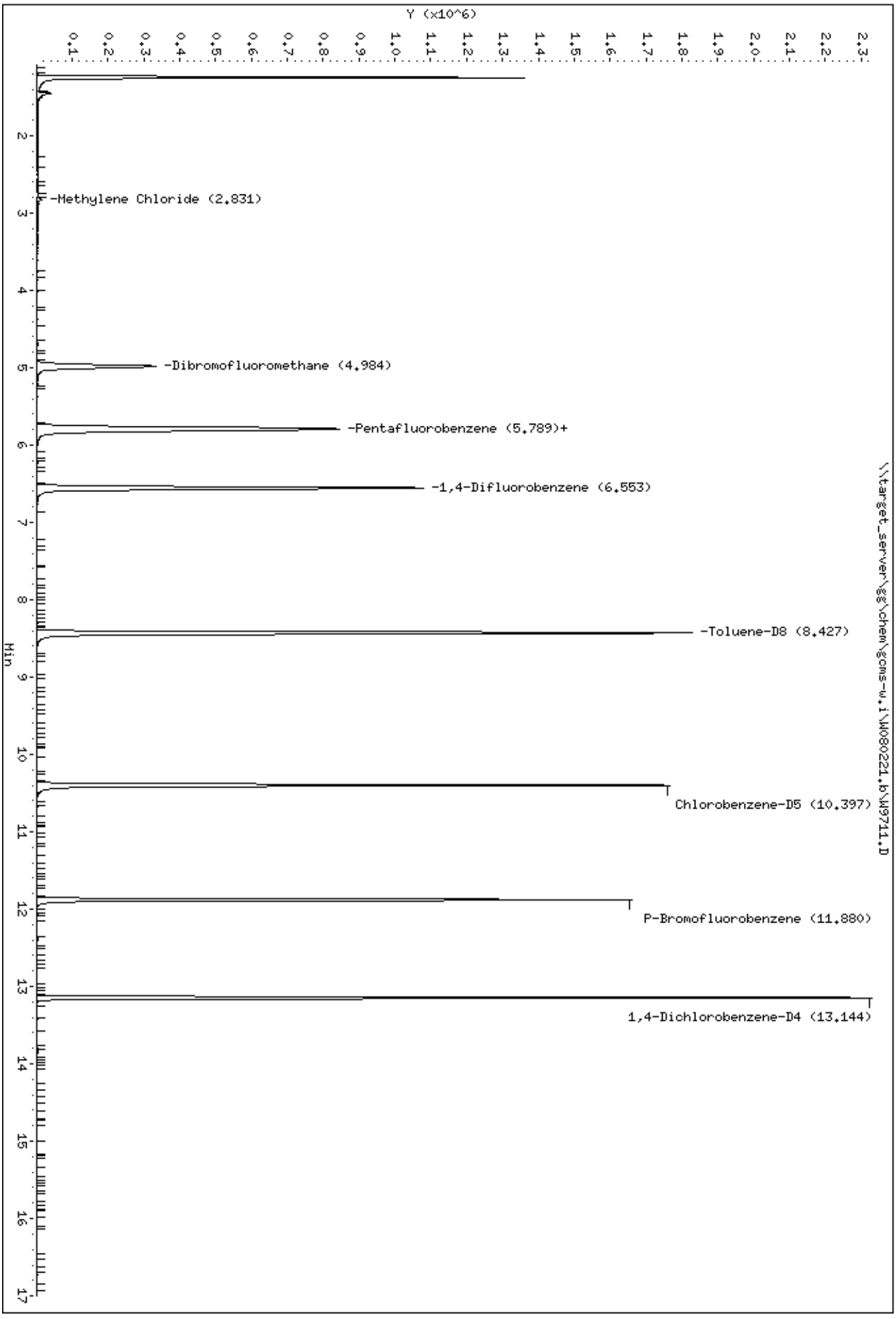
Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)	REVIEW CODE
	14 Methylene Chloride	84	2.824	2.824	(0.488)	5530	1.28473	1.3(a)	
$	34 Dibromofluoromethane	113	4.984	4.981	(0.862)	346286	57.2107	57.2	
*	41 Pentafluorobenzene	168	5.783	5.780	(1.000)	675547	50.0000		
$	42 1,2-Dichloroethane-D4	65	5.808	5.809	(1.004)	415888	61.3815	61.4	
*	48 1,4-Difluorobenzene	114	6.553	6.556	(1.000)	1176868	50.0000		
$	58 Toluene-D8	98	8.427	8.427	(1.286)	1480437	51.7996	51.8	
*	68 Chlorobenzene-D5	117	10.397	10.397	(1.000)	1170724	50.0000		
$	77 P-Bromofluorobenzene	95	11.879	11.880	(1.813)	596155	50.7711	50.8	
*	93 1,4-Dichlorobenzene-D4	152	13.147	13.144	(1.000)	612551	50.0000		

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).


Data File: \\target_server\gg\chem\gcms-w.i\W080221.b\W9711.D
Date : 02-AUG-2021 15:14
Client ID: MW-FD-SUMMER2021
Sample Info: SD4723-6
Instrument: gcms-w.i
\\target_server\gg\chem\gcms-w.i\W080221.b\W9711.D
Y (x10^6)
Min
-Methylene Chloride (2.831)
-Dibromofluoromethane (4.984)
-Pentafluorobenzene (5.789)+
-1,4-Difluorobenzene (6.553)
-Toluene-D8 (8.427)
Chlorobenzene-D5 (10.397)
P-Bromofluorobenzene (11.880)
1,4-Dichlorobenzene-D4 (13.144)

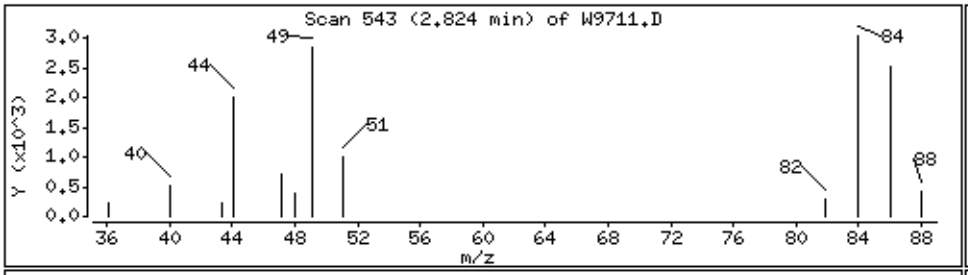
Data File: \\target_server\gg\chem\gcms-w.i\W080221.b\W9711.D

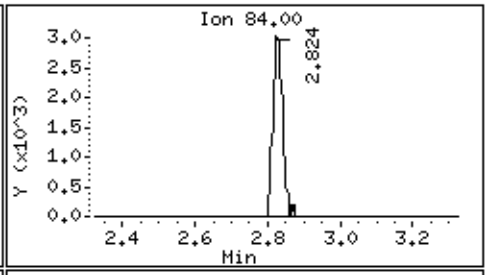
Date : 02-AUG-2021 15:14

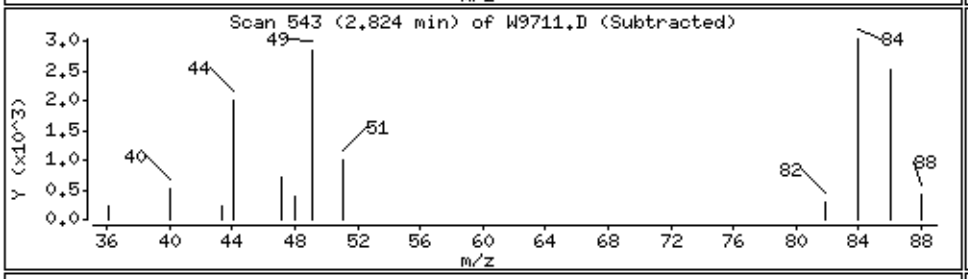
Client ID: MW-FD-SUMMER2021 Instrument: gcms-w.i

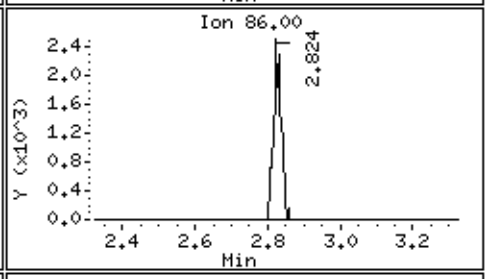
Sample Info: S04723-6

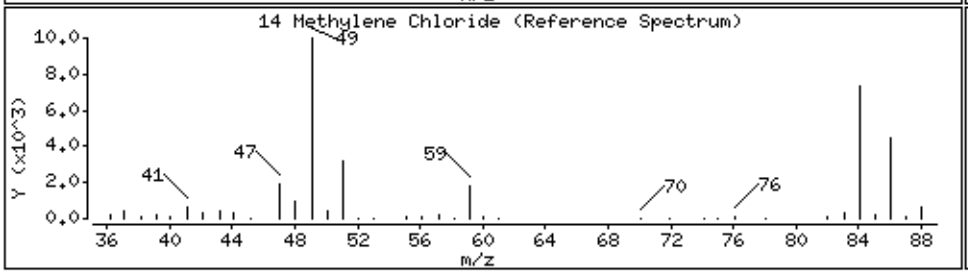
14 Methylene Chloride Concentration: 1.3 ug/l

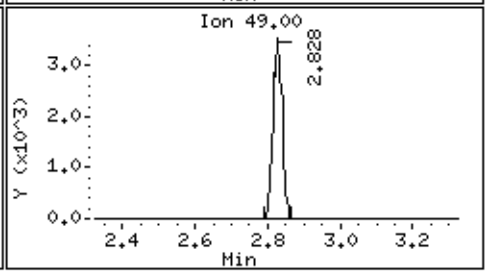












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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-6RA
Client ID: MW-FD-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2696.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 04-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303684

Analysis Date: 04-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	UL	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	UL	2.5	ug/L	1	5	5.0	1.3	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Xylenes (Total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-6RA
Client ID: MW-FD-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2696.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 04-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303684

Analysis Date: 04-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		102.	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4		101.	%					
Dibromofluoromethane		100.	%					

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Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2696.D
Report Date: 10-Aug-2021 11:00

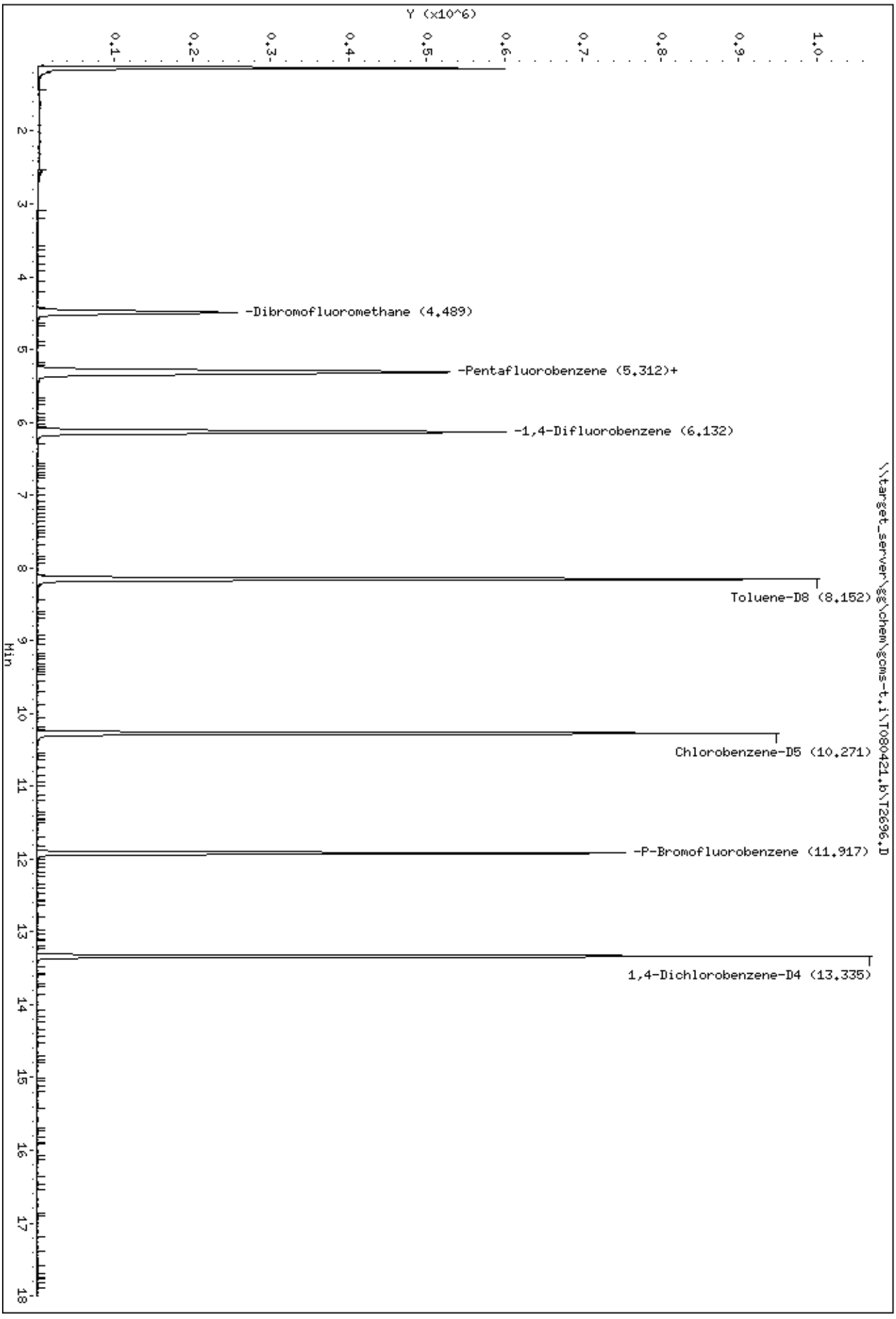
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-t.i\T080421.b\T2696.D
Lab Smp Id: SO4723-6RA Client Smp ID: MW-FD-SUMMER2021
Inj Date : 04-AUG-2021 15:51
Operator : HG Inst ID: gcms-t.i
Smp Info : SO4723-6RA
Misc Info : WG303684,WG303684-4
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-t.i\T080421.b\T8A05(66)D.m
Meth Date : 10-Aug-2021 10:55 croy Quant Type: ISTD
Cal Date : 04-AUG-2021 12:24 Cal File: T2690.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
$ 34 Dibromofluoromethane	113	4.492	4.489	(0.848)	226162	50.0769	50.1	
* 41 Pentafluorobenzene	168	5.300	5.301	(1.000)	416372	50.0000		
$ 42 1,2-Dichloroethane-D4	65	5.323	5.323	(1.004)	274533	50.7254	50.7	
* 48 1,4-Difluorobenzene	114	6.131	6.132	(1.000)	695417	50.0000		
$ 56 Toluene-D8	98	8.152	8.153	(1.330)	800851	50.7766	50.8	
* 68 Chlorobenzene-D5	117	10.274	10.274	(1.000)	616303	50.0000		
$ 77 P-Bromofluorobenzene	95	11.917	11.921	(1.944)	292224	51.0609	51.1	
* 93 1,4-Dichlorobenzene-D4	152	13.335	13.336	(1.000)	280131	50.0000		


Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2696.D
Date : 04-AUG-2021 15:51
Client ID: MW-FD-SUMMER2021
Sample Info: SD4723-6RA
Instrument: gcms-t.i
Y (x10^6)
Min
-Dibromofluoromethane (4.489)
-Pentafluorobenzene (5.312)+
-1,4-Difluorobenzene (6.132)
Toluene-D8 (8.152)
Chlorobenzene-D5 (10.271)
-P-Bromofluorobenzene (11.917)
1,4-Dichlorobenzene-D4 (13.335)
\\target_server\gg\chem\gcms-t.i\T080421.b\T2696.D

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-7RA
Client ID: GW-TB-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2695.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 04-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303684

Analysis Date: 04-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chloromethane	J	1.7	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride		6.1	ug/L	1	5	5.0	1.1	2.5
Acetone	UL	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	UL	2.5	ug/L	1	5	5.0	1.3	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Xylenes (Total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50

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Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-7RA
Client ID: GW-TB-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2695.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 04-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303684

Analysis Date: 04-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		102.	%					
Toluene-d8		101.	%					
1,2-Dichloroethane-d4		100.	%					
Dibromofluoromethane		98.3	%					

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Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2695.D
Report Date: 10-Aug-2021 11:00

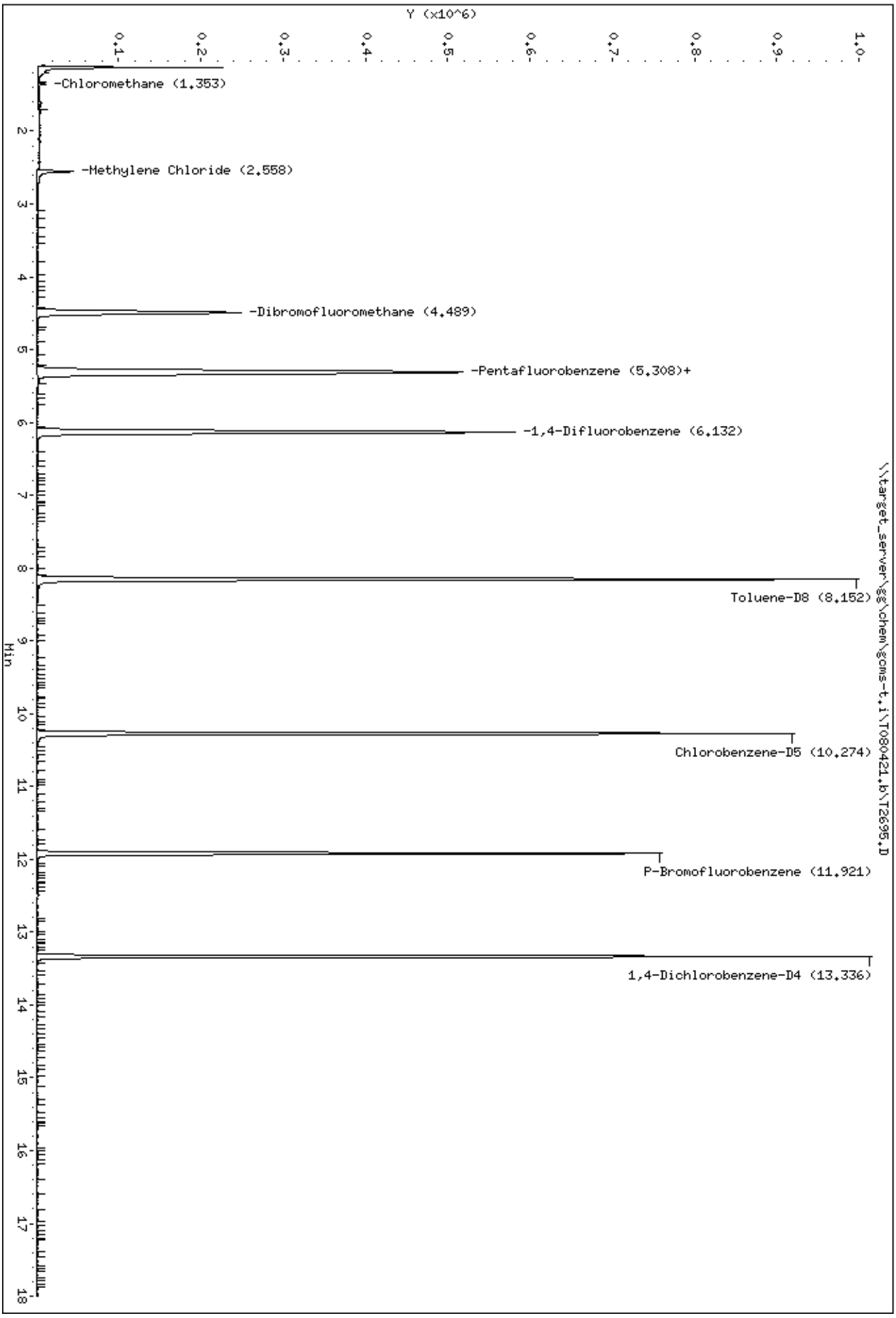
Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-t.i\T080421.b\T2695.D
Lab Smp Id: SO4723-7RA Client Smp ID: GW-TB-SUMMER2021
Inj Date : 04-AUG-2021 15:19
Operator : HG Inst ID: gcms-t.i
Smp Info : SO4723-7RA
Misc Info : WG303684,WG303684-4
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-t.i\T080421.b\T8A05(66)D.m
Meth Date : 10-Aug-2021 10:55 croy Quant Type: ISTD
Cal Date : 04-AUG-2021 12:24 Cal File: T2690.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)	REVIEW CODE
	2 Chloromethane	50	1.352	1.353	(0.255)	7118	1.66508	1.7	
	14 Methylene Chloride	84	2.557	2.554	(0.482)	14970	6.07176	6.1	
$	34 Dibromofluoromethane	113	4.492	4.489	(0.847)	220984	49.1543	49.2	
*	41 Pentafluorobenzene	168	5.304	5.301	(1.000)	414475	50.0000		
$	42 1,2-Dichloroethane-D4	65	5.323	5.323	(1.004)	270043	50.1242	50.1	
*	48 1,4-Difluorobenzene	114	6.135	6.132	(1.000)	691371	50.0000		
$	56 Toluene-D8	98	8.152	8.153	(1.329)	793331	50.5942	50.6	
*	68 Chlorobenzene-D5	117	10.274	10.274	(1.000)	605401	50.0000		
$	77 P-Bromofluorobenzene	95	11.920	11.921	(1.943)	288777	50.7539	50.8	
*	93 1,4-Dichlorobenzene-D4	152	13.335	13.336	(1.000)	272903	50.0000		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Date : 04-AUG-2021 15:19
Client ID: GW-TB-SUMMER2021
Sample Info: SD4723-7RA
Instrument: gcms-t.i
\\target_server\gg\chem\gcms-t.i\T080421.b\T2695.D
Y (x10^6)
Min
-Chloromethane (1.353)
-Methylene Chloride (2.558)
-Dibromofluoromethane (4.489)
-Pentafluorobenzene (5.308)+
-1,4-Difluorobenzene (6.132)
Toluene-D8 (8.152)
Chlorobenzene-D5 (10.274)
P-Bromofluorobenzene (11.921)
1,4-Dichlorobenzene-D4 (13.336)

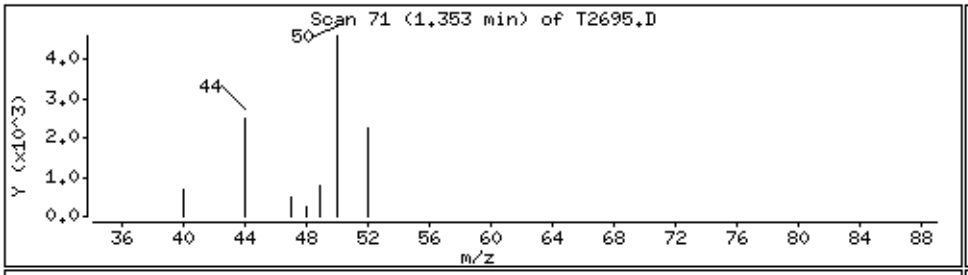
Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2695.D

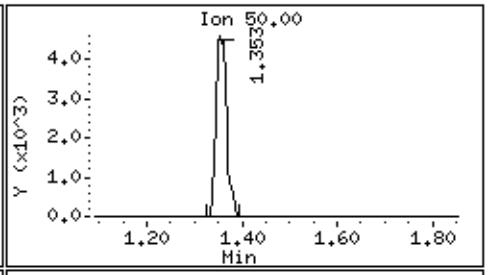
Date : 04-AUG-2021 15:19

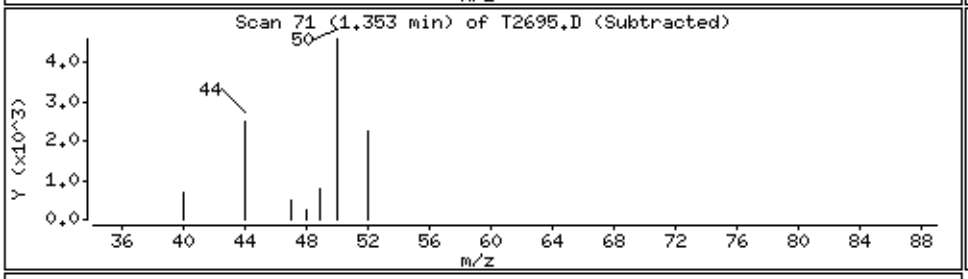
Client ID: GW-TB-SUMMER2021 Instrument: gcms-t.i

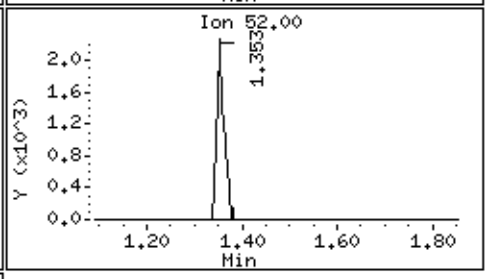
Sample Info: S04723-7RA

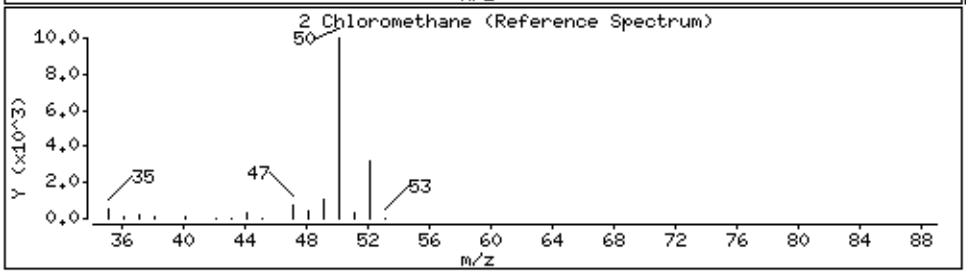
2 Chloromethane Concentration: 1.7 ug/l



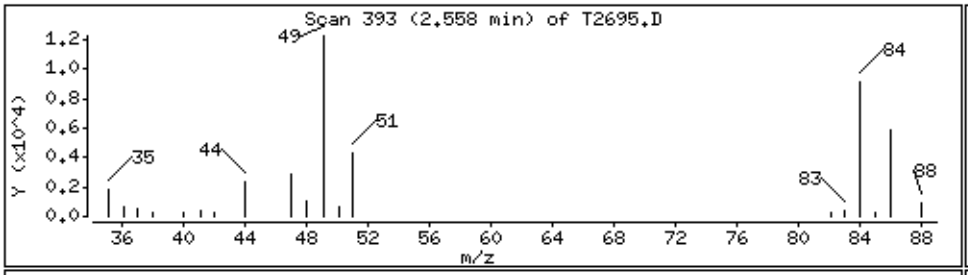


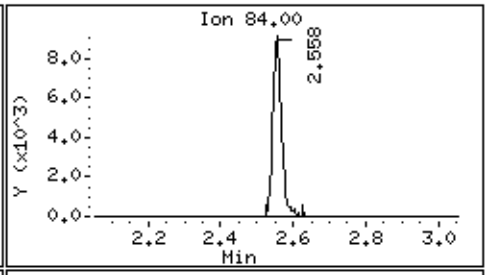


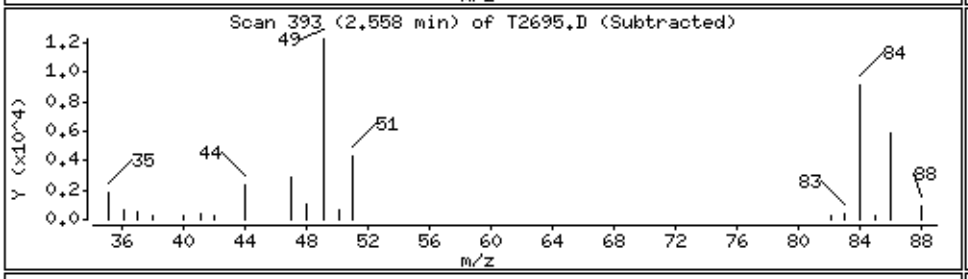


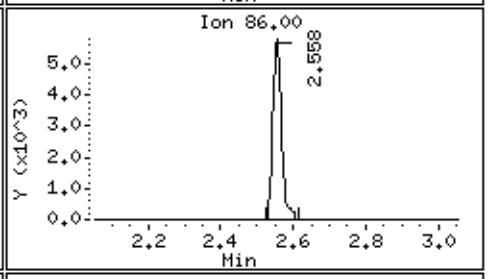


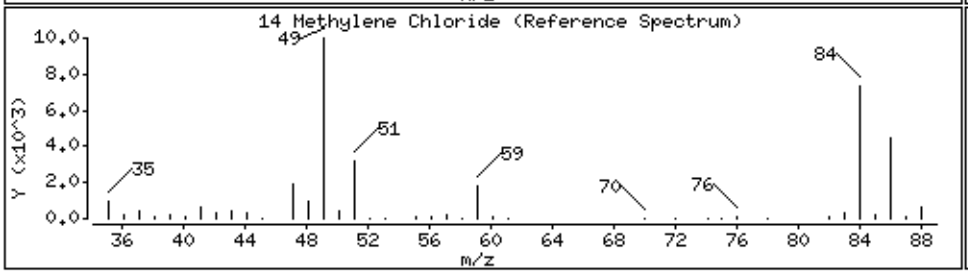
14 Methylene Chloride Concentration: 6.1 ug/l

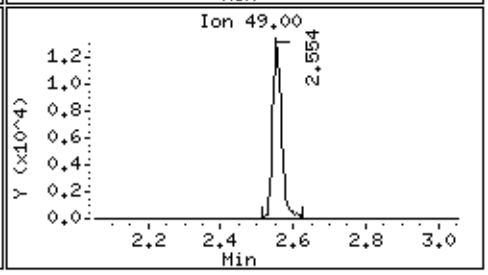












Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-8RA
Client ID: GW-EB-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2714.D

Sample Date: 22-JUL-21
Received Date: 22-JUL-21
Extract Date: 05-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303781

Analysis Date: 05-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	J	1.2	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Xylenes (Total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029
http://www.katahdinlab.com

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-8RA
Client ID: GW-EB-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: T2714.D

Sample Date: 22-JUL-21
Received Date: 22-JUL-21
Extract Date: 05-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303781

Analysis Date: 05-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
P-Bromofluorobenzene		104.	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4		101.	%					
Dibromofluoromethane		97.0	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029
http://www.katahdinlab.com

Data File: \\target_server\gg\chem\gcms-t.i\T080521.b\T2714.D
Report Date: 10-Aug-2021 11:11

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-t.i\T080521.b\T2714.D
Lab Smp Id: SO4723-8RA Client Smp ID: GW-EB-SUMMER2021
Inj Date : 05-AUG-2021 11:40
Operator : HG Inst ID: gcms-t.i
Smp Info : SO4723-8RA
Misc Info : WG303781,WG303684-4
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-t.i\T080521.b\T8A05(66)D.m
Meth Date : 06-Aug-2021 05:48 hgould Quant Type: ISTD
Cal Date : 04-AUG-2021 12:24 Cal File: T2690.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: ORGANICS2

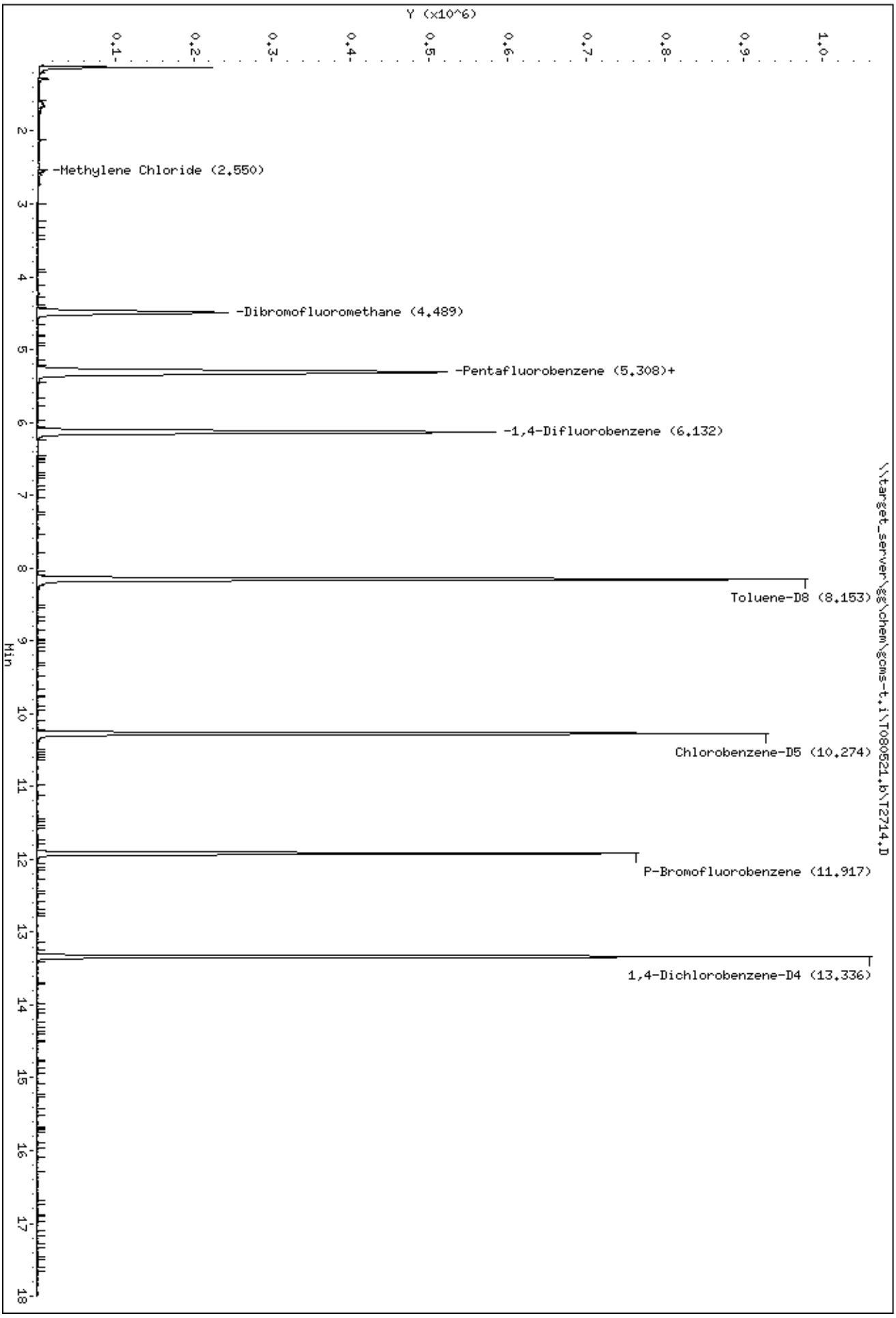
Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)	REVIEW CODE
	14 Methylene Chloride	84	2.554	2.554	(0.482)	2830	1.16123	1.2(a)	
$	34 Dibromofluoromethane	113	4.488	4.489	(0.847)	215566	48.5087	48.5	
*	41 Pentafluorobenzene	168	5.300	5.301	(1.000)	409694	50.0000		
$	42 1,2-Dichloroethane-D4	65	5.323	5.323	(1.004)	268702	50.4573	50.4	
*	48 1,4-Difluorobenzene	114	6.135	6.132	(1.000)	682081	50.0000		
$	56 Toluene-D8	98	8.152	8.153	(1.329)	790595	51.1064	51.1	
*	68 Chlorobenzene-D5	117	10.274	10.274	(1.000)	607338	50.0000		
$	77 P-Bromofluorobenzene	95	11.920	11.921	(1.943)	290923	51.8275	51.8	
*	93 1,4-Dichlorobenzene-D4	152	13.335	13.336	(1.000)	273663	50.0000		

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).


Y (x10^6)
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Min
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
-Methylene Chloride (2.550)
-Dibromofluoromethane (4.489)
-Pentafluorobenzene (5.308)+
-1,4-Difluorobenzene (6.132)
Toluene-D8 (8.153)
Chlorobenzene-D5 (10.274)
P-Bromofluorobenzene (11.917)
1,4-Dichlorobenzene-D4 (13.336)
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Date : 05-AUG-2021 11:40
Client ID: GW-EB-SUMMER2021
Sample Info: SD4723-8RA
Instrument: gcms-t.i

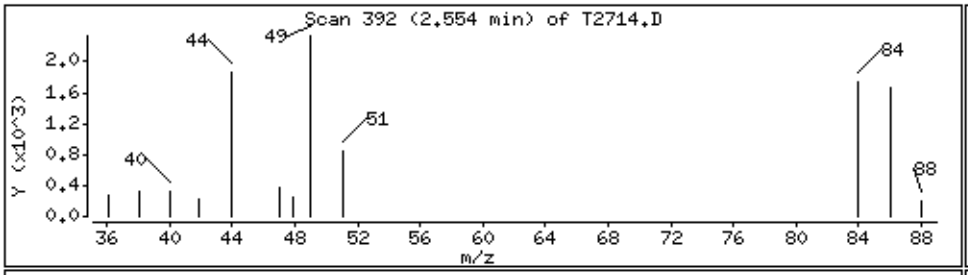
Data File: \\target_server\gg\chem\gcms-t.i\T080521.b\T2714.D

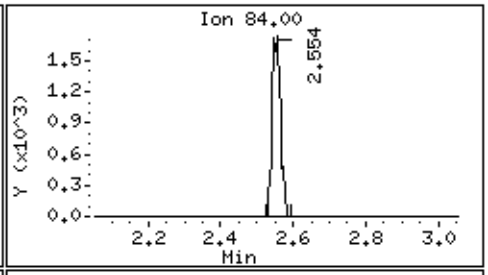
Date : 05-AUG-2021 11:40

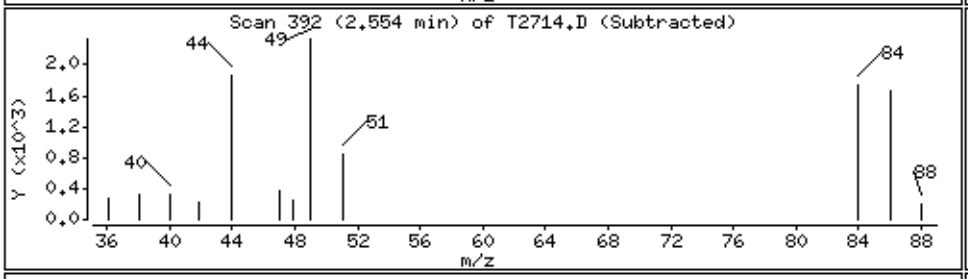
Client ID: GW-EB-SUMMER2021 Instrument: gcms-t.i

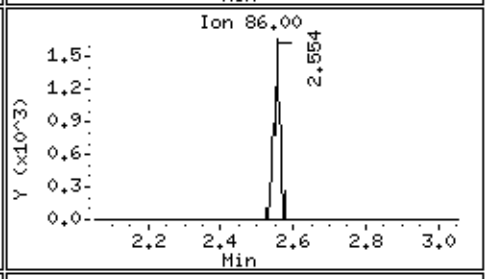
Sample Info: S04723-8RA

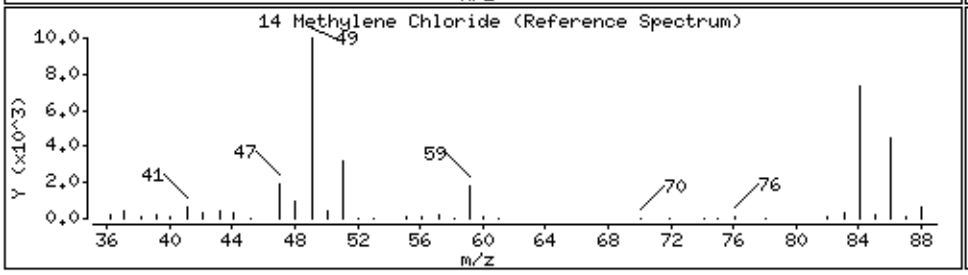
14 Methylene Chloride Concentration: 1.2 ug/l

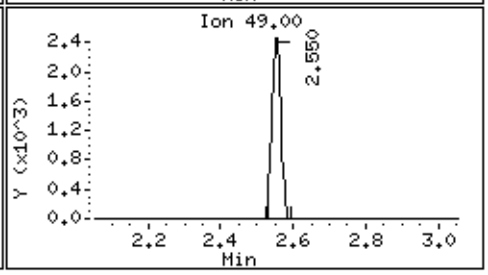












Standards Data Section

Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services **SDG:** SO4723
Project : LO-58 Nike Missile Battery Launch Site **Instrument ID:** GCMS-T
Lab File IDs : T2683.D T2684.D T2685.D T2686.D T2688.D T2690.D T2687.D **Calibration Date(s):** 04-AUG-21 08:24 04-AUG-21 12:24

	1.0000 Level 1	5.0000 Level 2	20.0000 Level 3	50.0000 Level 4	100.0000 Level 5	150.0000 Level 6	75.0000 Level 7		Curve Type	b	m1	m2	%RSD	MAX %RSD	
Chloromethane	0.59227	0.50602	0.49964	0.48896	0.51773	0.51690	0.48836		AVG		.5157		6.939	15	O
Vinyl chloride	0.40082	0.35998	0.36888	0.36737	0.39639	0.41696	0.36729		AVG		.3825		5.716	15	O
Bromomethane	1654	7040	23186	52549	113492	170312	79424		LNR	0	.1281		.9979	.99	O
Chloroethane	0.17762	0.17549	0.17359	0.15696	0.13401	+++++	0.14458		AVG		.1604		11.35	15	O
1,1-Dichloroethene	0.26298	0.25263	0.28535	0.26581	0.28024	0.28830	0.27105		AVG		.2723		4.756	15	O
Carbon Disulfide	0.74179	0.61857	0.70968	0.68768	0.71739	0.73351	0.68037		AVG		.6984		5.966	15	O
Methylene Chloride	4114	13493	52114	123213	249998	402646	188560		LNR	0	.2974		.9984	.99	O
Acetone	8547	27400	104766	205588	493035	778168	375884		QUA	0	9.478	-.5674	.997	.99	O
trans-1,2-Dichloroethene	2738	12120	52177	168166	366576	532699	267750		LNR	0	.4074		.9969	.99	O
1,1-Dichloroethane	0.81547	0.75849	0.83392	0.82490	0.85269	0.85947	0.81233		AVG		.8225		4.052	15	O
cis-1,2-Dichloroethene	0.45613	0.46172	0.49380	0.47398	0.48569	0.49106	0.46837		AVG		.4758		3.091	15	O
Chloroform	0.93324	0.81137	0.85874	0.83823	0.86170	0.86074	0.82168		AVG		.8551		4.656	15	O
Carbon Tetrachloride	0.31994	0.33649	0.39142	0.38447	0.42040	0.41977	0.39381		AVG		.3809		10.2	15	O
1,1,1-Trichloroethane	0.70517	0.73716	0.81110	0.79178	0.82764	0.83134	0.78239		AVG		.7838		6.018	15	O
2-Butanone	0.19438	0.19562	0.20993	0.19574	0.21437	0.20616	0.20348		AVG		.2028		3.866	15	O
Benzene	1.01260	0.99411	1.06349	1.01006	1.05633	1.04142	1.00591		AVG		1.026		2.644	15	O
1,2-Dichloroethane	0.39582	0.35791	0.37487	0.35965	0.36861	0.36614	0.35422		AVG		.3682		3.818	15	O
Trichloroethene	0.24259	0.24574	0.27044	0.26009	0.28062	0.27459	0.26499		AVG		.2627		5.442	15	O
1,2-Dichloropropane	0.23195	0.24154	0.25606	0.24938	0.25431	0.25307	0.24413		AVG		.2472		3.472	15	O
Bromodichloromethane	0.30025	0.31824	0.36802	0.35742	0.38183	0.37482	0.35943		AVG		.3514		8.667	15	O
cis-1,3-dichloropropene	0.36208	0.38160	0.42477	0.41940	0.44648	0.45037	0.42111		AVG		.4151		7.812	15	O
Toluene	0.64224	0.61671	0.65342	0.63278	0.65165	0.64156	0.62673		AVG		.6379		2.086	15	O
4-methyl-2-pentanone	0.18573	0.21973	0.23583	0.23308	0.24134	0.21631	0.22740		AVG		.2228		8.33	15	O
Tetrachloroethene	0.24618	0.23248	0.24415	0.23707	0.25834	0.26057	0.24425		AVG		.2462		4.174	15	O
trans-1,3-Dichloropropene	0.28050	0.33677	0.37877	0.39128	0.41226	0.41133	0.39257		AVG		.3719		12.81	15	O
1,1,2-Trichloroethane	0.18960	0.18124	0.19111	0.18624	0.19363	0.18706	0.18510		AVG		.1877		2.19	15	O
Dibromochloromethane	0.24995	0.25688	0.29667	0.30216	0.32660	0.33132	0.31175		AVG		.2965		10.77	15	O
2-Hexanone	0.14330	0.16941	0.19215	0.18247	0.19801	0.18721	0.18971		AVG		.1803		10.33	15	O
Chlorobenzene	0.77107	0.77102	0.81567	0.78660	0.81022	0.80657	0.78920		AVG		.7929		2.31	15	O
Ethylbenzene	1.29876	1.24707	1.37966	1.34763	1.39882	1.39492	1.35408		AVG		1.346		4.115	15	O
Xylenes (total)	+++++	+++++	+++++	+++++	+++++	+++++	+++++		AVG		0		0	15	MO
m+p-Xylenes	0.98604	0.96383	1.06679	1.03636	1.05872	1.01827	1.03670		AVG		1.024		3.664	15	O
o-Xylene	0.96838	0.97865	1.05599	1.05141	1.09216	1.08838	1.05043		AVG		1.041		4.714	15	O
Styrene	0.65250	0.74290	0.84236	0.81898	0.84936	0.84789	0.82686		AVG		.7973		9.241	15	O
Bromoform	1488	9111	42967	115108	239170	354952	172637		LNR	0	.1935		.9987	.99	O
1,1,2,2-Tetrachloroethane	0.62155	0.64192	0.69768	0.68901	0.71527	0.70797	0.68385		AVG		.6796		5.132	15	O

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Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SO4723
Project : LO-58 Nike Missile Battery Launch Site
Instrument ID: GCMS-T
Lab File IDs : T2683.D T2684.D T2685.D T2686.D T2688.D T2690.D T2687.D
Calibration Date(s): 04-AUG-21 08:24 04-AUG-21 12:24

Dibromofluoromethane	0.51869	0.52884	0.54148	0.55198	0.55183	0.55737	0.54619		AVG		.5423		2.571	15	
1,2-Dichloroethane-D4	0.63349	0.65535	0.64961	0.65318	0.65491	0.65957	0.64329		AVG		.6499		1.365	15	
Toluene-D8	1.13778	1.15040	1.14459	1.13557	1.12837	1.11563	1.12566		AVG		1.134		1.041	15	
P-Bromofluorobenzene	0.42003	0.42218	0.41866	0.41438	0.40952	0.39542	0.40020		AVG		.4115		2.503	15	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2691A.D
Report Date: 09-Aug-2021 08:41

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: WG303684
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: WG303684-8 Client Smp ID: Independent Source
Level: LOW Operator: HG
Data Type: MS DATA SampleType: Blank
SpikeList File: IND_CHECK.spk Quant Type: ISTD
Sublist File: all.sub
Method File: \\target_server\gg\chem\gcms-t.i\T080421.b\T8A05(66)D.m
Misc Info: WG303684-4,WG303684

SPIKE	COMPOUND	CONC ADDED ug/l	CONC RECOVERED ug/l	% RECOVERED	LIMITS
1	Dichlorodifluorome	50.0	53.0	106.01	80-120
2	Chloromethane	50.0	54.6	109.30	80-120
3	Vinyl chloride	50.0	53.2	106.31	80-120
4	Bromomethane	50.0	49.6	99.25	80-120
5	Chloroethane	50.0	47.0	93.94	80-120
6	Trichlorofluoromet	50.0	49.9	99.76	80-120
7	Diethyl Ether	50.0	48.8	97.58	80-120
19	Tertiary-butyl alc	250	358	143.14*	80-120
8	1,1-Dichloroethene	50.0	47.1	94.16	80-120
10	Carbon Disulfide	50.0	57.1	114.21	80-120
9	Freon-113	50.0	45.8	91.54	80-120
11	Iodomethane	50.0	48.4	96.75	80-120
12	Acrolein	250	241	96.46	80-120
14	Methylene Chloride	50.0	50.7	101.41	80-120
15	Acetone	50.0	81.1	162.23*	80-120
45	Isobutyl Alcohol	1000	1370	136.90*	80-120
16	trans-1,2-Dichloro	50.0	54.1	108.16	80-120
13	Allyl Chloride	50.0	47.6	95.32	80-120
18	Methyl tert-butyl	50.0	54.8	109.59	80-120
20	Acetonitrile	500	634	126.74*	80-120
21	Di-isopropyl ether	50.0	50.6	101.21	80-120
22	Chloroprene	50.0	49.4	98.75	80-120
39	Propionitrile	500	584	116.71	80-120
40	Methacrylonitrile	500	508	101.64	80-120
23	1,1-Dichloroethane	50.0	51.8	103.58	80-120
24	Acrylonitrile	250	258	103.33	80-120
25	Ethyl tertiary-but	50.0	50.9	101.80	80-120
26	Vinyl Acetate	50.0	59.4	118.73	80-120
27	cis-1,2-Dichloroet	50.0	49.9	99.79	80-120
M 103	1,2-Dichloroethyle	100	104	103.97	80-120
52	Methyl Methacrylat	50.0	51.5	102.95	80-120
28	2,2-Dichloropropan	50.0	51.5	103.06	80-120
30	Bromochloromethane	50.0	57.6	115.24	80-120
31	Chloroform	50.0	49.2	98.42	80-120
32	Carbon Tetrachlori	50.0	50.5	101.01	80-120
33	Tetrahydrofuran	50.0	65.3	130.60*	80-120
35	1,1,1-Trichloroeth	50.0	49.0	98.10	80-120
36	1,1-Dichloropropen	50.0	52.0	103.96	80-120
37	2-Butanone	50.0	73.9	147.82*	80-120
38	Benzene	50.0	53.1	106.30	80-120

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2691A.D
Report Date: 09-Aug-2021 08:41

	SPIKE COMPOUND	CONC ADDED ug/l	CONC RECOVERED ug/l	% RECOVERED	LIMITS
	29 Cyclohexane	50.0	52.0	104.12	80-120
	62 Ethyl Methacrylate	50.0	54.4	108.72	80-120
	43 Tertiary-amyl meth	50.0	50.8	101.55	80-120
	44 1,2-Dichloroethane	50.0	51.5	102.93	80-120
	47 Trichloroethene	50.0	52.8	105.54	80-120
	49 Dibromomethane	50.0	51.3	102.68	80-120
	50 1,2-Dichloropropan	50.0	52.4	104.83	80-120
	51 Bromodichlorometha	50.0	53.8	107.53	80-120
	55 cis-1,3-dichloropr	50.0	55.0	109.99	80-120
	53 1,4-Dioxane	1000	1690	169.09*	80-120
	54 2-Chloroethylvinyl	50.0	58.3	116.64	80-120
	57 Toluene	50.0	53.0	105.98	80-120
	59 4-methyl-2-pentano	50.0	58.3	116.70	80-120
	58 Tetrachloroethene	50.0	49.5	98.96	80-120
	60 trans-1,3-Dichloro	50.0	55.4	110.91	80-120
	61 1,1,2-Trichloroeth	50.0	52.3	104.54	80-120
	63 Dibromochlorometha	50.0	52.1	104.21	80-120
	64 1,3-Dichloropropan	50.0	51.4	102.73	80-120
	65 1,2-Dibromoethane	50.0	53.4	106.82	80-120
	67 2-Hexanone	50.0	59.6	119.25	80-120
	69 Chlorobenzene	50.0	53.1	106.13	80-120
	70 Ethylbenzene	50.0	53.7	107.48	80-120
	71 1,1,1,2-Tetrachlor	50.0	55.4	110.81	80-120
M	105 Xylenes (total)	150	160	106.69	80-120
	72 m+p-Xylenes	100	107	106.87	80-120
	73 o-Xylene	50.0	53.2	106.31	80-120
	74 Styrene	50.0	56.0	111.91	80-120
	75 Bromoform	50.0	48.7	97.47	80-120
	76 Isopropylbenzene	50.0	52.9	105.73	80-120
	79 cis-1,4-Dichloro-2	50.0	53.0	106.09	80-120
	85 trans-1,4-Dichloro	50.0	52.8	105.63	80-120
	78 Bromobenzene	50.0	53.2	106.51	80-120
	80 N-Propylbenzene	50.0	53.0	105.95	80-120
	81 1,1,2,2-Tetrachlor	50.0	54.2	108.42	80-120
	84 1,3,5-Trimethylben	50.0	54.6	109.19	80-120
	82 2-Chlorotoluene	50.0	53.1	106.25	80-120
	83 1,2,3-Trichloropro	50.0	51.6	103.24	80-120
	86 4-Chlorotoluene	50.0	53.0	106.07	80-120
	87 tert-Butylbenzene	50.0	52.2	104.49	80-120
	88 Pentachloroethane	50.0	0.00	*	80-120
	89 1,2,4-Trimethylben	50.0	53.9	107.78	80-120
	91 P-Isopropyltoluene	50.0	56.3	112.67	80-120
	92 1,3-Dichlorobenzen	50.0	54.4	108.71	80-120
	94 1,4-Dichlorobenzen	50.0	52.4	104.79	80-120
	96 N-Butylbenzene	50.0	54.9	109.74	80-120
	90 sec-Butylbenzene	50.0	53.7	107.37	80-120
	97 1,2-Dichlorobenzen	50.0	53.6	107.13	80-120
	98 1,2-Dibromo-3-Chlo	50.0	49.1	98.17	80-120
	99 1,3,5-Trichloroben	50.0	52.3	104.55	80-120
	100 Hexachlorobutadien	50.0	52.6	105.26	80-120
	101 1,2,4-Trichloroben	50.0	56.3	112.55	80-120
	95 1,2,3-Trimethylben	50.0	51.8	103.59	80-120
	102 Naphthalene	50.0	49.3	98.54	80-120
	104 1,2,3-Trichloroben	50.0	55.7	111.33	80-120

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2691A.D
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	SPIKE COMPOUND	CONC ADDED ug/l	CONC RECOVERED ug/l	% RECOVERED	LIMITS
	17 Methyl Acetate	50.0	51.9	103.72	80-120
	46 Methylcyclohexane	50.0	48.2	96.41	80-120
M	66 Total Alkylbenzene	350	379	108.17	80-120

	SURROGATE COMPOUND	AMOUNT ADDED ug/l	AMOUNT RECOVERED ug/l	% RECOVERED	LIMITS
$	34 Dibromofluorometha	50.0	49.3	98.64	68-128
$	42 1,2-Dichloroethane	50.0	49.4	98.81	67-135
$	56 Toluene-D8	50.0	50.3	100.53	65-128
$	77 P-Bromofluorobenze	50.0	50.2	100.49	56-133

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2691A.D
Report Date: 09-Aug-2021 08:41

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-t.i\T080421.b\T2691A.D
Lab Smp Id: WG303684-8 Client Smp ID: Independent Source
Inj Date : 04-AUG-2021 13:03
Operator : HG Inst ID: gcms-t.i
Smp Info : WG303684-8
Misc Info : WG303684-4,WG303684
Comment : SW846 5030
Method : \\target_server\gg\chem\gcms-t.i\T080421.b\T8A05(66)D.m
Meth Date : 05-Aug-2021 05:36 hgould Quant Type: ISTD
Cal Date : 04-AUG-2021 12:24 Cal File: T2690.D
Als bottle: 10 QC Sample: Blank
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: ORGANICS2

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.225	1.226	(0.231)	236811	53.0030	53.0	
2	Chloromethane	50	1.352	1.353	(0.255)	249681	54.6484	54.6	
3	Vinyl chloride	62	1.397	1.398	(0.263)	180139	53.1536	53.2	
4	Bromomethane	94	1.599	1.600	(0.302)	56321	49.6228	49.6	
5	Chloroethane	64	1.674	1.678	(0.316)	66734	46.9676	47.0	
6	Trichlorofluoromethane	101	1.764	1.768	(0.333)	212539	49.8821	49.9	
7	Diethyl Ether	59	1.970	1.970	(0.371)	102828	48.7918	48.8	
8	1,1-Dichloroethene	96	2.112	2.113	(0.398)	113596	47.0804	47.1	
9	Freon-113	151	2.134	2.138	(0.402)	81637	45.7723	45.8	
10	Carbon Disulfide	76	2.142	2.142	(0.404)	353360	57.1063	57.1	
11	Iodomethane	142	2.224	2.225	(0.419)	113516	48.3763	48.4	
12	Acrolein	56	2.366	2.367	(0.446)	52884	241.161	241	
13	Allyl Chloride	41	2.467	2.468	(0.465)	198248	47.6592	47.6	
14	Methylene Chloride	84	2.553	2.554	(0.481)	133607	50.7034	50.7	
15	Acetone	43	2.602	2.599	(0.491)	76611	81.1148	81.1(R)	
16	trans-1,2-Dichloroethene	96	2.684	2.685	(0.506)	195201	54.0791	54.1	
17	Methyl Acetate	43	2.703	2.704	(0.510)	149235	51.8615	51.9	
18	Methyl tert-butyl ether	73	2.778	2.782	(0.524)	581202	54.7940	54.8	
19	Tertiary-butyl alcohol	59	2.875	2.876	(0.542)	127457	357.861	358(R)	
20	Acetonitrile	41	3.017	3.018	(0.569)	290784	633.700	634(R)	
21	Di-isopropyl ether	45	3.133	3.134	(0.591)	650353	50.6046	50.6	
22	Chloroprene	53	3.235	3.235	(0.610)	298814	49.3751	49.4	
23	1,1-Dichloroethane	63	3.261	3.261	(0.615)	377373	51.7892	51.8	

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2691A.D
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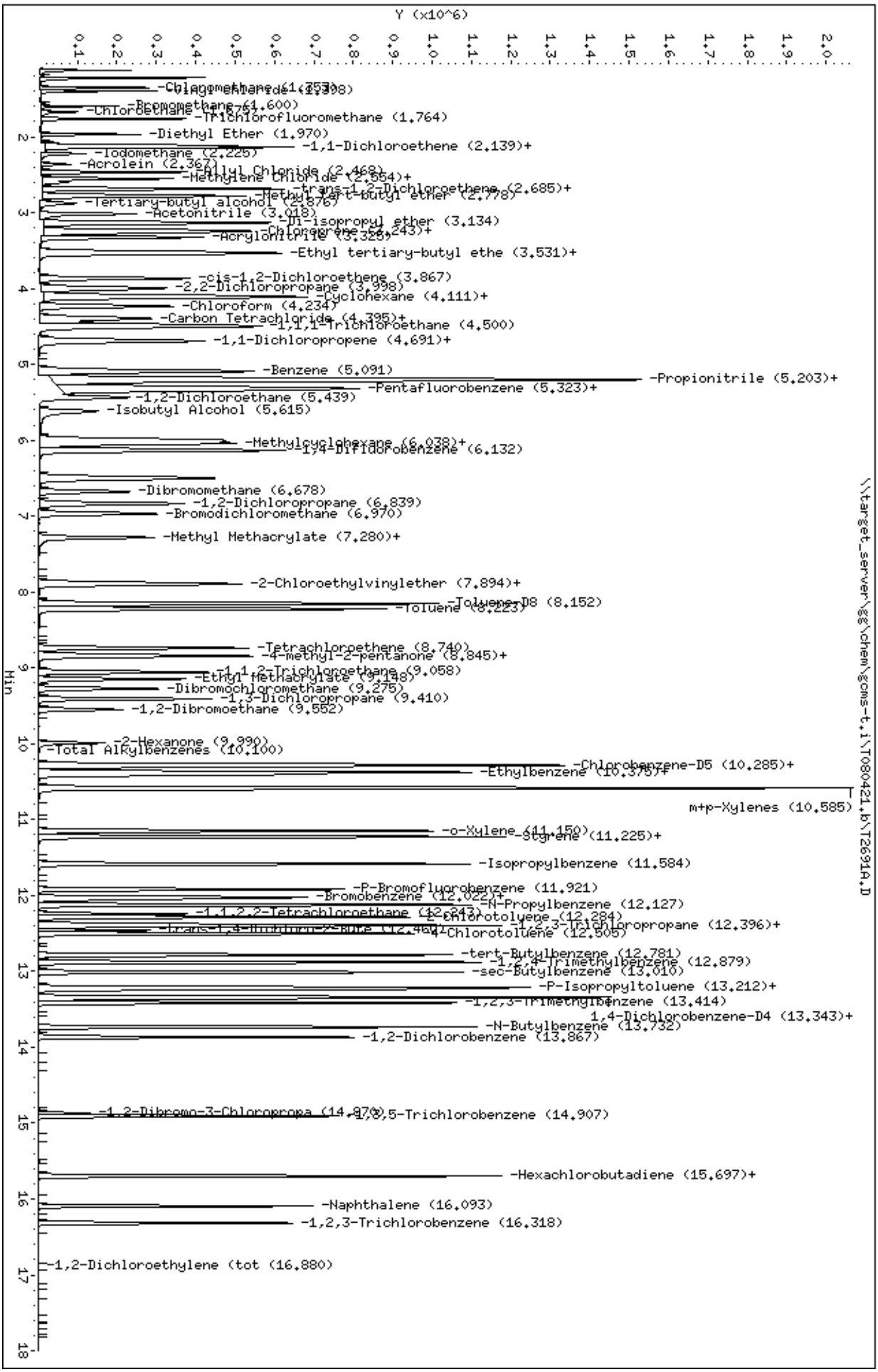
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
	24 Acrylonitrile	52	3.324	3.325	(0.627)	291992	258.320	258	
	25 Ethyl tertiary-butyl ether	59	3.523	3.523	(0.664)	576065	50.9003	50.9	
	26 Vinyl Acetate	43	3.541	3.542	(0.578)	508524	59.3667	59.4	
	27 cis-1,2-Dichloroethene	96	3.867	3.868	(0.729)	210333	49.8943	49.9	
	28 2,2-Dichloropropane	77	3.998	3.999	(0.754)	305568	51.5278	51.5	
	29 Cyclohexane	56	4.103	4.099	(0.774)	318125	52.0584	52.0	
	30 Bromochloromethane	128	4.118	4.118	(0.776)	101651	57.6218	57.6	
	31 Chloroform	83	4.230	4.234	(0.798)	372796	49.2088	49.2	
	32 Carbon Tetrachloride	117	4.395	4.395	(0.717)	279354	50.5044	50.5	
	33 Tetrahydrofuran	42	4.454	4.451	(0.840)	83467	65.3023	65.3(R)	
$	34 Dibromofluoromethane	113	4.492	4.489	(0.847)	236976	49.3197	49.3	
	35 1,1,1-Trichloroethane	97	4.499	4.496	(0.848)	340593	49.0477	49.0	
	36 1,1-Dichloropropene	75	4.687	4.691	(0.764)	279319	51.9805	52.0	
	37 2-Butanone	43	4.705	4.698	(0.887)	132806	73.9118	73.9(R)	
	38 Benzene	78	5.091	5.091	(0.830)	792102	53.1498	53.1	
	39 Propionitrile	54	5.177	5.177	(0.976)	283547	583.550	584	
	40 Methacrylonitrile	41	5.203	5.200	(0.981)	1193411	508.178	508	
*	41 Pentafluorobenzene	168	5.304	5.301	(1.000)	442979	50.0000		
$	42 1,2-Dichloroethane-D4	65	5.330	5.323	(1.005)	284469	49.4043	49.4	
	43 Tertiary-amyl methyl ether	73	5.338	5.335	(1.006)	510868	50.7762	50.8	
	44 1,2-Dichloroethane	62	5.439	5.439	(0.887)	275148	51.4633	51.5	
	45 Isobutyl Alcohol	43	5.615	5.619	(1.059)	187847	1369.02	1370(R)	
	46 Methylcyclohexane	83	5.996	5.997	(1.131)	309034	48.2052	48.2	
	47 Trichloroethene	95	6.037	6.042	(0.985)	201325	52.7689	52.8	
*	48 1,4-Difluorobenzene	114	6.131	6.132	(1.000)	726083	50.0000		
	49 Dibromomethane	93	6.674	6.682	(1.088)	124385	51.3379	51.3	
	50 1,2-Dichloropropane	63	6.838	6.832	(1.115)	188155	52.4128	52.4	
	51 Bromodichloromethane	83	6.966	6.966	(1.136)	274372	53.7632	53.8	
	52 Methyl Methacrylate	41	7.280	7.277	(1.187)	161220	51.4735	51.5	
	53 1,4-Dioxane	88	7.287	7.284	(1.189)	67184	1690.90	1690(R)	
	54 2-Chloroethylvinylether	63	7.871	7.876	(1.284)	119419	58.3202	58.3	
	55 cis-1,3-dichloropropene	75	7.897	7.898	(1.288)	331516	54.9945	55.0	
$	56 Toluene-D8	98	8.152	8.153	(1.330)	827725	50.2640	50.3	
	57 Toluene	92	8.223	8.220	(1.341)	490848	52.9907	53.0	
	58 Tetrachloroethene	164	8.739	8.736	(0.851)	153202	49.4777	49.5	
	59 4-methyl-2-pentanone	43	8.822	8.822	(1.439)	188765	58.3495	58.3	
	60 trans-1,3-Dichloropropene	75	8.848	8.849	(1.443)	299519	55.4564	55.4	
	61 1,1,2-Trichloroethane	83	9.054	9.054	(1.477)	142484	52.2705	52.3	
	62 Ethyl Methacrylate	69	9.147	9.148	(1.492)	226465	54.3582	54.4	
	63 Dibromochloromethane	129	9.275	9.275	(0.903)	194330	52.1069	52.1	
	64 1,3-Dichloropropane	76	9.409	9.410	(0.916)	301672	51.3662	51.4	
	65 1,2-Dibromoethane	107	9.551	9.548	(1.558)	177940	53.4084	53.4	
M	66 Total Alkylbenzenes	100				5147046	378.600	379	
	67 2-Hexanone	43	9.989	9.986	(0.972)	135253	59.6261	59.6	
*	68 Chlorobenzene-D5	117	10.274	10.274	(1.000)	628965	50.0000		
	69 Chlorobenzene	112	10.296	10.293	(1.002)	529299	53.0669	53.1	
	70 Ethylbenzene	91	10.375	10.372	(1.010)	909773	53.7379	53.7	
	71 1,1,1,2-Tetrachloroethane	131	10.405	10.409	(1.013)	188001	55.4061	55.4	
	72 m+p-Xylenes	91	10.584	10.585	(1.030)	1376416	106.874	107	
	73 o-Xylene	91	11.149	11.150	(1.085)	695938	53.1568	53.2	
	74 Styrene	104	11.228	11.229	(1.093)	561165	55.9541	56.0	
	75 Bromoform	173	11.220	11.221	(1.092)	118647	48.7369	48.7	
	76 Isopropylbenzene	105	11.583	11.584	(0.869)	839800	52.8628	52.9	
$	77 P-Bromofluorobenzene	95	11.920	11.921	(1.944)	300240	50.2458	50.2	

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2691A.D
Report Date: 09-Aug-2021 08:41

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
78	Bromobenzene	156	12.025	12.022	(0.902)	195455	53.2538	53.2	
79	cis-1,4-Dichloro-2-Butene	53	12.051	12.052	(0.904)	64502	53.0465	53.0	
80	N-Propylbenzene	91	12.126	12.123	(0.909)	992062	52.9762	53.0	
81	1,1,2,2-Tetrachloroethane	83	12.242	12.243	(0.918)	210886	54.2112	54.2	
82	2-Chlorotoluene	91	12.283	12.284	(0.921)	592656	53.1243	53.1	
83	1,2,3-Trichloropropane	75	12.373	12.378	(0.928)	173373	51.6197	51.6	
84	1,3,5-Trimethylbenzene	105	12.399	12.400	(0.930)	674873	54.5936	54.6	
85	trans-1,4-Dichloro-2-Butene	53	12.459	12.460	(0.934)	64222	52.8164	52.8	
86	4-Chlorotoluene	91	12.504	12.505	(0.938)	617645	53.0350	53.0	
87	tert-Butylbenzene	119	12.781	12.785	(0.958)	566308	52.2442	52.2	
89	1,2,4-Trimethylbenzene	105	12.878	12.879	(0.966)	678006	53.8918	53.9	
90	sec-Butylbenzene	105	13.009	13.010	(0.976)	848683	53.6862	53.7	
91	P-Isopropyltoluene	119	13.211	13.212	(0.991)	729316	56.3373	56.3	
92	1,3-Dichlorobenzene	146	13.234	13.238	(0.992)	365953	54.3545	54.4	
* 93	1,4-Dichlorobenzene-D4	152	13.335	13.336	(1.000)	286200	50.0000		
94	1,4-Dichlorobenzene	146	13.354	13.354	(1.001)	371099	52.3953	52.4	
95	1,2,3-Trimethylbenzene	105	13.413	13.414	(1.006)	649377	51.7937	51.8	
96	N-Butylbenzene	91	13.732	13.736	(1.030)	657798	54.8710	54.9	
97	1,2-Dichlorobenzene	146	13.866	13.867	(1.040)	333851	53.5642	53.6	
98	1,2-Dibromo-3-Chloropropane	157	14.869	14.874	(1.115)	35611	49.0865	49.1	
99	1,3,5-Trichlorobenzene	180	14.907	14.907	(1.118)	237605	52.2768	52.3	
100	Hexachlorobutadiene	225	15.692	15.693	(1.177)	101586	52.6280	52.6	
101	1,2,4-Trichlorobenzene	180	15.700	15.701	(1.177)	219263	56.2754	56.3	
102	Naphthalene	128	16.093	16.094	(1.207)	529419	49.2720	49.3	
M 103	1,2-Dichloroethylene (total)	96				405534	103.973	104	
104	1,2,3-Trichlorobenzene	180	16.317	16.318	(1.224)	195519	55.6671	55.7	
M 105	Xylenes (total)	91				2072354	160.031	160	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.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Sample Info: WG303684-8
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Column phase: RTX-VMS
Instrument: gcms-t.i
Operator: HG
Column diameter: 0.18
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Y (x10^6)
Min
-Chloromethane (1.353)
-Vinyl chloride (1.398)
-Bromomethane (1.600)
-Chloroethane
-Trichlorofluoromethane (1.764)
-Diethyl Ether (1.970)
-1,1-Dichloroethene (2.139)+
-Iodomethane (2.225)
-Acrolein (2.362)
-Allyl Chloride (2.468)
-Methylene Chloride (2.554)+
-trans-1,2-Dichloroethene (2.685)+
-Methyl tert-butyl ether (2.778)
-Tertiary-butyl alcohol (2.876)
-Acetonitrile (3.018)
-Di-isopropyl ether (3.134)
-Chloroprene (3.243)+
-Acrylonitrile (3.329)+
-Ethyl tertiary-butyl ethe (3.531)+
-cis-1,2-Dichloroethene (3.867)
-2,2-Dichloropropane (3.998)
-Cyclohexane (4.111)+
-Chloroform (4.234)
-Carbon Tetrachloride (4.395)+
-1,1,1-Trichloroethane (4.500)
-1,1-Dichloropropene (4.691)+
-Benzene (5.091)
-Propionitrile (5.203)+
-Pentafluorobenzene (5.323)+
-1,2-Dichloroethane (5.439)
-Isobutyl Alcohol (5.615)
-Methylcyclohexane (6.038)+
-1,4-Difluorobenzene (6.132)
-Dibromomethane (6.678)
-1,2-Dichloropropane (6.839)
-Bromodichloromethane (6.970)
-Methyl Methacrylate (7.280)+
-2-Chloroethylvinylether (7.894)+
-Toluene-D8 (8.152)
-Toluene (8.223)
-Tetrachloroethene (8.740)
-4-methyl-2-pentanone (8.845)+
-1,1,2-Trichloroethane (9.058)
-Ethyl Methacrylate (9.148)
-Dibromochloromethane (9.275)
-1,3-Dichloropropane (9.410)
-1,2-Dibromoethane (9.552)
-2-Hexanone (9.990)
-Total Alkylbenzenes (10.100)
-Chlorobenzene-D5 (10.285)+
-Ethylbenzene (10.375)+
m+p-Xylenes (10.585)
-o-Xylene (11.150)
-Styrene (11.225)+
-Isopropylbenzene (11.584)
-P-Bromofluorobenzene (11.921)
-Bromobenzene (12.022)+
-N-Propylbenzene (12.127)
-1,1,2,2-Tetrachloroethane (12.243)
-2-Chlorotoluene (12.284)
-trans-1,4-dichloro-2-Bute (12.467)+
-1,2,3-Trichloropropane (12.396)+
-4-Chlorotoluene (12.505)
-tert-Butylbenzene (12.781)
-1,2,4-Trimethylbenzene (12.879)
-sec-Butylbenzene (13.010)
-P-Isopropyltoluene (13.212)+
-1,2,3-Trimethylbenzene (13.414)
1,4-Dichlorobenzene-D4 (13.343)+
-N-Butylbenzene (13.732)
-1,2-Dichlorobenzene (13.867)
-1,2-Dibromo-3-Chloropropa (14.870)
-1,3,5-Trichlorobenzene (14.907)
-Hexachlorobutadiene (15.697)+
-Naphthalene (16.093)
-1,2,3-Trichlorobenzene (16.318)
-1,2-Dichloroethylene (tot (16.880)

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2683.D
Report Date: 09-Aug-2021 08:41

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-t.i\T080421.b\T2683.D
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Inj Date : 04-AUG-2021 08:24
Operator : HG   Inst ID: gcms-t.i
Smp Info : WG303684-1
Misc Info :
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-t.i\T080421.b\T8A05(66)D.m
Meth Date : 05-Aug-2021 05:36 hgould   Quant Type: ISTD
Cal Date : 04-AUG-2021 08:24   Cal File: T2683.D
Als bottle: 2   Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12
Processing Host: T6-O360

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.225	1.226	(0.231)	5019	1.00000	1.1	
2	Chloromethane	50	1.356	1.353	(0.256)	5225	1.00000	1.1	
3	Vinyl chloride	62	1.397	1.398	(0.263)	3536	1.00000	1.0	
4	Bromomethane	94	1.599	1.600	(0.302)	1654	1.00000	1.3	
5	Chloroethane	64	1.685	1.678	(0.318)	1567	1.00000	1.1	
6	Trichlorofluoromethane	101	1.771	1.768	(0.334)	4597	1.00000	1.1	
7	Diethyl Ether	59	1.973	1.970	(0.372)	1906	1.00000	0.92(a)	
8	1,1-Dichloroethene	96	2.112	2.113	(0.398)	2320	1.00000	0.99(a)	
9	Freon-113	151	2.146	2.138	(0.405)	1658	1.00000	0.95(a)	
10	Carbon Disulfide	76	2.142	2.142	(0.404)	6544	1.00000	1.1	
11	Iodomethane	142	2.224	2.225	(0.419)	1195	1.00000	0.63(a)	
12	Acrolein	56	2.366	2.367	(0.446)	1340	5.00000	6.1	
13	Allyl Chloride	41	2.467	2.468	(0.465)	4258	1.00000	1.0	
14	Methylene Chloride	84	2.554	2.554	(0.481)	4114	1.00000	1.4(a)	
15	Acetone	43	2.595	2.599	(0.489)	8547	5.00000	7.5	
16	trans-1,2-Dichloroethene	96	2.688	2.685	(0.507)	2738	1.00000	0.85(a)	
17	Methyl Acetate	43	2.707	2.704	(0.510)	3220	1.00000	1.1	
18	Methyl tert-butyl ether	73	2.778	2.782	(0.524)	10106	1.00000	0.94(a)	
19	Tertiary-butyl alcohol	59	2.868	2.876	(0.541)	2691	5.00000	7.2	
20	Acetonitrile	41	3.018	3.018	(0.569)	6629	10.0000	13.6(a)	
21	Di-isopropyl ether	45	3.137	3.134	(0.592)	12016	1.00000	0.96(a)	
22	Chloroprene	53	3.235	3.235	(0.610)	5381	1.00000	0.92(a)	
23	1,1-Dichloroethane	63	3.268	3.261	(0.616)	7194	1.00000	1.0	

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2683.D
Report Date: 09-Aug-2021 08:41

CR

11:37 am, Aug 10, 2021

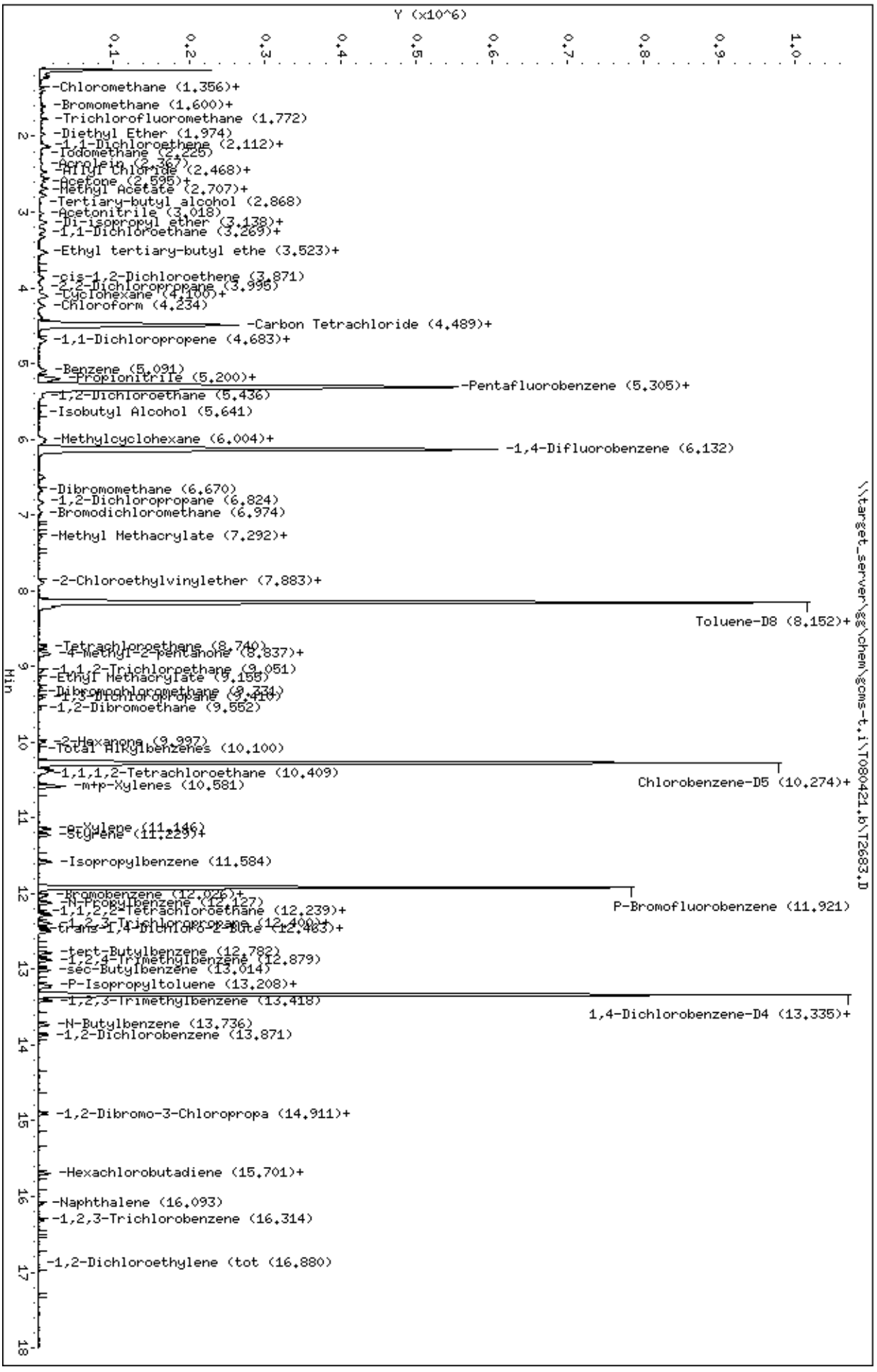
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	24 Acrylonitrile	52	3.324	3.325	(0.627)	5357	5.00000	4.8(a)	
	25 Ethyl tertiary-butyl ether	59	3.523	3.523	(0.664)	10478	1.00000	0.95(a)	
	26 Vinyl Acetate	43	3.541	3.542	(0.578)	8064	1.00000	0.97(a)	
	27 cis-1,2-Dichloroethene	96	3.871	3.868	(0.730)	4024	1.00000	0.97(a)	
	28 2,2-Dichloropropane	77	3.994	3.999	(0.753)	5407	1.00000	0.94(a)	
	29 Cyclohexane	56	4.099	4.099	(0.773)	5621	1.00000	0.94(a)	
	30 Bromochloromethane	128	4.114	4.118	(0.776)	1590	1.00000	0.92(a)	
	31 Chloroform	83	4.234	4.234	(0.798)	8233	1.00000	1.1	
	32 Carbon Tetrachloride	117	4.406	4.395	(0.719)	4600	1.00000	0.86(a)	
	33 Tetrahydrofuran	42	4.470	4.451	(0.843)	5939	5.00000	4.7(a)	
$	34 Dibromofluoromethane	113	4.488	4.489	(0.846)	228791	50.0000	48.1	
	35 1,1,1-Trichloroethane	97	4.492	4.496	(0.847)	6221	1.00000	0.92(a)	
	36 1,1-Dichloropropene	75	4.683	4.691	(0.764)	5037	1.00000	0.96(a)	
	37 2-Butanone	43	4.709	4.698	(0.888)	8574	5.00000	4.8(a)	
	38 Benzene	78	5.091	5.091	(0.830)	14559	1.00000	1.00	
	39 Propionitrile	54	5.188	5.177	(0.978)	5306	10.0000	10.9	
	40 Methacrylonitrile	41	5.211	5.200	(0.982)	22595	10.0000	9.7(a)	
*	41 Pentafluorobenzene	168	5.304	5.301	(1.000)	441098	50.0000		
$	42 1,2-Dichloroethane-D4	65	5.327	5.323	(1.004)	279433	50.0000	48.9	
	43 Tertiary-amyl methyl ether	73	5.338	5.335	(1.006)	9367	1.00000	0.95(a)	
	44 1,2-Dichloroethane	62	5.435	5.439	(0.886)	5691	1.00000	1.1	
	45 Isobutyl Alcohol	43	5.641	5.619	(1.063)	2785	20.0000	22.1(M)	M9
	46 Methylcyclohexane	83	6.004	5.997	(1.132)	5663	1.00000	0.91(a)	
	47 Trichloroethene	95	6.034	6.042	(0.984)	3488	1.00000	0.94(a)	
*	48 1,4-Difluorobenzene	114	6.131	6.132	(1.000)	718895	50.0000		
	49 Dibromomethane	93	6.670	6.682	(1.088)	2275	1.00000	0.96(a)	
	50 1,2-Dichloropropane	63	6.823	6.832	(1.113)	3335	1.00000	0.95(Ta)	
	51 Bromodichloromethane	83	6.973	6.966	(1.137)	4317	1.00000	0.87(Ta)	
	52 Methyl Methacrylate	41	7.287	7.277	(1.189)	2763	1.00000	0.90(a)	
	53 1,4-Dioxane	88	7.299	7.284	(1.190)	1051	20.0000	27.0	
	54 2-Chloroethylvinylether	63	7.882	7.876	(1.286)	1855	1.00000	0.92(Ta)	
	55 cis-1,3-dichloropropene	75	7.901	7.898	(1.289)	5206	1.00000	0.89(a)	
$	56 Toluene-D8	98	8.152	8.153	(1.330)	817941	50.0000	50.1	
	57 Toluene	92	8.219	8.220	(1.341)	9234	1.00000	1.0	
	58 Tetrachloroethene	164	8.743	8.736	(0.851)	3073	1.00000	1.0	
	59 4-methyl-2-pentanone	43	8.829	8.822	(1.440)	13352	5.00000	4.2(a)	
	60 trans-1,3-Dichloropropene	75	8.852	8.849	(1.444)	4033	1.00000	0.77(a)	
	61 1,1,2-Trichloroethane	83	9.061	9.054	(1.478)	2726	1.00000	1.0	
	62 Ethyl Methacrylate	69	9.155	9.148	(1.493)	3122	1.00000	0.78(a)	
	63 Dibromochloromethane	129	9.275	9.275	(0.903)	3120	1.00000	0.86(a)	
	64 1,3-Dichloropropane	76	9.409	9.410	(0.916)	5620	1.00000	0.97(a)	
	65 1,2-Dibromoethane	107	9.548	9.548	(1.557)	3182	1.00000	0.97(Ta)	
M	66 Total Alkylbenzenes	100				82981	1.00000	6.1(a)	
	67 2-Hexanone	43	9.989	9.986	(0.972)	8944	5.00000	4.0(a)	
*	68 Chlorobenzene-D5	117	10.274	10.274	(1.000)	624136	50.0000		
	69 Chlorobenzene	112	10.292	10.293	(1.002)	9625	1.00000	0.98(a)	
	70 Ethylbenzene	91	10.371	10.372	(1.009)	16212	1.00000	0.98(a)	
	71 1,1,1,2-Tetrachloroethane	131	10.408	10.409	(1.013)	2709	1.00000	0.83(a)	
	72 m+p-Xylenes	91	10.584	10.585	(1.030)	24617	2.00000	1.9(a)	
	73 o-Xylene	91	11.153	11.150	(1.086)	12088	1.00000	0.94(a)	
	74 Styrene	104	11.228	11.229	(1.093)	8145	1.00000	0.84(a)	
	75 Bromoform	173	11.224	11.221	(1.093)	1488	1.00000	0.72(a)	
	76 Isopropylbenzene	105	11.584	11.584	(0.868)	14544	1.00000	0.91(a)	
$	77 P-Bromofluorobenzene	95	11.920	11.921	(1.944)	301959	50.0000	50.8	

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2683.D
Report Date: 09-Aug-2021 08:41

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	78 Bromobenzene	156	12.029	12.022	(0.902)	3695	1.00000	0.99(a)	
	79 cis-1,4-Dichloro-2-Butene	53	12.048	12.052	(0.903)	1000	1.00000	0.83(a)	
	80 N-Propylbenzene	91	12.130	12.123	(0.909)	16915	1.00000	0.90(a)	
	81 1,1,2,2-Tetrachloroethane	83	12.242	12.243	(0.918)	3649	1.00000	0.93(Ta)	
	82 2-Chlorotoluene	91	12.283	12.284	(0.921)	10542	1.00000	0.94(a)	
	83 1,2,3-Trichloropropane	75	12.373	12.378	(0.928)	3211	1.00000	0.94(a)	
	84 1,3,5-Trimethylbenzene	105	12.399	12.400	(0.930)	10176	1.00000	0.82(a)	
	85 trans-1,4-Dichloro-2-Butene	53	12.459	12.460	(0.934)	1081	1.00000	0.89(a)	
	86 4-Chlorotoluene	91	12.500	12.505	(0.937)	10953	1.00000	0.94(a)	
	87 tert-Butylbenzene	119	12.789	12.785	(0.959)	9974	1.00000	0.92(a)	
	89 1,2,4-Trimethylbenzene	105	12.878	12.879	(0.965)	11101	1.00000	0.88(a)	
	90 sec-Butylbenzene	105	13.013	13.010	(0.976)	13964	1.00000	0.88(a)	
	91 P-Isopropyltoluene	119	13.208	13.212	(0.990)	11180	1.00000	0.86(a)	
	92 1,3-Dichlorobenzene	146	13.238	13.238	(0.992)	6356	1.00000	0.94(a)	
*	93 1,4-Dichlorobenzene-D4	152	13.339	13.336	(1.000)	293538	50.0000		
	94 1,4-Dichlorobenzene	146	13.350	13.354	(1.001)	7488	1.00000	1.0	
	95 1,2,3-Trimethylbenzene	105	13.417	13.414	(1.006)	11319	1.00000	0.90(a)	
	96 N-Butylbenzene	91	13.735	13.736	(1.030)	9671	1.00000	0.81(a)	
	97 1,2-Dichlorobenzene	146	13.866	13.867	(1.040)	6064	1.00000	0.96(a)	
	98 1,2-Dibromo-3-Chloropropane	157	14.869	14.874	(1.115)	281	1.00000	0.47(a)	
	99 1,3,5-Trichlorobenzene	180	14.910	14.907	(1.118)	4246	1.00000	0.94(a)	
	100 Hexachlorobutadiene	225	15.693	15.693	(1.176)	1796	1.00000	0.93(a)	
	101 1,2,4-Trichlorobenzene	180	15.700	15.701	(1.177)	3310	1.00000	0.85(a)	
	102 Naphthalene	128	16.093	16.094	(1.206)	5595	1.00000	0.63(a)	
M	103 1,2-Dichloroethylene (total)	96				6762	1.00000	1.8(a)	
	104 1,2,3-Trichlorobenzene	180	16.314	16.318	(1.223)	2988	1.00000	0.85(a)	
M	105 Xylenes (total)	91				36705	5.00000	2.9(a)	

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.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Client ID:
Sample Info: WG303684-1
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-t.i
Operator: HG
Column diameter: 0.18
\\target_server\gg\chem\gcms-t.i\T080421.b\T2683.D
Y (x10^6)
Min
-Chloromethane (1.356)+
-Bromomethane (1.600)+
-Trichlorofluoromethane (1.772)
-Diethyl Ether (1.974)
-1,1-Dichloroethene (2.112)+
-Iodomethane (2.225)
-Acrolein (2.367)
-Allyl Chloride (2.468)+
-Acetone (2.595)+
-Methyl Acetate (2.707)+
-Tertiary-butyl alcohol (2.868)
-Acetonitrile (3.018)
-Di-isopropyl ether (3.138)+
-1,1-Dichloroethane (3.269)+
-Ethyl tertiary-butyl ethe (3.523)+
-cis-1,2-Dichloroethene (3.871)
-2,2-Dichloropropane (3.995)
-Cyclohexane (4.100)+
-Chloroform (4.234)
-Carbon Tetrachloride (4.489)+
-1,1-Dichloropropene (4.683)+
-Benzene (5.091)
-Propionitrile (5.200)+
-Pentafluorobenzene (5.305)+
-1,2-Dichloroethane (5.436)
-Isobutyl Alcohol (5.641)
-Methylcyclohexane (6.004)+
-1,4-Difluorobenzene (6.132)
-Dibromomethane (6.670)
-1,2-Dichloropropane (6.824)
-Bromodichloromethane (6.974)
-Methyl Methacrylate (7.292)+
-2-Chloroethylvinylether (7.883)+
Toluene-D8 (8.152)+
-Tetrachloroethene (8.740)
-4-Methyl-2-pentanone (8.837)+
-1,1,2-Trichloroethane (9.051)
-Ethyl Methacrylate (9.155)
-Dibromochloromethane (9.234)
-1,3-Dichloropropane (9.410)
-1,2-Dibromoethane (9.552)
-2-Hexanone (9.997)
-Total Alkylbenzenes (10.100)
-1,1,1,2-Tetrachloroethane (10.409)
-m+p-Xylenes (10.581)
Chlorobenzene-D5 (10.274)+
-o-Xylene (11.146)
-Styrene (11.229)+
-Isopropylbenzene (11.584)
-Bromobenzene (12.026)+
-N-Propylbenzene (12.127)
-1,1,2,2-Tetrachloroethane (12.239)+
-1,2,3-Trichloropropane (12.400)+
-trans-1,4-Dichloro-2-Bute (12.483)+
P-Bromofluorobenzene (11.921)
-tert-Butylbenzene (12.782)
-1,2,4-Trimethylbenzene (12.879)
-sec-Butylbenzene (13.014)
-P-Isopropyltoluene (13.208)+
-1,2,3-Trimethylbenzene (13.418)
-N-Butylbenzene (13.736)
-1,2-Dichlorobenzene (13.871)
1,4-Dichlorobenzene-D4 (13.335)+
-1,2-Dibromo-3-Chloropropa (14.911)+
-Hexachlorobutadiene (15.701)+
-Naphthalene (16.093)
-1,2,3-Trichlorobenzene (16.314)
-1,2-Dichloroethylene (tot (16.880)

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2684.D
Report Date: 09-Aug-2021 08:41

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-t.i\T080421.b\T2684.D
Lab Smp Id: WG303684-2
Inj Date : 04-AUG-2021 08:57
Operator : HG   Inst ID: gcms-t.i
Smp Info : WG303684-2
Misc Info :
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-t.i\T080421.b\T8A05(66)D.m
Meth Date : 05-Aug-2021 05:36 hgould   Quant Type: ISTD
Cal Date : 04-AUG-2021 08:57   Cal File: T2684.D
Als bottle: 3   Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12
Processing Host: T6-O360

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.225	1.226	(0.231)	21840	5.00000	4.8	
2	Chloromethane	50	1.352	1.353	(0.255)	22183	5.00000	4.9	
3	Vinyl chloride	62	1.397	1.398	(0.263)	15781	5.00000	4.8	
4	Bromomethane	94	1.603	1.600	(0.302)	7040	5.00000	5.6	
5	Chloroethane	64	1.685	1.678	(0.318)	7693	5.00000	5.4	
6	Trichlorofluoromethane	101	1.771	1.768	(0.334)	22410	5.00000	5.2	
7	Diethyl Ether	59	1.970	1.970	(0.371)	10776	5.00000	5.2	
8	1,1-Dichloroethene	96	2.116	2.113	(0.399)	11075	5.00000	4.7	
9	Freon-113	151	2.138	2.138	(0.403)	8391	5.00000	4.8	
10	Carbon Disulfide	76	2.142	2.142	(0.404)	27117	5.00000	4.5	
11	Iodomethane	142	2.224	2.225	(0.419)	6314	5.00000	3.3	
12	Acrolein	56	2.366	2.367	(0.446)	5026	25.0000	23.1	
13	Allyl Chloride	41	2.467	2.468	(0.465)	19886	5.00000	4.9	
14	Methylene Chloride	84	2.553	2.554	(0.481)	13493	5.00000	4.7(a)	
15	Acetone	43	2.602	2.599	(0.490)	27400	25.0000	24.3	
16	trans-1,2-Dichloroethene	96	2.684	2.685	(0.506)	12120	5.00000	3.8	
17	Methyl Acetate	43	2.707	2.704	(0.510)	11736	5.00000	4.0	
18	Methyl tert-butyl ether	73	2.782	2.782	(0.524)	49889	5.00000	4.7	
19	Tertiary-butyl alcohol	59	2.872	2.876	(0.541)	7888	25.0000	21.2	
20	Acetonitrile	41	3.014	3.018	(0.568)	21244	50.0000	44.0	
21	Di-isopropyl ether	45	3.137	3.134	(0.591)	60180	5.00000	4.8	
22	Chloroprene	53	3.235	3.235	(0.609)	27741	5.00000	4.8	
23	1,1-Dichloroethane	63	3.261	3.261	(0.614)	33251	5.00000	4.7	

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2684.D
Report Date: 09-Aug-2021 08:41

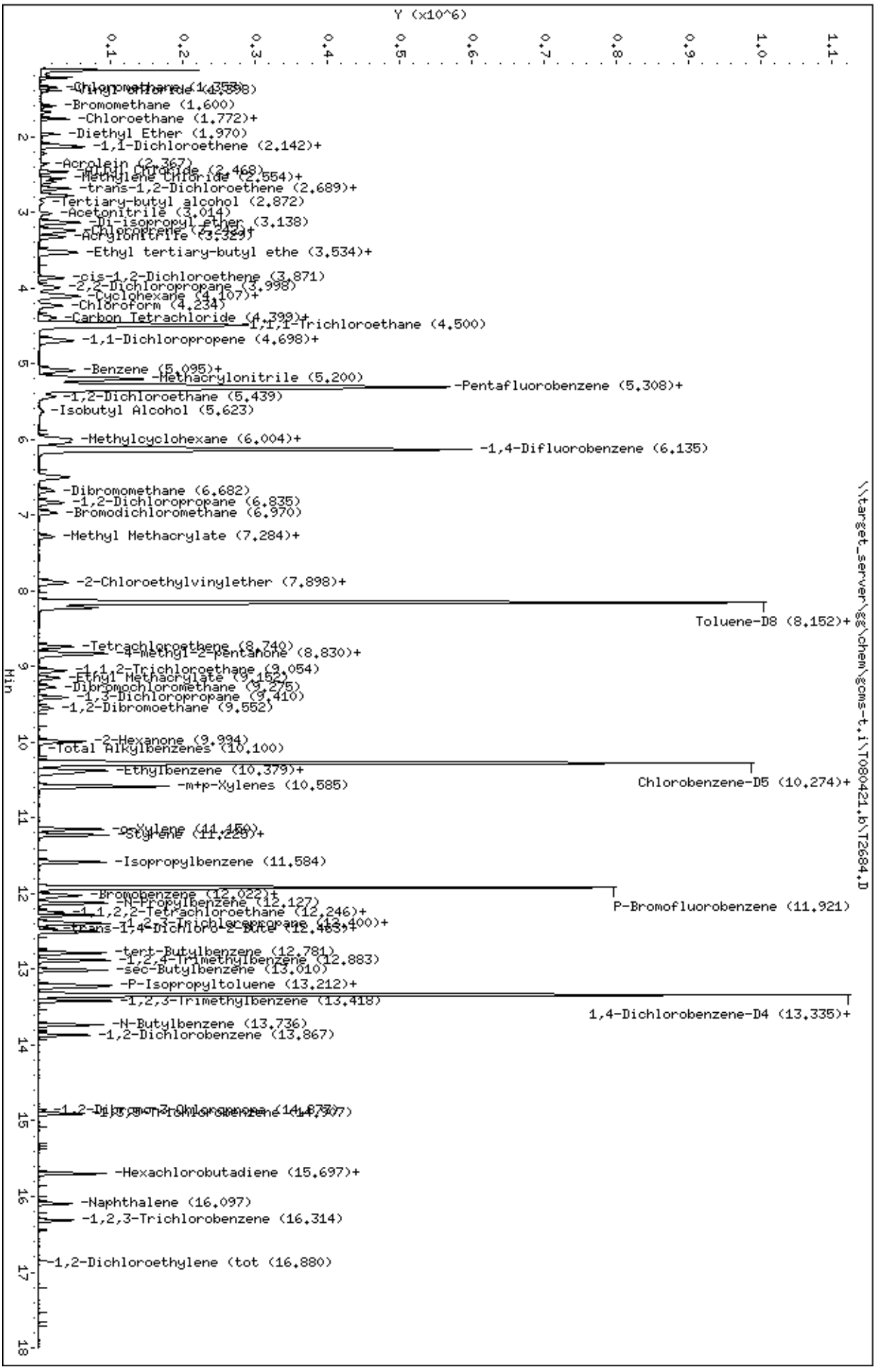
			QUANT SIG					AMOUNTS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	24	Acrylonitrile	52	3.321	3.325	(0.626)	27613	25.0000	24.9	
	25	Ethyl tertiary-butyl ether	59	3.526	3.523	(0.664)	52350	5.00000	4.8	
	26	Vinyl Acetate	43	3.545	3.542	(0.578)	39022	5.00000	4.7	
	27	cis-1,2-Dichloroethene	96	3.871	3.868	(0.729)	20241	5.00000	4.9	
	28	2,2-Dichloropropane	77	3.998	3.999	(0.753)	27432	5.00000	4.8	
	29	Cyclohexane	56	4.106	4.099	(0.774)	27618	5.00000	4.6	
	30	Bromochloromethane	128	4.121	4.118	(0.777)	8460	5.00000	4.9	
	31	Chloroform	83	4.234	4.234	(0.798)	35569	5.00000	4.8	
	32	Carbon Tetrachloride	117	4.398	4.395	(0.717)	23972	5.00000	4.5	
	33	Tetrahydrofuran	42	4.458	4.451	(0.840)	30426	25.0000	24.2	
$	34	Dibromofluoromethane	113	4.496	4.489	(0.847)	231833	50.0000	49.0	
	35	1,1,1-Trichloroethane	97	4.499	4.496	(0.848)	32316	5.00000	4.8	
	36	1,1-Dichloropropene	75	4.687	4.691	(0.764)	24539	5.00000	4.7	
	37	2-Butanone	43	4.705	4.698	(0.886)	42878	25.0000	24.4	
	38	Benzene	78	5.091	5.091	(0.830)	70822	5.00000	4.9	
	39	Propionitrile	54	5.177	5.177	(0.975)	23885	50.0000	49.2	
	40	Methacrylonitrile	41	5.199	5.200	(0.980)	116110	50.0000	50.2	
*	41	Pentafluorobenzene	168	5.308	5.301	(1.000)	438384	50.0000		
$	42	1,2-Dichloroethane-D4	65	5.326	5.323	(1.004)	287294	50.0000	50.6	
	43	Tertiary-amyl methyl ether	73	5.345	5.335	(1.007)	46849	5.00000	4.8	
	44	1,2-Dichloroethane	62	5.439	5.439	(0.887)	25498	5.00000	4.9	
	45	Isobutyl Alcohol	43	5.622	5.619	(1.059)	8644	100.000	69.0(T)	
	46	Methylcyclohexane	83	6.004	5.997	(1.131)	29989	5.00000	4.8	
	47	Trichloroethene	95	6.045	6.042	(0.985)	17507	5.00000	4.7	
*	48	1,4-Difluorobenzene	114	6.135	6.132	(1.000)	712414	50.0000		
	49	Dibromomethane	93	6.674	6.682	(1.088)	11722	5.00000	5.0	
	50	1,2-Dichloropropane	63	6.838	6.832	(1.115)	17208	5.00000	4.9	
	51	Bromodichloromethane	83	6.969	6.966	(1.136)	22672	5.00000	4.6	
	52	Methyl Methacrylate	41	7.291	7.277	(1.188)	14565	5.00000	4.8	
	53	1,4-Dioxane	88	7.302	7.284	(1.190)	3031	100.000	78.7	
	54	2-Chloroethylvinylether	63	7.879	7.876	(1.284)	9704	5.00000	4.9	
	55	cis-1,3-dichloropropene	75	7.905	7.898	(1.289)	27186	5.00000	4.7	
$	56	Toluene-D8	98	8.152	8.153	(1.329)	819561	50.0000	50.6	
	57	Toluene	92	8.223	8.220	(1.340)	43935	5.00000	4.9	
	58	Tetrachloroethene	164	8.739	8.736	(0.851)	14609	5.00000	4.8	
	59	4-methyl-2-pentanone	43	8.825	8.822	(1.439)	78269	25.0000	24.8	
	60	trans-1,3-Dichloropropene	75	8.848	8.849	(1.442)	23992	5.00000	4.6	
	61	1,1,2-Trichloroethane	83	9.057	9.054	(1.476)	12912	5.00000	4.8	
	62	Ethyl Methacrylate	69	9.155	9.148	(1.492)	18559	5.00000	4.7	
	63	Dibromochloromethane	129	9.274	9.275	(0.903)	16142	5.00000	4.4	
	64	1,3-Dichloropropane	76	9.409	9.410	(0.916)	28396	5.00000	4.9	
	65	1,2-Dibromoethane	107	9.551	9.548	(1.557)	15603	5.00000	4.8(T)	
M	66	Total Alkylbenzenes	100				441345	5.00000	32.7	
	67	2-Hexanone	43	9.989	9.986	(0.972)	53228	25.0000	24.0	
*	68	Chlorobenzene-D5	117	10.274	10.274	(1.000)	628386	50.0000		
	69	Chlorobenzene	112	10.296	10.293	(1.002)	48450	5.00000	4.9	
	70	Ethylbenzene	91	10.375	10.372	(1.010)	78364	5.00000	4.7	
	71	1,1,1,2-Tetrachloroethane	131	10.405	10.409	(1.013)	14803	5.00000	4.5	
	72	m+p-Xylenes	91	10.584	10.585	(1.030)	121131	10.0000	9.5	
	73	o-Xylene	91	11.153	11.150	(1.086)	61497	5.00000	4.8	
	74	Styrene	104	11.228	11.229	(1.093)	46683	5.00000	4.8	
	75	Bromoform	173	11.220	11.221	(1.092)	9111	5.00000	4.4	
	76	Isopropylbenzene	105	11.583	11.584	(0.869)	74734	5.00000	4.7	
$	77	P-Bromofluorobenzene	95	11.920	11.921	(1.943)	300764	50.0000	51.1	

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2684.D
Report Date: 09-Aug-2021 08:41

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	78 Bromobenzene	156	12.021	12.022	(0.901)	17560	5.00000	4.8	
	79 cis-1,4-Dichloro-2-Butene	53	12.051	12.052	(0.904)	5249	5.00000	4.4	
	80 N-Propylbenzene	91	12.126	12.123	(0.909)	87340	5.00000	4.7	
	81 1,1,2,2-Tetrachloroethane	83	12.246	12.243	(0.918)	18615	5.00000	4.8	
	82 2-Chlorotoluene	91	12.287	12.284	(0.921)	52664	5.00000	4.7	
	83 1,2,3-Trichloropropane	75	12.377	12.378	(0.928)	16160	5.00000	4.8	
	84 1,3,5-Trimethylbenzene	105	12.399	12.400	(0.930)	57560	5.00000	4.7	
	85 trans-1,4-Dichloro-2-Butene	53	12.463	12.460	(0.935)	5270	5.00000	4.4	
	86 4-Chlorotoluene	91	12.504	12.505	(0.938)	55180	5.00000	4.8	
	87 tert-Butylbenzene	119	12.781	12.785	(0.958)	50744	5.00000	4.7	
	89 1,2,4-Trimethylbenzene	105	12.882	12.879	(0.966)	58544	5.00000	4.7	
	90 sec-Butylbenzene	105	13.009	13.010	(0.976)	74617	5.00000	4.8	
	91 P-Isopropyltoluene	119	13.211	13.212	(0.991)	58968	5.00000	4.6	
	92 1,3-Dichlorobenzene	146	13.234	13.238	(0.992)	32336	5.00000	4.8	
*	93 1,4-Dichlorobenzene-D4	152	13.335	13.336	(1.000)	289988	50.0000		
	94 1,4-Dichlorobenzene	146	13.354	13.354	(1.001)	34766	5.00000	4.9	
	95 1,2,3-Trimethylbenzene	105	13.413	13.414	(1.006)	61296	5.00000	4.9	
	96 N-Butylbenzene	91	13.735	13.736	(1.030)	53572	5.00000	4.5	
	97 1,2-Dichlorobenzene	146	13.866	13.867	(1.040)	29570	5.00000	4.8	
	98 1,2-Dibromo-3-Chloropropane	157	14.869	14.874	(1.115)	2716	5.00000	4.6	
	99 1,3,5-Trichlorobenzene	180	14.907	14.907	(1.118)	20854	5.00000	4.6	
	100 Hexachlorobutadiene	225	15.692	15.693	(1.177)	8661	5.00000	4.5	
	101 1,2,4-Trichlorobenzene	180	15.700	15.701	(1.177)	16713	5.00000	4.4	
	102 Naphthalene	128	16.097	16.094	(1.207)	36640	5.00000	4.2	
M	103 1,2-Dichloroethylene (total)	96				32361	5.00000	8.7	
	104 1,2,3-Trichlorobenzene	180	16.317	16.318	(1.224)	15201	5.00000	4.4	
M	105 Xylenes (total)	91				182628	15.0000	14.2	

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).


Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2684.D
Date : 04-AUG-2021 08:57
Client ID:
Sample Info: WG303684-2
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-t.i
Operator: HG
Column diameter: 0.18
Y (x10^6)
Min
\\target_server\gg\chem\gcms-t.i\T080421.b\T2684.D
-Chloromethane (1.358)
-Vinyl chloride (1.498)
-Bromomethane (1.600)
-Chloroethane (1.772)+
-Diethyl Ether (1.970)
-1,1-Dichloroethene (2.142)+
-Acrolein (2.367)
-Methylene Chloride (2.554)+
-trans-1,2-Dichloroethene (2.689)+
-Tertiary-butyl alcohol (2.872)
-Acetonitrile (3.014)
-Di-isopropyl ether (3.138)
-Propionitrile (3.289)
-Acrylonitrile (3.329)
-Ethyl tertiary-butyl ethe (3.534)+
-cis-1,2-Dichloroethene (3.871)
-2,2-Dichloropropane (3.998)
-Cyclohexane (4.107)+
-Chloroform (4.234)
-Carbon Tetrachloride (4.399)+
-1,1,1-Trichloroethane (4.500)
-1,1-Dichloropropene (4.698)+
-Benzene (5.095)+
-Methacrylonitrile (5.200)
-Pentafluorobenzene (5.308)+
-1,2-Dichloroethane (5.439)
-Isobutyl Alcohol (5.623)
-Methylcyclohexane (6.004)+
-1,4-Difluorobenzene (6.135)
-Dibromomethane (6.682)
-1,2-Dichloropropane (6.835)
-Bromodichloromethane (6.970)
-Methyl Methacrylate (7.284)+
-2-Chloroethylvinylether (7.898)+
Toluene-D8 (8.152)+
-Tetrachloroethene (8.740)
-4-Methyl-2-pentanone (8.830)+
-1,1,2-Trichloroethane (9.054)
-Ethyl Methacrylate (9.152)
-Dibromochloromethane (9.275)
-1,3-Dichloropropane (9.410)
-1,2-Dibromoethane (9.552)
-2-Hexanone (9.994)
-Total Alkylbenzenes (10.100)
-Ethylbenzene (10.379)+
-m+p-Xylenes (10.585)
Chlorobenzene-D5 (10.274)+
-o-Xylene (11.150)
-Styrene (11.220)+
-Isopropylbenzene (11.584)
-Bromobenzene (12.022)+
-N-Propylbenzene (12.127)
P-Bromofluorobenzene (11.921)
-1,1,2,2-Tetrachloroethane (12.246)+
-1,2,3-Trichloropropane (12.400)+
-trans-1,4-Dichloro-2-Bute (12.463)+
-tert-Butylbenzene (12.781)
-1,2,4-Trimethylbenzene (12.883)
-sec-Butylbenzene (13.010)
-P-Isopropyltoluene (13.212)+
-1,2,3-Trimethylbenzene (13.418)
1,4-Dichlorobenzene-D4 (13.335)+
-N-Butylbenzene (13.736)
-1,2-Dichlorobenzene (13.867)
-1,2-Dibromo-3-Chloropropane (14.877)
-1,3,5-Trichlorobenzene (14.907)
-Hexachlorobutadiene (15.697)+
-Naphthalene (16.097)
-1,2,3-Trichlorobenzene (16.314)
-1,2-Dichloroethylene (tot (16.880)

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2685.D
Report Date: 09-Aug-2021 08:41

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-t.i\T080421.b\T2685.D
Lab Smp Id: WG303684-3
Inj Date : 04-AUG-2021 09:30
Operator : HG Inst ID: gcms-t.i
Smp Info : WG303684-3
Misc Info :
Comment : SW846 5030
Method : \\target_server\gg\chem\gcms-t.i\T080421.b\T8A05(66)D.m
Meth Date : 05-Aug-2021 05:36 hgould Quant Type: ISTD
Cal Date : 04-AUG-2021 09:30 Cal File: T2685.D
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: T6-O360

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

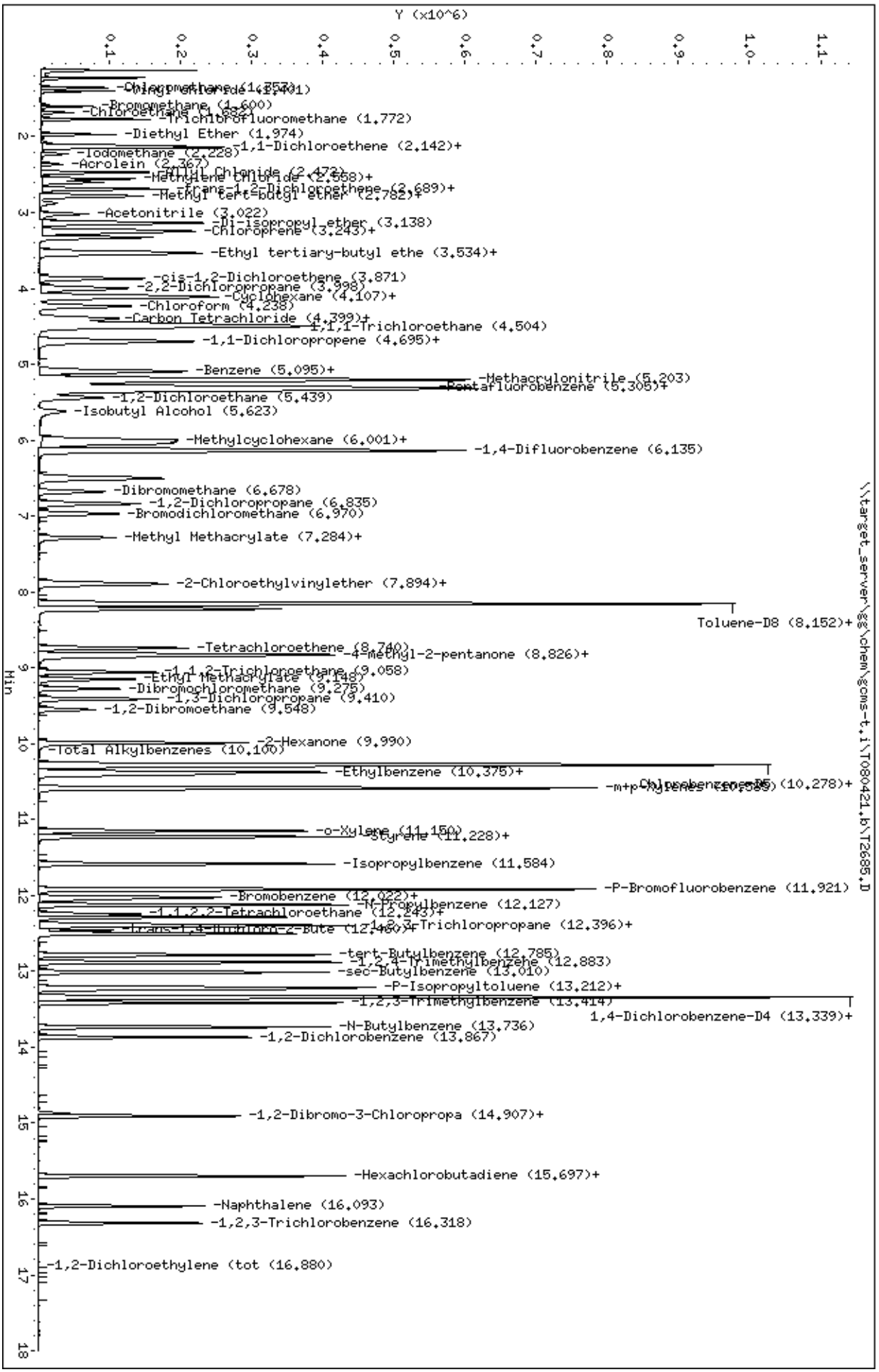
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.225	1.226	(0.231)	81727	20.0000	19.0	
2	Chloromethane	50	1.352	1.353	(0.255)	84598	20.0000	19.4	
3	Vinyl chloride	62	1.401	1.398	(0.264)	62458	20.0000	19.6	
4	Bromomethane	94	1.599	1.600	(0.302)	23186	20.0000	19.1	
5	Chloroethane	64	1.682	1.678	(0.317)	29392	20.0000	21.6	
6	Trichlorofluoromethane	101	1.771	1.768	(0.334)	83257	20.0000	20.0	
7	Diethyl Ether	59	1.973	1.970	(0.372)	43030	20.0000	21.4	
8	1,1-Dichloroethene	96	2.116	2.113	(0.399)	48315	20.0000	21.2	
9	Freon-113	151	2.138	2.138	(0.403)	36403	20.0000	21.5	
10	Carbon Disulfide	76	2.142	2.142	(0.404)	120161	20.0000	20.5	
11	Iodomethane	142	2.224	2.225	(0.419)	37228	20.0000	20.4	
12	Acrolein	56	2.366	2.367	(0.446)	20996	100.000	100	
13	Allyl Chloride	41	2.471	2.468	(0.466)	84936	20.0000	21.4	
14	Methylene Chloride	84	2.557	2.554	(0.482)	52114	20.0000	19.0	
15	Acetone	43	2.602	2.599	(0.491)	104766	100.000	96.8	
16	trans-1,2-Dichloroethene	96	2.688	2.685	(0.507)	52177	20.0000	17.3	
17	Methyl Acetate	43	2.703	2.704	(0.510)	43030	20.0000	15.8	
18	Methyl tert-butyl ether	73	2.782	2.782	(0.525)	168371	20.0000	16.8	
19	Tertiary-butyl alcohol	59	2.872	2.876	(0.541)	30928	100.000	88.2	
20	Acetonitrile	41	3.021	3.018	(0.570)	83752	200.000	183	
21	Di-isopropyl ether	45	3.137	3.134	(0.592)	255597	20.0000	21.0	
22	Chloroprene	53	3.235	3.235	(0.610)	122848	20.0000	21.5	
23	1,1-Dichloroethane	63	3.261	3.261	(0.615)	141197	20.0000	20.4	

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2685.D
Report Date: 09-Aug-2021 08:41

			QUANT SIG					AMOUNTS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	24	Acrylonitrile	52	3.324	3.325	(0.627)	109653	100.000	102	
	25	Ethyl tertiary-butyl ether	59	3.526	3.523	(0.665)	225527	20.0000	21.1	
	26	Vinyl Acetate	43	3.545	3.542	(0.578)	166384	20.0000	20.4	
	27	cis-1,2-Dichloroethene	96	3.871	3.868	(0.730)	83608	20.0000	20.9	
	28	2,2-Dichloropropane	77	3.998	3.999	(0.754)	115804	20.0000	20.9	
	29	Cyclohexane	56	4.106	4.099	(0.774)	121202	20.0000	20.9	
	30	Bromochloromethane	128	4.118	4.118	(0.776)	36179	20.0000	21.4	
	31	Chloroform	83	4.237	4.234	(0.799)	145399	20.0000	20.1	
	32	Carbon Tetrachloride	117	4.398	4.395	(0.717)	110069	20.0000	20.9	
	33	Tetrahydrofuran	42	4.455	4.451	(0.840)	123631	100.000	101	
$	34	Dibromofluoromethane	113	4.492	4.489	(0.847)	229206	50.0000	50.2	
	35	1,1,1-Trichloroethane	97	4.503	4.496	(0.849)	137333	20.0000	20.9	
	36	1,1-Dichloropropene	75	4.690	4.691	(0.765)	108246	20.0000	20.9	
	37	2-Butanone	43	4.705	4.698	(0.887)	177725	100.000	104	
	38	Benzene	78	5.091	5.091	(0.830)	299059	20.0000	20.8	
	39	Propionitrile	54	5.173	5.177	(0.975)	92816	200.000	198	
	40	Methacrylonitrile	41	5.203	5.200	(0.981)	474033	200.000	210	
*	41	Pentafluorobenzene	168	5.304	5.301	(1.000)	423293	50.0000		
$	42	1,2-Dichloroethane-D4	65	5.326	5.323	(1.004)	274977	50.0000	50.1	
	43	Tertiary-amyl methyl ether	73	5.338	5.335	(1.006)	197216	20.0000	20.8	
	44	1,2-Dichloroethane	62	5.439	5.439	(0.887)	105415	20.0000	20.3	
	45	Isobutyl Alcohol	43	5.622	5.619	(1.060)	43785	400.000	368	
	46	Methylcyclohexane	83	5.996	5.997	(1.131)	127122	20.0000	21.0	
	47	Trichloroethene	95	6.045	6.042	(0.985)	76050	20.0000	20.7	
*	48	1,4-Difluorobenzene	114	6.135	6.132	(1.000)	703015	50.0000		
	49	Dibromomethane	93	6.681	6.682	(1.089)	48857	20.0000	20.9	
	50	1,2-Dichloropropane	63	6.835	6.832	(1.114)	72005	20.0000	20.8	
	51	Bromodichloromethane	83	6.969	6.966	(1.136)	103490	20.0000	21.2	
	52	Methyl Methacrylate	41	7.284	7.277	(1.187)	61983	20.0000	20.6	
	53	1,4-Dioxane	88	7.284	7.284	(1.187)	13758	400.000	368	
	54	2-Chloroethylvinylether	63	7.879	7.876	(1.284)	41319	20.0000	20.8	
	55	cis-1,3-dichloropropene	75	7.901	7.898	(1.288)	119449	20.0000	20.8	
$	56	Toluene-D8	98	8.152	8.153	(1.329)	804662	50.0000	50.3	
	57	Toluene	92	8.223	8.220	(1.340)	183745	20.0000	20.5	
	58	Tetrachloroethene	164	8.739	8.736	(0.851)	59942	20.0000	20.0	
	59	4-methyl-2-pentanone	43	8.822	8.822	(1.438)	331586	100.000	105	
	60	trans-1,3-Dichloropropene	75	8.848	8.849	(1.442)	106511	20.0000	20.7	
	61	1,1,2-Trichloroethane	83	9.057	9.054	(1.476)	53742	20.0000	20.4	
	62	Ethyl Methacrylate	69	9.147	9.148	(1.491)	83984	20.0000	21.2	
	63	Dibromochloromethane	129	9.275	9.275	(0.903)	72835	20.0000	20.4	
	64	1,3-Dichloropropane	76	9.409	9.410	(0.916)	116243	20.0000	20.4	
	65	1,2-Dibromoethane	107	9.548	9.548	(1.556)	66445	20.0000	20.6	
M	66	Total Alkylbenzenes	100				1952008	20.0000	148	
	67	2-Hexanone	43	9.989	9.986	(0.972)	235872	100.000	107	
*	68	Chlorobenzene-D5	117	10.274	10.274	(1.000)	613774	50.0000		
	69	Chlorobenzene	112	10.296	10.293	(1.002)	200254	20.0000	20.6	
	70	Ethylbenzene	91	10.375	10.372	(1.010)	338721	20.0000	20.6	
	71	1,1,1,2-Tetrachloroethane	131	10.405	10.409	(1.013)	67294	20.0000	20.7	
	72	m+p-Xylenes	91	10.584	10.585	(1.030)	523814	40.0000	41.6	
	73	o-Xylene	91	11.149	11.150	(1.085)	259255	20.0000	20.4	
	74	Styrene	104	11.228	11.229	(1.093)	206807	20.0000	21.4	
	75	Bromoform	173	11.220	11.221	(1.092)	42967	20.0000	20.8	
	76	Isopropylbenzene	105	11.580	11.584	(0.868)	324082	20.0000	20.9	
$	77	P-Bromofluorobenzene	95	11.920	11.921	(1.943)	294325	50.0000	50.5	

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2685.D
Report Date: 09-Aug-2021 08:41

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	78 Bromobenzene	156	12.021	12.022	(0.902)	74384	20.0000	20.7	
	79 cis-1,4-Dichloro-2-Butene	53	12.051	12.052	(0.904)	23864	20.0000	20.6	
	80 N-Propylbenzene	91	12.126	12.123	(0.909)	384040	20.0000	21.0	
	81 1,1,2,2-Tetrachloroethane	83	12.246	12.243	(0.918)	78517	20.0000	20.7	
	82 2-Chlorotoluene	91	12.283	12.284	(0.921)	223753	20.0000	20.6	
	83 1,2,3-Trichloropropane	75	12.377	12.378	(0.928)	67494	20.0000	20.5	
	84 1,3,5-Trimethylbenzene	105	12.399	12.400	(0.930)	254667	20.0000	21.2	
	85 trans-1,4-Dichloro-2-Butene	53	12.459	12.460	(0.934)	23510	20.0000	20.2	
	86 4-Chlorotoluene	91	12.504	12.505	(0.938)	237238	20.0000	21.0	
	87 tert-Butylbenzene	119	12.785	12.785	(0.959)	221985	20.0000	21.0	
	89 1,2,4-Trimethylbenzene	105	12.882	12.879	(0.966)	258479	20.0000	21.1	
	90 sec-Butylbenzene	105	13.009	13.010	(0.976)	323675	20.0000	21.0	
	91 P-Isopropyltoluene	119	13.211	13.212	(0.991)	267685	20.0000	21.3	
	92 1,3-Dichlorobenzene	146	13.234	13.238	(0.992)	135958	20.0000	20.7	
*	93 1,4-Dichlorobenzene-D4	152	13.335	13.336	(1.000)	281351	50.0000		
	94 1,4-Dichlorobenzene	146	13.354	13.354	(1.001)	141719	20.0000	20.4	
	95 1,2,3-Trimethylbenzene	105	13.413	13.414	(1.006)	255915	20.0000	21.0	
	96 N-Butylbenzene	91	13.735	13.736	(1.030)	241477	20.0000	20.9	
	97 1,2-Dichlorobenzene	146	13.866	13.867	(1.040)	125724	20.0000	20.7	
	98 1,2-Dibromo-3-Chloropropane	157	14.873	14.874	(1.115)	11738	20.0000	20.5	
	99 1,3,5-Trichlorobenzene	180	14.907	14.907	(1.118)	89469	20.0000	20.5	
	100 Hexachlorobutadiene	225	15.696	15.693	(1.177)	37844	20.0000	20.4	
	101 1,2,4-Trichlorobenzene	180	15.700	15.701	(1.177)	76735	20.0000	20.5	
	102 Naphthalene	128	16.093	16.094	(1.207)	181180	20.0000	21.0	
M	103 1,2-Dichloroethylene (total)	96				135785	20.0000	38.1	
	104 1,2,3-Trichlorobenzene	180	16.317	16.318	(1.224)	68957	20.0000	20.4	
M	105 Xylenes (total)	91				783069	60.0000	62.1	


Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2685.D
Date : 04-AUG-2021 09:30
Client ID:
Sample Info: WG303684-3
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-t.i
Operator: HG
Column diameter: 0.18
Y (x10^6)
Min
\\target_server\gg\chem\gcms-t.i\T080421.b\T2685.D
-Chloromethane (1,357)
-Vinyl chloride (1,401)
-Bromomethane (1,600)
-Chloroethane (1,684)
-Trichlorofluoromethane (1,772)
-Diethyl Ether (1,974)
-1,1-Dichloroethene (2,142)+
-Iodomethane (2,228)
-Acrolein (2,367)
-Methylene Chloride (2,472)
-Methylene chloride (2,558)+
-trans-1,2-Dichloroethene (2,689)+
-Methyl tert-butyl ether (2,782)+
-Acetonitrile (3,022)
-Di-isopropyl ether (3,138)
-Chloroprene (3,243)+
-Ethyl tertiary-butyl ethe (3,534)+
-cis-1,2-Dichloroethene (3,871)
-2,2-Dichloropropane (3,998)
-Cyclohexane (4,107)+
-Chloroform (4,238)
-Carbon Tetrachloride (4,399)+
-1,1,1-Trichloroethane (4,504)
-1,1-Dichloropropene (4,695)+
-Benzene (5,095)+
-Methacrylonitrile (5,203)
-Pentafluorobenzene (5,305)+
-1,2-Dichloroethane (5,439)
-Isobutyl Alcohol (5,623)
-Methylcyclohexane (6,001)+
-1,4-Difluorobenzene (6,135)
-Dibromomethane (6,678)
-1,2-Dichloropropane (6,835)
-Bromodichloromethane (6,970)
-Methyl Methacrylate (7,284)+
-2-Chloroethylvinylether (7,894)+
Toluene-D8 (8,152)+
-Tetrachloroethene (8,740)
-4-methyl-2-pentanone (8,826)+
-1,1,2-Trichloroethane (9,058)
-Ethyl Methacrylate (9,148)
-Dibromochloromethane (9,275)
-1,3-Dichloropropane (9,410)
-1,2-Dibromoethane (9,548)
-2-Hexanone (9,990)
-Total Alkylbenzenes (10,100)
-Ethylbenzene (10,375)+
-m+p-Xylenes (10,583)(10,278)+
-o-Xylene (11,150)
-Styrene (11,228)+
-Isopropylbenzene (11,584)
-P-Bromofluorobenzene (11,921)
-Bromobenzene (12,022)+
-N-Propylbenzene (12,127)
-1,1,2,2-Tetrachloroethane (12,243)+
-trans-1,4-dichloro-2-Bute (12,460)+
Trichloropropane (12,396)+
-tert-Butylbenzene (12,785)
-1,2,4-Trimethylbenzene (12,883)
-sec-Butylbenzene (13,010)
-P-Isopropyltoluene (13,212)+
-1,2,3-Trimethylbenzene (13,414)
1,4-Dichlorobenzene-D4 (13,339)+
-N-Butylbenzene (13,736)
-1,2-Dichlorobenzene (13,867)
-1,2-Dibromo-3-Chloropropa (14,907)+
-Hexachlorobutadiene (15,697)+
-Naphthalene (16,093)
-1,2,3-Trichlorobenzene (16,318)
-1,2-Dichloroethylene (tot (16,880)

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2686.D
Report Date: 09-Aug-2021 08:41

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-t.i\T080421.b\T2686.D
Lab Smp Id: WG303684-4
Inj Date : 04-AUG-2021 10:02
Operator : HG   Inst ID: gcms-t.i
Smp Info : WG303684-4
Misc Info :
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-t.i\T080421.b\T8A05(66)D.m
Meth Date : 05-Aug-2021 05:36 hgould   Quant Type: ISTD
Cal Date : 03-AUG-2021 11:48   Cal File: T2668.D
Als bottle: 5   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.225	1.226	(0.231)	206876	50.0000	(a)	
2	Chloromethane	50	1.352	1.353	(0.255)	210974	50.0000	(a)	
3	Vinyl chloride	62	1.397	1.398	(0.264)	158513	50.0000	(a)	
4	Bromomethane	94	1.599	1.600	(0.302)	52549	50.0000	(a)	
5	Chloroethane	64	1.678	1.678	(0.317)	67723	50.0000	(a)	
6	Trichlorofluoromethane	101	1.768	1.768	(0.334)	206058	50.0000	(a)	
7	Diethyl Ether	59	1.970	1.970	(0.372)	100912	50.0000	(a)	
8	1,1-Dichloroethene	96	2.112	2.113	(0.399)	114693	50.0000	(a)	
9	Freon-113	151	2.138	2.138	(0.403)	87064	50.0000	(a)	
10	Carbon Disulfide	76	2.142	2.142	(0.404)	296720	50.0000	(a)	
11	Iodomethane	142	2.224	2.225	(0.420)	111850	50.0000	(a)	
12	Acrolein	56	2.367	2.367	(0.447)	51292	250.000	(a)	
13	Allyl Chloride	41	2.468	2.468	(0.466)	198510	50.0000	(a)	
14	Methylene Chloride	84	2.554	2.554	(0.482)	123213	50.0000	(a)	
15	Acetone	43	2.599	2.599	(0.490)	205588	250.000	(a)	
16	trans-1,2-Dichloroethene	96	2.685	2.685	(0.507)	168166	50.0000	(a)	
17	Methyl Acetate	43	2.703	2.704	(0.510)	143682	50.0000	(a)	
18	Methyl tert-butyl ether	73	2.782	2.782	(0.525)	538939	50.0000	(a)	
19	Tertiary-butyl alcohol	59	2.875	2.876	(0.543)	78445	250.000	(a)	
20	Acetonitrile	41	3.018	3.018	(0.569)	216525	500.000	(a)	
21	Di-isopropyl ether	45	3.134	3.134	(0.591)	627422	50.0000	(a)	
22	Chloroprene	53	3.235	3.235	(0.610)	299569	50.0000	(a)	
23	1,1-Dichloroethane	63	3.261	3.261	(0.615)	355927	50.0000	(a)	
24	Acrylonitrile	52	3.325	3.325	(0.627)	277071	250.000	(a)	

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2686.D
Report Date: 09-Aug-2021 08:41

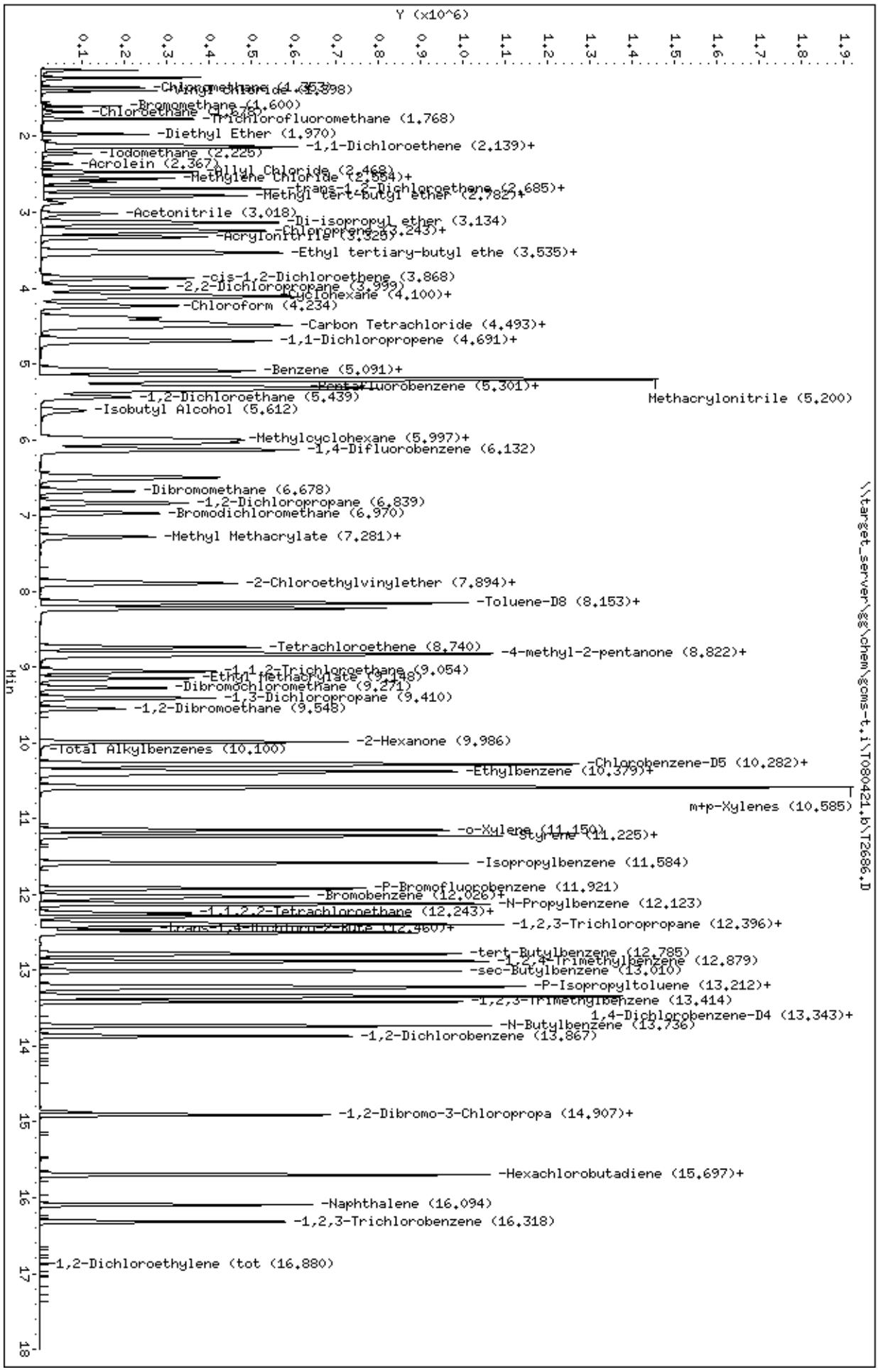
			QUANT SIG					AMOUNTS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	25	Ethyl tertiary-butyl ether	59	3.523	3.523	(0.665)	550116	50.0000	(a)	
	26	Vinyl Acetate	43	3.542	3.542	(0.578)	462292	50.0000	(a)	
	27	cis-1,2-Dichloroethene	96	3.867	3.868	(0.730)	204511	50.0000	(a)	
	28	2,2-Dichloropropane	77	3.998	3.999	(0.754)	285407	50.0000	(a)	
	29	Cyclohexane	56	4.099	4.099	(0.773)	296087	50.0000	(a)	
	30	Bromochloromethane	128	4.118	4.118	(0.777)	87894	50.0000	(a)	
	31	Chloroform	83	4.234	4.234	(0.799)	361676	50.0000	(a)	
	32	Carbon Tetrachloride	117	4.395	4.395	(0.717)	277526	50.0000	(a)	
	33	Tetrahydrofuran	42	4.451	4.451	(0.840)	319825	250.000	(a)	
$	34	Dibromofluoromethane	113	4.488	4.489	(0.847)	238168	50.0000	(a)	
	35	1,1,1-Trichloroethane	97	4.496	4.496	(0.848)	341637	50.0000	(a)	
	36	1,1-Dichloropropene	75	4.690	4.691	(0.765)	265703	50.0000	(a)	
	37	2-Butanone	43	4.698	4.698	(0.886)	422277	250.000	(a)	
	38	Benzene	78	5.091	5.091	(0.830)	729101	50.0000	(a)	
	39	Propionitrile	54	5.177	5.177	(0.977)	231050	500.000	(a)	
	40	Methacrylonitrile	41	5.199	5.200	(0.981)	1162567	500.000	(a)	
*	41	Pentafluorobenzene	168	5.300	5.301	(1.000)	431478	50.0000		
$	42	1,2-Dichloroethane-D4	65	5.323	5.323	(1.004)	281832	50.0000	(a)	
	43	Tertiary-amyl methyl ether	73	5.334	5.335	(1.006)	486761	50.0000	(a)	
	44	1,2-Dichloroethane	62	5.439	5.439	(0.887)	259613	50.0000	(a)	
	45	Isobutyl Alcohol	43	5.619	5.619	(1.060)	124107	1000.00	(a)	
	46	Methylcyclohexane	83	5.997	5.997	(1.131)	312965	50.0000	(a)	
	47	Trichloroethene	95	6.041	6.042	(0.985)	187746	50.0000	(a)	
*	48	1,4-Difluorobenzene	114	6.131	6.132	(1.000)	721841	50.0000		
	49	Dibromomethane	93	6.681	6.682	(1.090)	119528	50.0000	(a)	
	50	1,2-Dichloropropane	63	6.831	6.832	(1.114)	180013	50.0000	(a)	
	51	Bromodichloromethane	83	6.966	6.966	(1.136)	257998	50.0000	(a)	
	52	Methyl Methacrylate	41	7.276	7.277	(1.187)	159335	50.0000	(a)	
	53	1,4-Dioxane	88	7.284	7.284	(1.188)	34907	1000.00	(a)	
	54	2-Chloroethylvinylether	63	7.875	7.876	(1.284)	102375	50.0000	(a)	
	55	cis-1,3-dichloropropene	75	7.898	7.898	(1.288)	302742	50.0000	(a)	
$	56	Toluene-D8	98	8.152	8.153	(1.330)	819701	50.0000	(a)	
	57	Toluene	92	8.219	8.220	(1.341)	456763	50.0000	(a)	
	58	Tetrachloroethene	164	8.736	8.736	(0.850)	147889	50.0000	(a)	
	59	4-methyl-2-pentanone	43	8.822	8.822	(1.439)	841242	250.000	(a)	
	60	trans-1,3-Dichloropropene	75	8.848	8.849	(1.443)	282440	50.0000	(a)	
	61	1,1,2-Trichloroethane	83	9.054	9.054	(1.477)	134434	50.0000	(a)	
	62	Ethyl Methacrylate	69	9.147	9.148	(1.492)	215876	50.0000	(a)	
	63	Dibromochloromethane	129	9.275	9.275	(0.903)	188492	50.0000	(a)	
	64	1,3-Dichloropropane	76	9.409	9.410	(0.916)	283653	50.0000	(a)	
	65	1,2-Dibromoethane	107	9.548	9.548	(1.557)	167552	50.0000	(a)	
M	66	Total Alkylbenzenes	100				4827222	50.0000	(a)	
	67	2-Hexanone	43	9.986	9.986	(0.972)	569143	250.000	(a)	
*	68	Chlorobenzene-D5	117	10.274	10.274	(1.000)	623824	50.0000		
	69	Chlorobenzene	112	10.293	10.293	(1.002)	490700	50.0000	(a)	
	70	Ethylbenzene	91	10.371	10.372	(1.009)	840686	50.0000	(a)	
	71	1,1,1,2-Tetrachloroethane	131	10.409	10.409	(1.013)	172487	50.0000	(a)	
	72	m+p-Xylenes	91	10.585	10.585	(1.030)	1293015	100.000	(a)	
	73	o-Xylene	91	11.150	11.150	(1.085)	655896	50.0000	(a)	
	74	Styrene	104	11.228	11.229	(1.093)	510897	50.0000	(a)	
	75	Bromoform	173	11.221	11.221	(1.092)	115108	50.0000	(a)	
	76	Isopropylbenzene	105	11.584	11.584	(0.869)	798560	50.0000	(a)	
$	77	P-Bromofluorobenzene	95	11.920	11.921	(1.944)	299115	50.0000	(a)	
	78	Bromobenzene	156	12.022	12.022	(0.902)	180385	50.0000	(a)	

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2686.D
Report Date: 09-Aug-2021 08:41

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
79	cis-1,4-Dichloro-2-Butene	53	12.051	12.052	(0.904)	61433	50.0000	(a)	
80	N-Propylbenzene	91	12.123	12.123	(0.909)	945193	50.0000	(a)	
81	1,1,2,2-Tetrachloroethane	83	12.242	12.243	(0.918)	197199	50.0000	(a)	
82	2-Chlorotoluene	91	12.283	12.284	(0.921)	555500	50.0000	(a)	
83	1,2,3-Trichloropropane	75	12.377	12.378	(0.928)	169032	50.0000	(a)	
84	1,3,5-Trimethylbenzene	105	12.399	12.400	(0.930)	633710	50.0000	(a)	
85	trans-1,4-Dichloro-2-Butene	53	12.459	12.460	(0.934)	61537	50.0000	(a)	
86	4-Chlorotoluene	91	12.504	12.505	(0.938)	569790	50.0000	(a)	
87	tert-Butylbenzene	119	12.785	12.785	(0.959)	539825	50.0000	(a)	
89	1,2,4-Trimethylbenzene	105	12.878	12.879	(0.966)	631015	50.0000	(a)	
90	sec-Butylbenzene	105	13.009	13.010	(0.976)	792168	50.0000	(a)	
91	P-Isopropyltoluene	119	13.212	13.212	(0.991)	666401	50.0000	(a)	
92	1,3-Dichlorobenzene	146	13.238	13.238	(0.993)	335555	50.0000	(a)	
* 93	1,4-Dichlorobenzene-D4	152	13.335	13.336	(1.000)	286206	50.0000		
94	1,4-Dichlorobenzene	146	13.354	13.354	(1.001)	343961	50.0000	(a)	
95	1,2,3-Trimethylbenzene	105	13.414	13.414	(1.006)	619723	50.0000	(a)	
96	N-Butylbenzene	91	13.735	13.736	(1.030)	618910	50.0000	(a)	
97	1,2-Dichlorobenzene	146	13.866	13.867	(1.040)	306072	50.0000	(a)	
98	1,2-Dibromo-3-Chloropropane	157	14.873	14.874	(1.115)	33514	50.0000	(a)	
99	1,3,5-Trichlorobenzene	180	14.907	14.907	(1.118)	220807	50.0000	(a)	
100	Hexachlorobutadiene	225	15.693	15.693	(1.177)	92731	50.0000	(a)	
101	1,2,4-Trichlorobenzene	180	15.700	15.701	(1.177)	195623	50.0000	(a)	
102	Naphthalene	128	16.093	16.094	(1.207)	489170	50.0000	(a)	
M 103	1,2-Dichloroethylene (total)	96				372677	50.0000	(a)	
104	1,2,3-Trichlorobenzene	180	16.318	16.318	(1.224)	177220	50.0000	(a)	
M 105	Xylenes (total)	91				1948911	150.000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).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Sample Info: WG303684-4
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Column phase: RTX-VMS
Instrument: gcms-t.i
Operator: HG
Column diameter: 0.18
\\target_server\gg\chem\gcms-t.i\T080421.b\T2686.D
Y (x10^6)
Min
-Chloromethane (1.353)
-Vinyl Chloride (1.398)
-Bromomethane (1.600)
-Chloroethane (1.676)
-Trichlorofluoromethane (1.768)
-Diethyl Ether (1.970)
-1,1-Dichloroethene (2.139)+
-Iodomethane (2.225)
-Acrolein (2.367)
-Allyl Chloride (2.468)
-Methylene Chloride (2.554)+
-trans-1,2-Dichloroethene (2.685)+
-Methyl tert-butyl ether (2.782)+
-Acetonitrile (3.018)
-Di-isopropyl ether (3.134)
-Acrylonitrile (3.326)
-Chloroprene (3.243)+
-Ethyl tertiary-butyl ethe (3.535)+
-cis-1,2-Dichloroethene (3.868)
-2,2-Dichloropropane (3.999)
-Cyclohexane (4.100)+
-Chloroform (4.234)
-Carbon Tetrachloride (4.493)+
-1,1-Dichloropropene (4.691)+
-Benzene (5.091)+
-Pentafluorobenzene (5.301)+
Methacrylonitrile (5.200)
-1,2-Dichloroethane (5.439)
-Isobutyl Alcohol (5.612)
-Methylcyclohexane (5.997)+
-1,4-Difluorobenzene (6.132)
-Dibromomethane (6.678)
-1,2-Dichloropropane (6.839)
-Bromodichloromethane (6.970)
-Methyl Methacrylate (7.281)+
-2-Chloroethylvinylether (7.894)+
-Toluene-D8 (8.153)+
-Tetrachloroethene (8.740)
-4-methyl-2-pentanone (8.822)+
-1,1,2-Trichloroethane (9.054)
-Ethyl Methacrylate (9.148)
-Dibromochloromethane (9.271)
-1,3-Dichloropropane (9.410)
-1,2-Dibromoethane (9.548)
-2-Hexanone (9.986)
-Total Alkylbenzenes (10.100)
-Chlorobenzene-D5 (10.282)+
-Ethylbenzene (10.379)+
m+p-Xylenes (10.585)
-o-Xylene (11.150)
-Styrene (11.225)+
-Isopropylbenzene (11.584)
-P-Bromofluorobenzene (11.921)
-Bromobenzene (12.026)+
-N-Propylbenzene (12.123)
-1,1,2,2-Tetrachloroethane (12.243)+
-trans-1,4-Dichloro-2-Bute (12.360)+
-1,2,3-Trichloropropane (12.396)+
-tert-Butylbenzene (12.785)
-1,2,4-Trimethylbenzene (12.879)
-sec-Butylbenzene (13.010)
-P-Isopropyltoluene (13.212)+
-1,2,3-Trimethylbenzene (13.414)
1,4-Dichlorobenzene-D4 (13.343)+
-N-Butylbenzene (13.736)
-1,2-Dichlorobenzene (13.867)
-1,2-Dibromo-3-Chloropropa (14.907)+
-Hexachlorobutadiene (15.697)+
-Naphthalene (16.094)
-1,2,3-Trichlorobenzene (16.318)
-1,2-Dichloroethylene (tot (16.880)

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2687.D
Report Date: 09-Aug-2021 08:41

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-t.i\T080421.b\T2687.D
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Inj Date : 04-AUG-2021 10:35
Operator : HG Inst ID: gcms-t.i
Smp Info : WG303684-7
Misc Info :
Comment : SW846 5030
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Meth Date : 05-Aug-2021 05:36 hgould Quant Type: ISTD
Cal Date : 04-AUG-2021 10:35 Cal File: T2687.D
Als bottle: 6 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: T6-O360

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

CR
11:37 am, Aug 10, 2021

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.225	1.226	(0.231)	323290	75.0000	72.5	
2	Chloromethane	50	1.352	1.353	(0.255)	321271	75.0000	71.1	
3	Vinyl chloride	62	1.397	1.398	(0.263)	241627	75.0000	72.4	
4	Bromomethane	94	1.599	1.600	(0.302)	79424	75.0000	70.6	
5	Chloroethane	64	1.674	1.678	(0.316)	95110	75.0000	67.6	
6	Trichlorofluoromethane	101	1.764	1.768	(0.333)	307053	75.0000	72.2	
7	Diethyl Ether	59	1.970	1.970	(0.371)	152787	75.0000	73.6	
8	1,1-Dichloroethene	96	2.112	2.113	(0.398)	178313	75.0000	74.9	
9	Freon-113	151	2.138	2.138	(0.403)	131588	75.0000	74.6	
10	Carbon Disulfide	76	2.142	2.142	(0.404)	447583	75.0000	73.2	
11	Iodomethane	142	2.224	2.225	(0.419)	172383	75.0000	74.5	
12	Acrolein	56	2.366	2.367	(0.446)	75410	375.000	350	
13	Allyl Chloride	41	2.467	2.468	(0.465)	296382	75.0000	72.4	
14	Methylene Chloride	84	2.553	2.554	(0.481)	188560	75.0000	73.6	
15	Acetone	43	2.602	2.599	(0.491)	375884	375.000	386	
16	trans-1,2-Dichloroethene	96	2.684	2.685	(0.506)	267750	75.0000	87.0(M)	M7
17	Methyl Acetate	43	2.703	2.704	(0.510)	223593	75.0000	79.5	
18	Methyl tert-butyl ether	73	2.782	2.782	(0.524)	813618	75.0000	77.4	
19	Tertiary-butyl alcohol	59	2.879	2.876	(0.543)	122129	375.000	339	
20	Acetonitrile	41	3.017	3.018	(0.569)	323659	750.000	686	
21	Di-isopropyl ether	45	3.133	3.134	(0.591)	946862	75.0000	74.7	
22	Chloroprene	53	3.235	3.235	(0.610)	449823	75.0000	75.4	
23	1,1-Dichloroethane	63	3.261	3.261	(0.615)	534397	75.0000	74.3	

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2687.D
Report Date: 09-Aug-2021 08:41

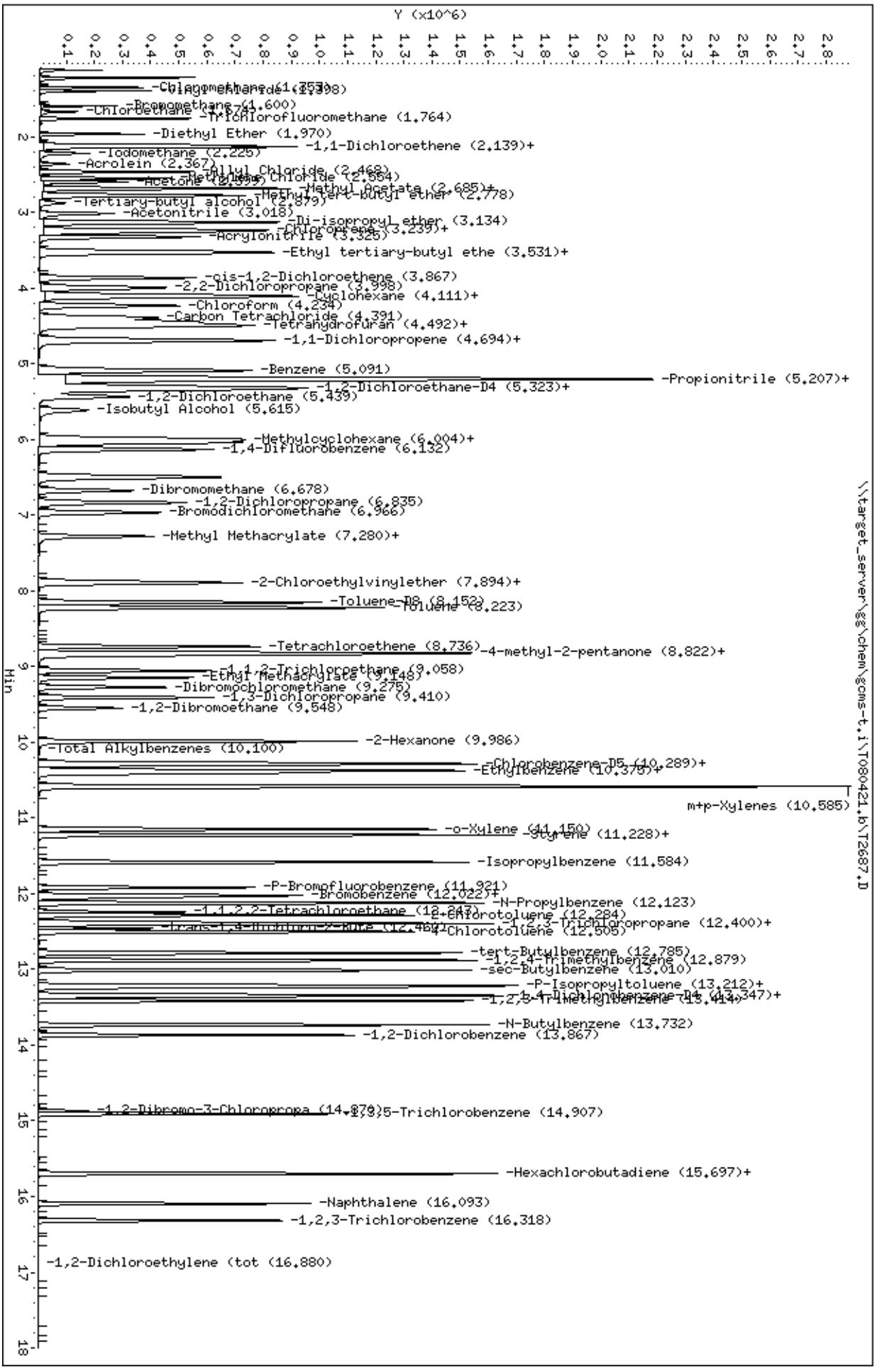
			QUANT SIG					AMOUNTS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	24	Acrylonitrile	52	3.328	3.325	(0.628)	411898	375.000	368	
	25	Ethyl tertiary-butyl ether	59	3.523	3.523	(0.664)	832802	75.0000	74.6	
	26	Vinyl Acetate	43	3.541	3.542	(0.578)	614251	75.0000	72.4	
	27	cis-1,2-Dichloroethene	96	3.871	3.868	(0.730)	308119	75.0000	73.9	
	28	2,2-Dichloropropane	77	3.994	3.999	(0.753)	432149	75.0000	74.8	
	29	Cyclohexane	56	4.103	4.099	(0.774)	457756	75.0000	75.7	
	30	Bromochloromethane	128	4.118	4.118	(0.776)	132789	75.0000	76.3	
	31	Chloroform	83	4.234	4.234	(0.798)	540545	75.0000	72.1	
	32	Carbon Tetrachloride	117	4.391	4.395	(0.716)	429521	75.0000	77.6	
	33	Tetrahydrofuran	42	4.447	4.451	(0.838)	472788	375.000	371	
$	34	Dibromofluoromethane	113	4.488	4.489	(0.846)	239543	50.0000	50.4	
	35	1,1,1-Trichloroethane	97	4.499	4.496	(0.848)	514701	75.0000	75.0	
	36	1,1-Dichloropropene	75	4.690	4.691	(0.765)	401938	75.0000	74.7	
	37	2-Butanone	43	4.698	4.698	(0.886)	669292	375.000	377	
	38	Benzene	78	5.091	5.091	(0.830)	1097116	75.0000	73.6	
	39	Propionitrile	54	5.173	5.177	(0.975)	344643	750.000	715	
	40	Methacrylonitrile	41	5.203	5.200	(0.981)	1712262	750.000	736	
*	41	Pentafluorobenzene	168	5.304	5.301	(1.000)	438571	50.0000		
$	42	1,2-Dichloroethane-D4	65	5.323	5.323	(1.004)	282130	50.0000	49.5	
	43	Tertiary-amyl methyl ether	73	5.334	5.335	(1.006)	738764	75.0000	74.5	
	44	1,2-Dichloroethane	62	5.439	5.439	(0.887)	386341	75.0000	72.1	
	45	Isobutyl Alcohol	43	5.618	5.619	(1.059)	198770	1500.00	1600	
	46	Methylcyclohexane	83	6.000	5.997	(1.131)	476559	75.0000	75.3	
	47	Trichloroethene	95	6.041	6.042	(0.985)	289021	75.0000	75.6	
*	48	1,4-Difluorobenzene	114	6.131	6.132	(1.000)	727116	50.0000		
	49	Dibromomethane	93	6.677	6.682	(1.089)	179197	75.0000	73.8	
	50	1,2-Dichloropropane	63	6.835	6.832	(1.115)	266269	75.0000	74.1	
	51	Bromodichloromethane	83	6.966	6.966	(1.136)	392026	75.0000	76.7	
	52	Methyl Methacrylate	41	7.280	7.277	(1.187)	236466	75.0000	75.2	
	53	1,4-Dioxane	88	7.284	7.284	(1.188)	55467	1500.00	1440	
	54	2-Chloroethylvinylether	63	7.871	7.876	(1.284)	155019	75.0000	75.2	
	55	cis-1,3-dichloropropene	75	7.901	7.898	(1.289)	459289	75.0000	76.4	
$	56	Toluene-D8	98	8.152	8.153	(1.330)	818486	50.0000	49.6	
	57	Toluene	92	8.219	8.220	(1.341)	683563	75.0000	73.8	
	58	Tetrachloroethene	164	8.739	8.736	(0.851)	226091	75.0000	74.6	
	59	4-methyl-2-pentanone	43	8.822	8.822	(1.439)	1240109	375.000	380	
	60	trans-1,3-Dichloropropene	75	8.848	8.849	(1.443)	428171	75.0000	79.4	
	61	1,1,2-Trichloroethane	83	9.057	9.054	(1.477)	201888	75.0000	73.8	
	62	Ethyl Methacrylate	69	9.147	9.148	(1.492)	325607	75.0000	78.0	
	63	Dibromochloromethane	129	9.274	9.275	(0.903)	288578	75.0000	79.0	
	64	1,3-Dichloropropane	76	9.409	9.410	(0.916)	433867	75.0000	75.4	
	65	1,2-Dibromoethane	107	9.548	9.548	(1.557)	248422	75.0000	74.3	
M	66	Total Alkylbenzenes	100				7221495	75.0000	546	
	67	2-Hexanone	43	9.986	9.986	(0.972)	878054	375.000	394	
*	68	Chlorobenzene-D5	117	10.274	10.274	(1.000)	617113	50.0000		
	69	Chlorobenzene	112	10.292	10.293	(1.002)	730534	75.0000	74.9	
	70	Ethylbenzene	91	10.375	10.372	(1.010)	1253433	75.0000	75.6	
	71	1,1,1,2-Tetrachloroethane	131	10.405	10.409	(1.013)	261150	75.0000	78.8	
	72	m+p-Xylenes	91	10.584	10.585	(1.030)	1919278	150.000	152	
	73	o-Xylene	91	11.149	11.150	(1.085)	972350	75.0000	75.9	
	74	Styrene	104	11.228	11.229	(1.093)	765399	75.0000	78.1	
	75	Bromoform	173	11.220	11.221	(1.092)	172637	75.0000	81.5	
	76	Isopropylbenzene	105	11.583	11.584	(0.869)	1187348	75.0000	76.7	
$	77	P-Bromofluorobenzene	95	11.920	11.921	(1.944)	290990	50.0000	48.6	

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2687.D
Report Date: 09-Aug-2021 08:41

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	78 Bromobenzene	156	12.021	12.022	(0.901)	267542	75.0000	74.9	
	79 cis-1,4-Dichloro-2-Butene	53	12.047	12.052	(0.903)	93103	75.0000	79.0	
	80 N-Propylbenzene	91	12.122	12.123	(0.909)	1406261	75.0000	77.1	
	81 1,1,2,2-Tetrachloroethane	83	12.242	12.243	(0.918)	286503	75.0000	75.3	
	82 2-Chlorotoluene	91	12.283	12.284	(0.921)	826054	75.0000	76.1	
	83 1,2,3-Trichloropropane	75	12.373	12.378	(0.928)	247823	75.0000	75.3	
	84 1,3,5-Trimethylbenzene	105	12.399	12.400	(0.930)	945228	75.0000	78.5	
	85 trans-1,4-Dichloro-2-Butene	53	12.459	12.460	(0.934)	92482	75.0000	78.4	
	86 4-Chlorotoluene	91	12.504	12.505	(0.938)	852600	75.0000	75.4	
	87 tert-Butylbenzene	119	12.785	12.785	(0.959)	814296	75.0000	77.2	
	89 1,2,4-Trimethylbenzene	105	12.882	12.879	(0.966)	957029	75.0000	78.1	
	90 sec-Butylbenzene	105	13.009	13.010	(0.976)	1192687	75.0000	77.5	
	91 P-Isopropyltoluene	119	13.211	13.212	(0.991)	979874	75.0000	77.8	
	92 1,3-Dichlorobenzene	146	13.238	13.238	(0.993)	494976	75.0000	75.6	
*	93 1,4-Dichlorobenzene-D4	152	13.335	13.336	(1.000)	279303	50.0000		
	94 1,4-Dichlorobenzene	146	13.354	13.354	(1.001)	507513	75.0000	73.6	
	95 1,2,3-Trimethylbenzene	105	13.413	13.414	(1.006)	929424	75.0000	76.4	
	96 N-Butylbenzene	91	13.732	13.736	(1.030)	926120	75.0000	79.5	
	97 1,2-Dichlorobenzene	146	13.866	13.867	(1.040)	455956	75.0000	75.1	
	98 1,2-Dibromo-3-Chloropropane	157	14.869	14.874	(1.115)	49402	75.0000	83.3	
	99 1,3,5-Trichlorobenzene	180	14.907	14.907	(1.118)	335880	75.0000	76.5	
	100 Hexachlorobutadiene	225	15.696	15.693	(1.177)	143538	75.0000	76.6	
	101 1,2,4-Trichlorobenzene	180	15.700	15.701	(1.177)	300158	75.0000	79.2	
	102 Naphthalene	128	16.093	16.094	(1.207)	740403	75.0000	83.2	
M	103 1,2-Dichloroethylene (total)	96				575869	75.0000	161	
	104 1,2,3-Trichlorobenzene	180	16.317	16.318	(1.224)	270689	75.0000	79.2	
M	105 Xylenes (total)	91				2891628	75.0000	228	

QC Flag Legend

M - Compound response manually integrated.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Client ID:
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Column phase: RTX-VMS
Instrument: gcms-t.i
Operator: HG
Column diameter: 0.18
\\target_server\gg\chem\gcms-t.i\T080421.b\T2687.D
Y (x10^6)
Min
-Chloromethane (1.753)
-Vinyl Chloride (1.898)
-Bromomethane (1.600)
-Chloroethane
-Trichlorofluoromethane (1.764)
-Diethyl Ether (1.970)
-1,1-Dichloroethene (2.139)+
-Iodomethane (2.225)
-Acrolein (2.367)
-Allyl Chloride (2.468)
-Methylene Chloride (2.564)
-Acetone (2.595)
-Methyl Acetate (2.685)+
-Methyl tert-butyl ether (2.778)
-Tertiary-butyl alcohol (2.879)
-Acetonitrile (3.018)
-Di-isopropyl ether (3.134)
-Chloroprene (3.239)+
-Acrylonitrile (3.325)
-Ethyl tertiary-butyl ethe (3.531)+
-cis-1,2-Dichloroethene (3.867)
-2,2-Dichloropropane (3.998)
-Cyclohexane (4.111)+
-Chloroform (4.234)
-Carbon Tetrachloride (4.391)
-Tetrahydrofuran (4.492)+
-1,1-Dichloropropene (4.694)+
-Benzene (5.091)
-Propionitrile (5.207)+
-1,2-Dichloroethane-D4 (5.323)+
-1,2-Dichloroethane (5.439)
-Isobutyl Alcohol (5.615)
-Methylcyclohexane (6.004)+
-1,4-Difluorobenzene (6.132)
-Dibromomethane (6.678)
-1,2-Dichloropropane (6.835)
-Bromodichloromethane (6.966)
-Methyl Methacrylate (7.280)+
-2-Chloroethylvinylether (7.894)+
-Toluene-D8 (8.152)
-Toluene (8.223)
-Tetrachloroethene (8.736)
-4-methyl-2-pentanone (8.822)+
-1,1,2-Trichloroethane (9.058)
-Ethyl Methacrylate (9.148)
-Dibromochloromethane (9.275)
-1,3-Dichloropropane (9.410)
-1,2-Dibromoethane (9.548)
-2-Hexanone (9.986)
-Total Alkylbenzenes (10.100)
-Chlorobenzene-D5 (10.289)+
-Ethylbenzene (10.379)+
m+p-Xylenes (10.585)
-o-Xylene (11.150)
-Styrene (11.228)+
-Isopropylbenzene (11.584)
-P-Bromofluorobenzene (11.921)
-Bromobenzene (12.022)+
-N-Propylbenzene (12.123)
-1,1,2,2-Tetrachloroethane (12.247)
-2-Chlorotoluene (12.284)
-1,2,3-Trichloropropane (12.400)+
-trans-1,4-dichloro-2-Butene (12.466)+
-4-Chlorotoluene (12.505)
-tert-Butylbenzene (12.785)
-1,2,4-Trimethylbenzene (12.879)
-sec-Butylbenzene (13.010)
-P-Isopropyltoluene (13.212)+
-1,4-Dichlorobenzene-D4 (13.347)+
-1,2,3-Trimethylbenzene (13.414)
-N-Butylbenzene (13.732)
-1,2-Dichlorobenzene (13.867)
-1,2-Dibromo-3-Chloropropa (14.870)
-1,3,5-Trichlorobenzene (14.907)
-Hexachlorobutadiene (15.697)+
-Naphthalene (16.093)
-1,2,3-Trichlorobenzene (16.318)
-1,2-Dichloroethylene (tot (16.880)

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2688.D
Report Date: 09-Aug-2021 08:41

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-t.i\T080421.b\T2688.D
Lab Smp Id: WG303684-5
Inj Date : 04-AUG-2021 11:08
Operator : HG Inst ID: gcms-t.i
Smp Info : WG303684-5
Misc Info :
Comment : SW846 5030
Method : \\target_server\gg\chem\gcms-t.i\T080421.b\T8A05(66)D.m
Meth Date : 05-Aug-2021 05:36 hgould Quant Type: ISTD
Cal Date : 04-AUG-2021 11:08 Cal File: T2688.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: T6-O360

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

CR
11:37 am, Aug 10, 2021

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.225	1.226	(0.231)	451511	100.000	103	
2	Chloromethane	50	1.352	1.353	(0.255)	445277	100.000	100	
3	Vinyl chloride	62	1.397	1.398	(0.263)	340915	100.000	104	
4	Bromomethane	94	1.599	1.600	(0.302)	113492	100.000	103	
5	Chloroethane	64	1.667	1.678	(0.314)	115260	100.000	83.6	
6	Trichlorofluoromethane	101	1.760	1.768	(0.332)	409146	100.000	98.1	
7	Diethyl Ether	59	1.970	1.970	(0.371)	206972	100.000	102	
8	1,1-Dichloroethene	96	2.112	2.113	(0.398)	241023	100.000	103	
9	Freon-113	151	2.134	2.138	(0.402)	177233	100.000	102	
10	Carbon Disulfide	76	2.138	2.142	(0.403)	616999	100.000	103	
11	Iodomethane	142	2.220	2.225	(0.419)	236084	100.000	104	
12	Acrolein	56	2.366	2.367	(0.446)	102641	500.000	485	
13	Allyl Chloride	41	2.464	2.468	(0.465)	399946	100.000	99.7	
14	Methylene Chloride	84	2.553	2.554	(0.481)	249998	100.000	99.5	
15	Acetone	43	2.598	2.599	(0.490)	493035	500.000	534	
16	trans-1,2-Dichloroethene	96	2.684	2.685	(0.506)	366576	100.000	122(M)	M7
17	Methyl Acetate	43	2.699	2.704	(0.509)	314394	100.000	114	
18	Methyl tert-butyl ether	73	2.782	2.782	(0.525)	1135186	100.000	110	
19	Tertiary-butyl alcohol	59	2.879	2.876	(0.543)	178524	500.000	505	
20	Acetonitrile	41	3.021	3.018	(0.570)	447801	1000.00	969	
21	Di-isopropyl ether	45	3.134	3.134	(0.591)	1290521	100.000	104	
22	Chloroprene	53	3.235	3.235	(0.610)	608946	100.000	104	
23	1,1-Dichloroethane	63	3.261	3.261	(0.615)	733365	100.000	104	

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2688.D
Report Date: 09-Aug-2021 08:41

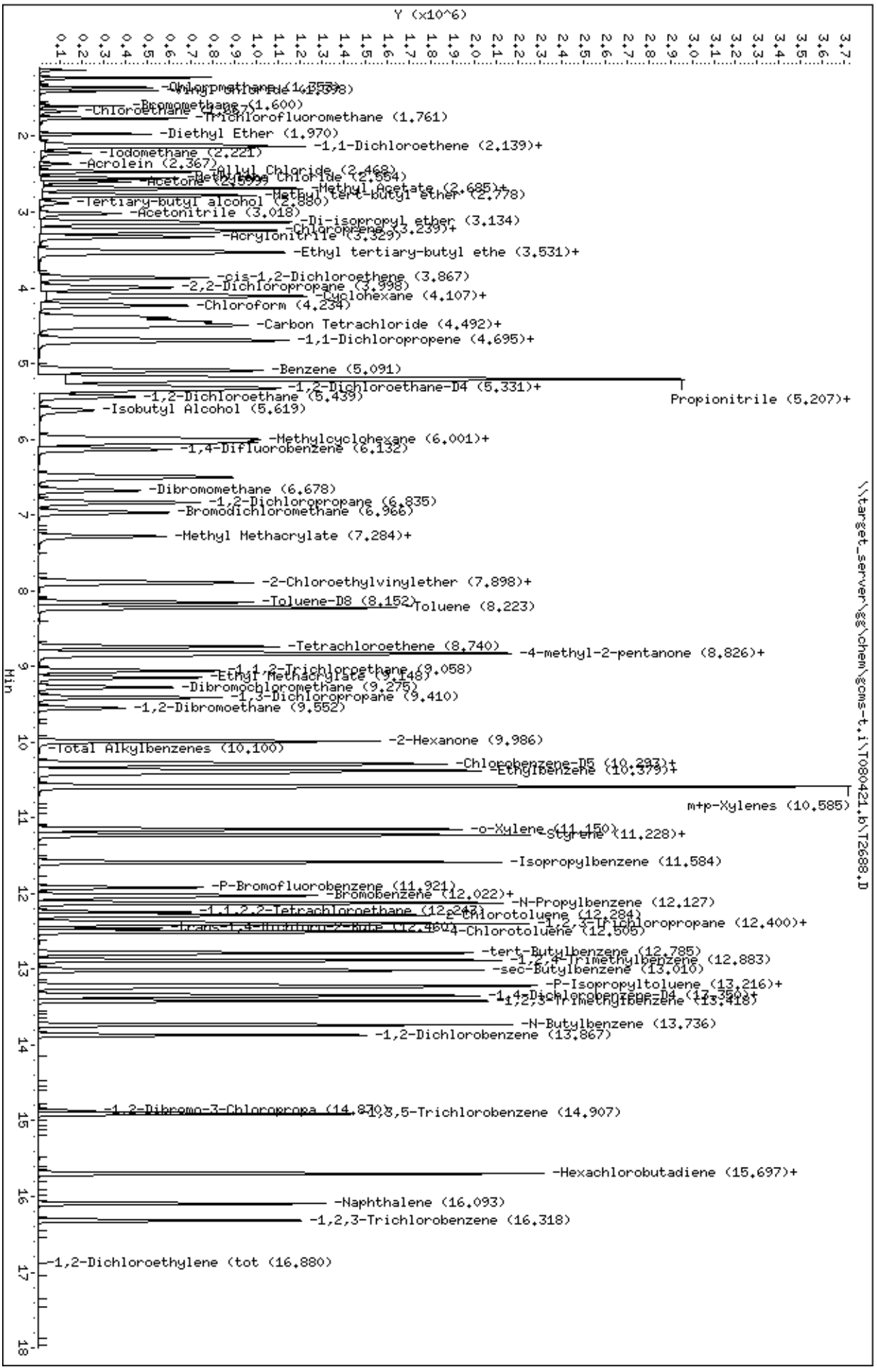
		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
	24	Acrylonitrile	52	3.328	3.325	(0.628)	567587	500.000	516	
	25	Ethyl tertiary-butyl ether	59	3.526	3.523	(0.665)	1140562	100.000	104	
	26	Vinyl Acetate	43	3.541	3.542	(0.577)	817238	100.000	98.3	
	27	cis-1,2-Dichloroethene	96	3.863	3.868	(0.728)	417725	100.000	102	
	28	2,2-Dichloropropane	77	4.002	3.999	(0.754)	591039	100.000	104	
	29	Cyclohexane	56	4.099	4.099	(0.773)	632787	100.000	107	
	30	Bromochloromethane	128	4.118	4.118	(0.776)	174844	100.000	102	
	31	Chloroform	83	4.234	4.234	(0.798)	741109	100.000	101	
	32	Carbon Tetrachloride	117	4.395	4.395	(0.716)	599141	100.000	110	
	33	Tetrahydrofuran	42	4.443	4.451	(0.838)	653853	500.000	524	
$	34	Dibromofluoromethane	113	4.492	4.489	(0.847)	237302	50.0000	50.9	
	35	1,1,1-Trichloroethane	97	4.503	4.496	(0.849)	711816	100.000	106	
	36	1,1-Dichloropropene	75	4.690	4.691	(0.765)	554542	100.000	105	
	37	2-Butanone	43	4.698	4.698	(0.886)	921850	500.000	530	
	38	Benzene	78	5.091	5.091	(0.830)	1505452	100.000	103	
	39	Propionitrile	54	5.181	5.177	(0.977)	482111	1000.00	1020	
	40	Methacrylonitrile	41	5.207	5.200	(0.982)	2317051	1000.00	1020	
*	41	Pentafluorobenzene	168	5.304	5.301	(1.000)	430029	50.0000		
$	42	1,2-Dichloroethane-D4	65	5.330	5.323	(1.005)	281631	50.0000	50.4	
	43	Tertiary-amyl methyl ether	73	5.334	5.335	(1.006)	1016931	100.000	105	
	44	1,2-Dichloroethane	62	5.439	5.439	(0.887)	525327	100.000	100	
	45	Isobutyl Alcohol	43	5.615	5.619	(1.059)	281116	2000.00	2300	
	46	Methylcyclohexane	83	5.996	5.997	(1.131)	655930	100.000	106	
	47	Trichloroethene	95	6.041	6.042	(0.985)	399937	100.000	107	
*	48	1,4-Difluorobenzene	114	6.135	6.132	(1.000)	712586	50.0000		
	49	Dibromomethane	93	6.677	6.682	(1.088)	246195	100.000	103	
	50	1,2-Dichloropropane	63	6.835	6.832	(1.114)	362439	100.000	103	
	51	Bromodichloromethane	83	6.966	6.966	(1.135)	544167	100.000	109	
	52	Methyl Methacrylate	41	7.276	7.277	(1.186)	329292	100.000	107	
	53	1,4-Dioxane	88	7.291	7.284	(1.188)	79039	2000.00	2090	
	54	2-Chloroethylvinylether	63	7.871	7.876	(1.283)	212999	100.000	105	
	55	cis-1,3-dichloropropene	75	7.897	7.898	(1.287)	636305	100.000	108	
$	56	Toluene-D8	98	8.152	8.153	(1.329)	804064	50.0000	49.7	
	57	Toluene	92	8.219	8.220	(1.340)	928714	100.000	102	
	58	Tetrachloroethene	164	8.739	8.736	(0.851)	312709	100.000	105	
	59	4-methyl-2-pentanone	43	8.822	8.822	(1.438)	1719783	500.000	537	
	60	trans-1,3-Dichloropropene	75	8.848	8.849	(1.442)	587546	100.000	111	
	61	1,1,2-Trichloroethane	83	9.054	9.054	(1.476)	275962	100.000	103	
	62	Ethyl Methacrylate	69	9.147	9.148	(1.491)	456323	100.000	112	
	63	Dibromochloromethane	129	9.278	9.275	(0.903)	395336	100.000	110	
	64	1,3-Dichloropropane	76	9.409	9.410	(0.916)	586203	100.000	104	
	65	1,2-Dibromoethane	107	9.551	9.548	(1.557)	340494	100.000	104	
M	66	Total Alkylbenzenes	100				9764353	100.000	754	
	67	2-Hexanone	43	9.986	9.986	(0.972)	1198413	500.000	548	
*	68	Chlorobenzene-D5	117	10.274	10.274	(1.000)	605223	50.0000		
	69	Chlorobenzene	112	10.296	10.293	(1.002)	980727	100.000	102	
	70	Ethylbenzene	91	10.375	10.372	(1.010)	1693195	100.000	104	
	71	1,1,1,2-Tetrachloroethane	131	10.408	10.409	(1.013)	363926	100.000	112	
	72	m+p-Xylenes	91	10.584	10.585	(1.030)	2563045	200.000	207	
	73	o-Xylene	91	11.149	11.150	(1.085)	1322002	100.000	105	
	74	Styrene	104	11.228	11.229	(1.093)	1028100	100.000	107	
	75	Bromoform	173	11.221	11.221	(1.092)	239170	100.000	115	
	76	Isopropylbenzene	105	11.584	11.584	(0.868)	1613612	100.000	107	
$	77	P-Bromofluorobenzene	95	11.917	11.921	(1.942)	291817	50.0000	49.7	

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2688.D
Report Date: 09-Aug-2021 08:41

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	78 Bromobenzene	156	12.021	12.022	(0.901)	360264	100.000	103	
	79 cis-1,4-Dichloro-2-Butene	53	12.051	12.052	(0.903)	129481	100.000	112	
	80 N-Propylbenzene	91	12.126	12.123	(0.909)	1910755	100.000	107	
	81 1,1,2,2-Tetrachloroethane	83	12.242	12.243	(0.918)	390802	100.000	105	
	82 2-Chlorotoluene	91	12.283	12.284	(0.921)	1131039	100.000	106	
	83 1,2,3-Trichloropropane	75	12.377	12.378	(0.928)	339070	100.000	105	
	84 1,3,5-Trimethylbenzene	105	12.399	12.400	(0.930)	1274428	100.000	108	
	85 trans-1,4-Dichloro-2-Butene	53	12.459	12.460	(0.934)	127594	100.000	111	
	86 4-Chlorotoluene	91	12.504	12.505	(0.937)	1169095	100.000	106	
	87 tert-Butylbenzene	119	12.785	12.785	(0.958)	1091222	100.000	106	
	89 1,2,4-Trimethylbenzene	105	12.882	12.879	(0.966)	1284419	100.000	107	
	90 sec-Butylbenzene	105	13.013	13.010	(0.976)	1614753	100.000	107	
	91 P-Isopropyltoluene	119	13.211	13.212	(0.990)	1327724	100.000	108	
	92 1,3-Dichlorobenzene	146	13.238	13.238	(0.992)	675029	100.000	105	
*	93 1,4-Dichlorobenzene-D4	152	13.339	13.336	(1.000)	273184	50.0000		
	94 1,4-Dichlorobenzene	146	13.354	13.354	(1.001)	686066	100.000	102	
	95 1,2,3-Trimethylbenzene	105	13.417	13.414	(1.006)	1254905	100.000	106	
	96 N-Butylbenzene	91	13.735	13.736	(1.030)	1261052	100.000	111	
	97 1,2-Dichlorobenzene	146	13.866	13.867	(1.040)	627496	100.000	106	
	98 1,2-Dibromo-3-Chloropropane	157	14.873	14.874	(1.115)	70880	100.000	122	
	99 1,3,5-Trichlorobenzene	180	14.910	14.907	(1.118)	462882	100.000	108	
	100 Hexachlorobutadiene	225	15.692	15.693	(1.176)	202375	100.000	110	
	101 1,2,4-Trichlorobenzene	180	15.700	15.701	(1.177)	417776	100.000	113	
	102 Naphthalene	128	16.093	16.094	(1.206)	1044595	100.000	120	
M	103 1,2-Dichloroethylene (total)	96				784301	100.000	224	
	104 1,2,3-Trichlorobenzene	180	16.317	16.318	(1.223)	374918	100.000	112	
M	105 Xylenes (total)	91				3885047	100.000	313	

QC Flag Legend

M - Compound response manually integrated.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Date : 04-AUG-2021 11:08
Client ID:
Sample Info: WG303684-5
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-t.i
Operator: HG
Column diameter: 0.18
\\target_server\gg\chem\gcms-t.i\T080421.b\T2688.D
Y (x10^6)
Min
-Chloromethane (1.358)
-Vinyl Chloride (1.398)
-Bromomethane (1.600)
-Chloroethane (1.685)
-Trichlorofluoromethane (1.761)
-Diethyl Ether (1.970)
-1,1-Dichloroethene (2.139)+
-Iodomethane (2.221)
-Acrolein (2.367)
-Allyl Chloride (2.468)
-Methylene Chloride (2.564)
-Acetone (2.615)
-Methyl Acetate (2.685)+
-Methyl tert-butyl ether (2.778)
-Tertiary-butyl alcohol (2.880)
-Acetonitrile (3.018)
-Di-isopropyl ether (3.134)
-Chloroprene (3.239)+
-Acrylonitrile (3.329)
-Ethyl tertiary-butyl ethe (3.531)+
-cis-1,2-Dichloroethene (3.867)
-2,2-Dichloropropane (3.998)
-Cyclohexane (4.107)+
-Chloroform (4.234)
-Carbon Tetrachloride (4.492)+
-1,1-Dichloropropene (4.695)+
-Benzene (5.091)
-1,2-Dichloroethane-D4 (5.331)+
-1,2-Dichloroethane (5.439)
Propionitrile (5.207)+
-Isobutyl Alcohol (5.619)
-Methylcyclohexane (6.001)+
-1,4-Difluorobenzene (6.132)
-Dibromomethane (6.678)
-1,2-Dichloropropane (6.835)
-Bromodichloromethane (6.966)
-Methyl Methacrylate (7.284)+
-2-Chloroethylvinylether (7.898)+
-Toluene-D8 (8.152)
Toluene (8.223)
-Tetrachloroethene (8.740)
-4-methyl-2-pentanone (8.826)+
-1,1,2-Trichloroethane (9.058)
-Ethyl Methacrylate (9.148)
-Dibromochloromethane (9.275)
-1,3-Dichloropropane (9.410)
-1,2-Dibromoethane (9.552)
-2-Hexanone (9.986)
-Total Alkylbenzenes (10.100)
-Chlorobenzene-D5 (10.293)+
-Ethylbenzene (10.379)+
m+p-Xylenes (10.585)
-o-Xylene (11.150)
Styrene (11.228)+
-Isopropylbenzene (11.584)
-P-Bromofluorobenzene (11.921)
-Bromobenzene (12.022)+
-N-Propylbenzene (12.127)
-1,1,2,2-Tetrachloroethane (12.242)
2-Chlorotoluene (12.284)
-1,2,3-Trichloropropane (12.400)+
-trans-1,4-dichloro-2-bute (12.460)
4-Chlorotoluene (12.505)
-tert-Butylbenzene (12.785)
-1,2,4-Trimethylbenzene (12.883)
-sec-Butylbenzene (13.010)
-P-Isopropyltoluene (13.216)+
-1,4-Dichlorobenzene-D4 (13.350)+
1,2,3-Trimethylbenzene (13.418)
-N-Butylbenzene (13.736)
-1,2-Dichlorobenzene (13.867)
-1,2-Dibromo-3-Chloropropa (14.870)
1,3,5-Trichlorobenzene (14.907)
-Hexachlorobutadiene (15.697)+
-Naphthalene (16.093)
-1,2,3-Trichlorobenzene (16.318)
-1,2-Dichloroethylene (tot (16.880)

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2690.D
Report Date: 09-Aug-2021 08:41

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-t.i\T080421.b\T2690.D
Lab Smp Id: WG303684-6
Inj Date : 04-AUG-2021 12:24
Operator : HG   Inst ID: gcms-t.i
Smp Info : WG303684-6
Misc Info :
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-t.i\T080421.b\T8A05(66)D.m
Meth Date : 05-Aug-2021 05:36 hgould   Quant Type: ISTD
Cal Date : 04-AUG-2021 12:24   Cal File: T2690.D
Als bottle: 9   Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12
Processing Host: T6-O360

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.225	1.226	(0.231)	641892	150.000	144	
2	Chloromethane	50	1.348	1.353	(0.254)	684925	150.000	150(A)	
3	Vinyl chloride	62	1.397	1.398	(0.263)	552491	150.000	164(A)	
4	Bromomethane	94	1.599	1.600	(0.302)	170312	150.000	150(A)	
5	Chloroethane	64	1.663	1.678	(0.314)	114102	150.000	80.5	
6	Trichlorofluoromethane	101	1.760	1.768	(0.332)	559796	150.000	132	
7	Diethyl Ether	59	1.970	1.970	(0.371)	321137	150.000	153(A)	
8	1,1-Dichloroethene	96	2.112	2.113	(0.398)	382014	150.000	159(A)	
9	Freon-113	151	2.134	2.138	(0.402)	274242	150.000	154(A)	
10	Carbon Disulfide	76	2.138	2.142	(0.403)	971936	150.000	158(A)	
11	Iodomethane	142	2.220	2.225	(0.419)	347753	150.000	149	
12	Acrolein	56	2.366	2.367	(0.446)	162871	750.000	745	
13	Allyl Chloride	41	2.464	2.468	(0.465)	626834	150.000	151(A)	
14	Methylene Chloride	84	2.553	2.554	(0.481)	402646	150.000	153(A)	
15	Acetone	43	2.602	2.599	(0.491)	778168	750.000	747	
16	trans-1,2-Dichloroethene	96	2.684	2.685	(0.506)	532699	150.000	148	
17	Methyl Acetate	43	2.699	2.704	(0.509)	461520	150.000	161(A)	
18	Methyl tert-butyl ether	73	2.778	2.782	(0.524)	1718554	150.000	162(A)	
19	Tertiary-butyl alcohol	59	2.883	2.876	(0.544)	269965	750.000	740	
20	Acetonitrile	41	3.021	3.018	(0.570)	695559	1500.00	1460	
21	Di-isopropyl ether	45	3.134	3.134	(0.591)	2008541	150.000	157(A)	
22	Chloroprene	53	3.231	3.235	(0.609)	963664	150.000	160(A)	
23	1,1-Dichloroethane	63	3.261	3.261	(0.615)	1138841	150.000	157(A)	

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2690.D
Report Date: 09-Aug-2021 08:41

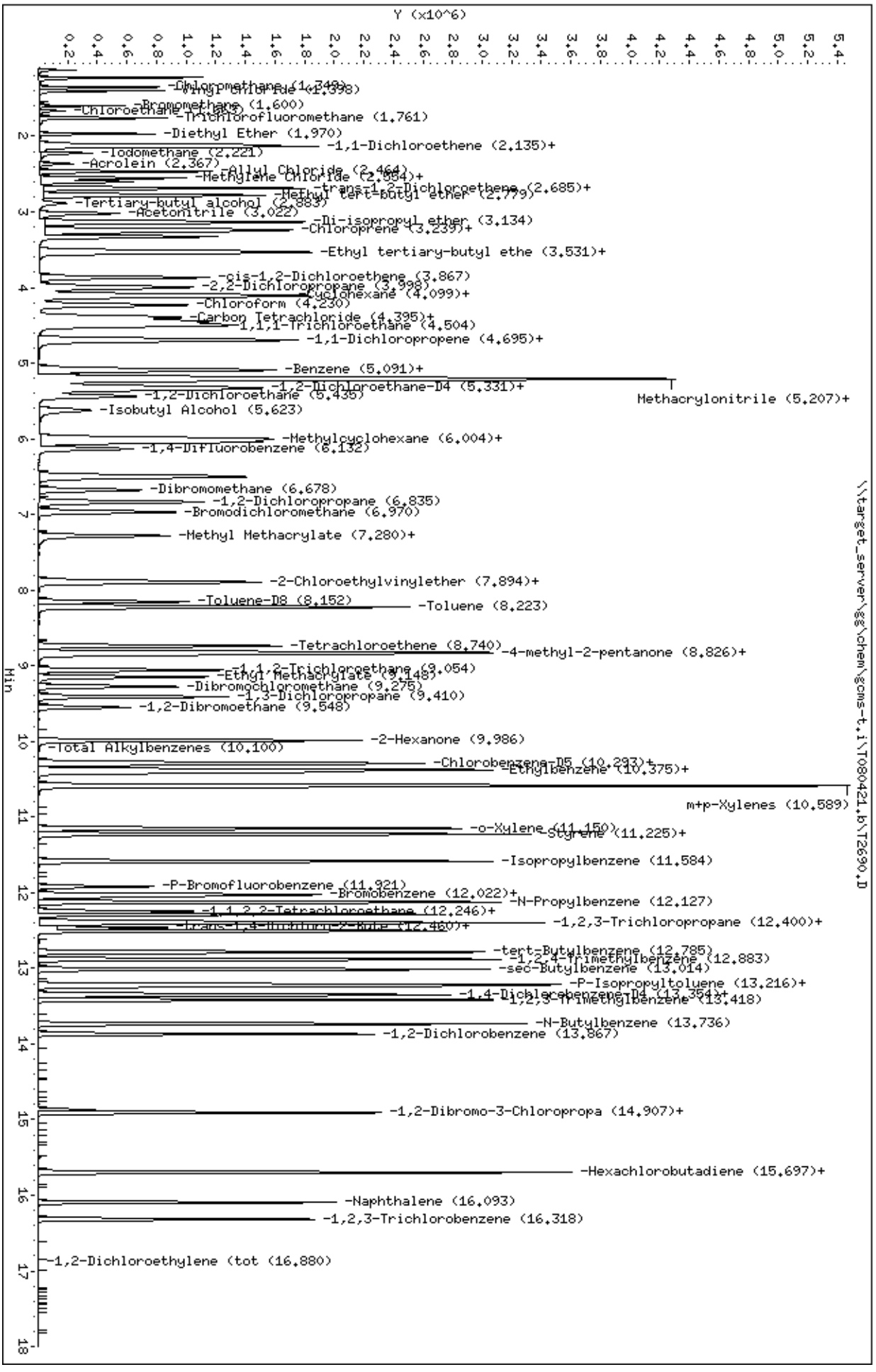
			QUANT SIG					AMOUNTS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	24	Acrylonitrile	52	3.328	3.325	(0.628)	864643	750.000	767(A)	
	25	Ethyl tertiary-butyl ether	59	3.523	3.523	(0.664)	1803593	150.000	160(A)	
	26	Vinyl Acetate	43	3.541	3.542	(0.578)	1446001	150.000	166(A)	
	27	cis-1,2-Dichloroethene	96	3.867	3.868	(0.729)	650678	150.000	155(A)	
	28	2,2-Dichloropropane	77	3.998	3.999	(0.754)	1003421	150.000	170(A)	
	29	Cyclohexane	56	4.099	4.099	(0.773)	963966	150.000	158(A)	
	30	Bromochloromethane	128	4.121	4.118	(0.777)	262482	150.000	149	
	31	Chloroform	83	4.230	4.234	(0.798)	1140529	150.000	151(A)	
	32	Carbon Tetrachloride	117	4.395	4.395	(0.717)	931364	150.000	165(A)	
	33	Tetrahydrofuran	42	4.443	4.451	(0.838)	969723	750.000	761(A)	
$	34	Dibromofluoromethane	113	4.492	4.489	(0.847)	246182	50.0000	51.4	
	35	1,1,1-Trichloroethane	97	4.503	4.496	(0.849)	1101567	150.000	159(A)	
	36	1,1-Dichloropropene	75	4.690	4.691	(0.765)	853820	150.000	156(A)	
	37	2-Butanone	43	4.698	4.698	(0.886)	1365895	750.000	762(A)	
	38	Benzene	78	5.091	5.091	(0.830)	2310671	150.000	152(A)	
	39	Propionitrile	54	5.181	5.177	(0.977)	695281	1500.00	1440	
	40	Methacrylonitrile	41	5.207	5.200	(0.982)	3384426	1500.00	1440	
*	41	Pentafluorobenzene	168	5.304	5.301	(1.000)	441685	50.0000		
$	42	1,2-Dichloroethane-D4	65	5.330	5.323	(1.005)	291323	50.0000	50.7	
	43	Tertiary-amyl methyl ether	73	5.334	5.335	(1.006)	1617424	150.000	161(A)	
	44	1,2-Dichloroethane	62	5.435	5.439	(0.886)	812375	150.000	149	
	45	Isobutyl Alcohol	43	5.622	5.619	(1.060)	406355	3000.00	3230(A)	
	46	Methylcyclohexane	83	6.000	5.997	(1.131)	1028256	150.000	161(A)	
	47	Trichloroethene	95	6.045	6.042	(0.986)	609258	150.000	157(A)	
*	48	1,4-Difluorobenzene	114	6.131	6.132	(1.000)	739588	50.0000		
	49	Dibromomethane	93	6.677	6.682	(1.089)	374465	150.000	152(A)	
	50	1,2-Dichloropropane	63	6.835	6.832	(1.115)	561510	150.000	154(A)	
	51	Bromodichloromethane	83	6.966	6.966	(1.136)	831628	150.000	160(A)	
	52	Methyl Methacrylate	41	7.280	7.277	(1.187)	497363	150.000	156(A)	
	53	1,4-Dioxane	88	7.287	7.284	(1.189)	124218	3000.00	3130(A)	
	54	2-Chloroethylvinylether	63	7.875	7.876	(1.284)	313880	150.000	150(A)	
	55	cis-1,3-dichloropropene	75	7.897	7.898	(1.288)	999255	150.000	163(A)	
$	56	Toluene-D8	98	8.152	8.153	(1.330)	825105	50.0000	49.2	
	57	Toluene	92	8.223	8.220	(1.341)	1423472	150.000	151(A)	
	58	Tetrachloroethene	164	8.736	8.736	(0.850)	475120	150.000	159(A)	
	59	4-methyl-2-pentanone	43	8.822	8.822	(1.439)	2399721	750.000	728	
	60	trans-1,3-Dichloropropene	75	8.848	8.849	(1.443)	912641	150.000	166(A)	
	61	1,1,2-Trichloroethane	83	9.054	9.054	(1.477)	415044	150.000	149	
	62	Ethyl Methacrylate	69	9.147	9.148	(1.492)	697045	150.000	164(A)	
	63	Dibromochloromethane	129	9.275	9.275	(0.903)	604133	150.000	168(A)	
	64	1,3-Dichloropropane	76	9.409	9.410	(0.916)	884074	150.000	156(A)	
	65	1,2-Dibromoethane	107	9.548	9.548	(1.557)	511617	150.000	151(A)	
M	66	Total Alkylbenzenes	100				14599822	150.000	1120	
	67	2-Hexanone	43	9.986	9.986	(0.972)	1706817	750.000	779(A)	
*	68	Chlorobenzene-D5	117	10.274	10.274	(1.000)	607799	50.0000		
	69	Chlorobenzene	112	10.296	10.293	(1.002)	1470689	150.000	152(A)	
	70	Ethylbenzene	91	10.375	10.372	(1.010)	2543487	150.000	155(A)	
	71	1,1,1,2-Tetrachloroethane	131	10.408	10.409	(1.013)	551062	150.000	168(A)	
	72	m+p-Xylenes	91	10.588	10.585	(1.031)	3713422	300.000	298	
	73	o-Xylene	91	11.149	11.150	(1.085)	1984540	150.000	157(A)	
	74	Styrene	104	11.228	11.229	(1.093)	1546047	150.000	160(A)	
	75	Bromoform	173	11.221	11.221	(1.092)	354952	150.000	170(A)	
	76	Isopropylbenzene	105	11.584	11.584	(0.869)	2390392	150.000	158(A)	
$	77	P-Bromofluorobenzene	95	11.920	11.921	(1.944)	292448	50.0000	48.0	

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2690.D
Report Date: 09-Aug-2021 08:41

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	78 Bromobenzene	156	12.025	12.022	(0.902)	544557	150.000	155(A)	
	79 cis-1,4-Dichloro-2-Butene	53	12.051	12.052	(0.904)	204740	150.000	176(A)	
	80 N-Propylbenzene	91	12.126	12.123	(0.909)	2819304	150.000	158(A)	
	81 1,1,2,2-Tetrachloroethane	83	12.246	12.243	(0.918)	580347	150.000	156(A)	
	82 2-Chlorotoluene	91	12.287	12.284	(0.921)	1688880	150.000	158(A)	
	83 1,2,3-Trichloropropane	75	12.373	12.378	(0.928)	492432	150.000	154(A)	
	84 1,3,5-Trimethylbenzene	105	12.399	12.400	(0.930)	1912799	150.000	162(A)	
	85 trans-1,4-Dichloro-2-Butene	53	12.463	12.460	(0.935)	199159	150.000	172(A)	
	86 4-Chlorotoluene	91	12.504	12.505	(0.938)	1803335	150.000	162(A)	
	87 tert-Butylbenzene	119	12.785	12.785	(0.959)	1645795	150.000	159(A)	
	89 1,2,4-Trimethylbenzene	105	12.882	12.879	(0.966)	1917348	150.000	160(A)	
	90 sec-Butylbenzene	105	13.013	13.010	(0.976)	2405406	150.000	159(A)	
	91 P-Isopropyltoluene	119	13.211	13.212	(0.991)	1981815	150.000	160(A)	
	92 1,3-Dichlorobenzene	146	13.238	13.238	(0.993)	1015155	150.000	158(A)	
*	93 1,4-Dichlorobenzene-D4	152	13.335	13.336	(1.000)	273245	50.0000		
	94 1,4-Dichlorobenzene	146	13.357	13.354	(1.002)	1032106	150.000	153(A)	
	95 1,2,3-Trimethylbenzene	105	13.413	13.414	(1.006)	1915203	150.000	160(A)	
	96 N-Butylbenzene	91	13.735	13.736	(1.030)	1917355	150.000	168(A)	
	97 1,2-Dichlorobenzene	146	13.866	13.867	(1.040)	939540	150.000	158(A)	
	98 1,2-Dibromo-3-Chloropropane	157	14.869	14.874	(1.115)	105542	150.000	183(A)	
	99 1,3,5-Trichlorobenzene	180	14.907	14.907	(1.118)	738224	150.000	170(A)	
	100 Hexachlorobutadiene	225	15.692	15.693	(1.177)	313704	150.000	170(A)	
	101 1,2,4-Trichlorobenzene	180	15.696	15.701	(1.177)	637936	150.000	171(A)	
	102 Naphthalene	128	16.093	16.094	(1.207)	1564322	150.000	180(A)	
M	103 1,2-Dichloroethylene (total)	96				1183377	150.000	303	
	104 1,2,3-Trichlorobenzene	180	16.317	16.318	(1.224)	572054	150.000	170(A)	
M	105 Xylenes (total)	91				5697962	150.000	455	

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.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Client ID:
Sample Info: WG303684-6
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-t.i
Operator: HG
Column diameter: 0.18
\\target_server\gg\chem\gcms-t.i\T080421.b\T2690.D
Y (x10^6)
Min
-Chloromethane (1.348)
-Vinyl Chloride (1.398)
-Bromomethane (1.600)
-Chloroethane (1.660)
-Trichlorofluoromethane (1.761)
-Diethyl Ether (1.970)
-1,1-Dichloroethene (2.135)+
-Iodomethane (2.221)
-Acrolein (2.367)
-Allyl Chloride (2.464)
-Methylene Chloride (2.554)+
-trans-1,2-Dichloroethene (2.685)+
-Methyl tert-butyl ether (2.779)
-Tertiary-butyl alcohol (2.883)
-Acetonitrile (3.022)
-Di-isopropyl ether (3.134)
-Chloroprene (3.239)+
-Ethyl tertiary-butyl ethe (3.531)+
-cis-1,2-Dichloroethene (3.867)
-2,2-Dichloropropane (3.998)
-Cyclohexane (4.099)+
-Chloroform (4.230)
-Carbon Tetrachloride (4.395)+
-1,1,1-Trichloroethane (4.504)
-1,1-Dichloropropene (4.695)+
-Benzene (5.091)+
-1,2-Dichloroethane-D4 (5.331)+
-1,2-Dichloroethane (5.435)
Methacrylonitrile (5.207)+
-Isobutyl Alcohol (5.623)
-Methylcyclohexane (6.004)+
-1,4-Difluorobenzene (6.132)
-Dibromomethane (6.678)
-1,2-Dichloropropane (6.835)
-Bromodichloromethane (6.970)
-Methyl Methacrylate (7.280)+
-2-Chloroethylvinylether (7.894)+
-Toluene-D8 (8.152)
-Toluene (8.223)
-Tetrachloroethene (8.740)
-4-methyl-2-pentanone (8.826)+
-1,1,2-Trichloroethane (9.054)
-Ethyl Methacrylate (9.148)
-Dibromochloromethane (9.275)
-1,3-Dichloropropane (9.410)
-1,2-Dibromoethane (9.548)
-2-Hexanone (9.986)
-Total Alkylbenzenes (10.100)
-Chlorobenzene-D5 (10.293)+
-Ethylbenzene (10.375)+
m+p-Xylenes (10.589)
-o-Xylene (11.150)
-Styrene (11.225)+
-Isopropylbenzene (11.584)
-P-Bromofluorobenzene (11.921)
-Bromobenzene (12.022)+
-N-Propylbenzene (12.127)
-1,1,2,2-Tetrachloroethane (12.246)+
-trans-1,4-Dichloro-2-Bute (12.460)+
-1,2,3-Trichloropropane (12.400)+
-tert-Butylbenzene (12.785)
-1,2,4-Trimethylbenzene (12.883)
-sec-Butylbenzene (13.014)
-P-Isopropyltoluene (13.216)+
-1,4-Dichlorobenzene-D4 (13.354)+
1,2,3-Trimethylbenzene (13.418)
-N-Butylbenzene (13.736)
-1,2-Dichlorobenzene (13.867)
-1,2-Dibromo-3-Chloropropa (14.907)+
-Hexachlorobutadiene (15.697)+
-Naphthalene (16.093)
-1,2,3-Trichlorobenzene (16.318)
-1,2-Dichloroethylene (tot (16.880)

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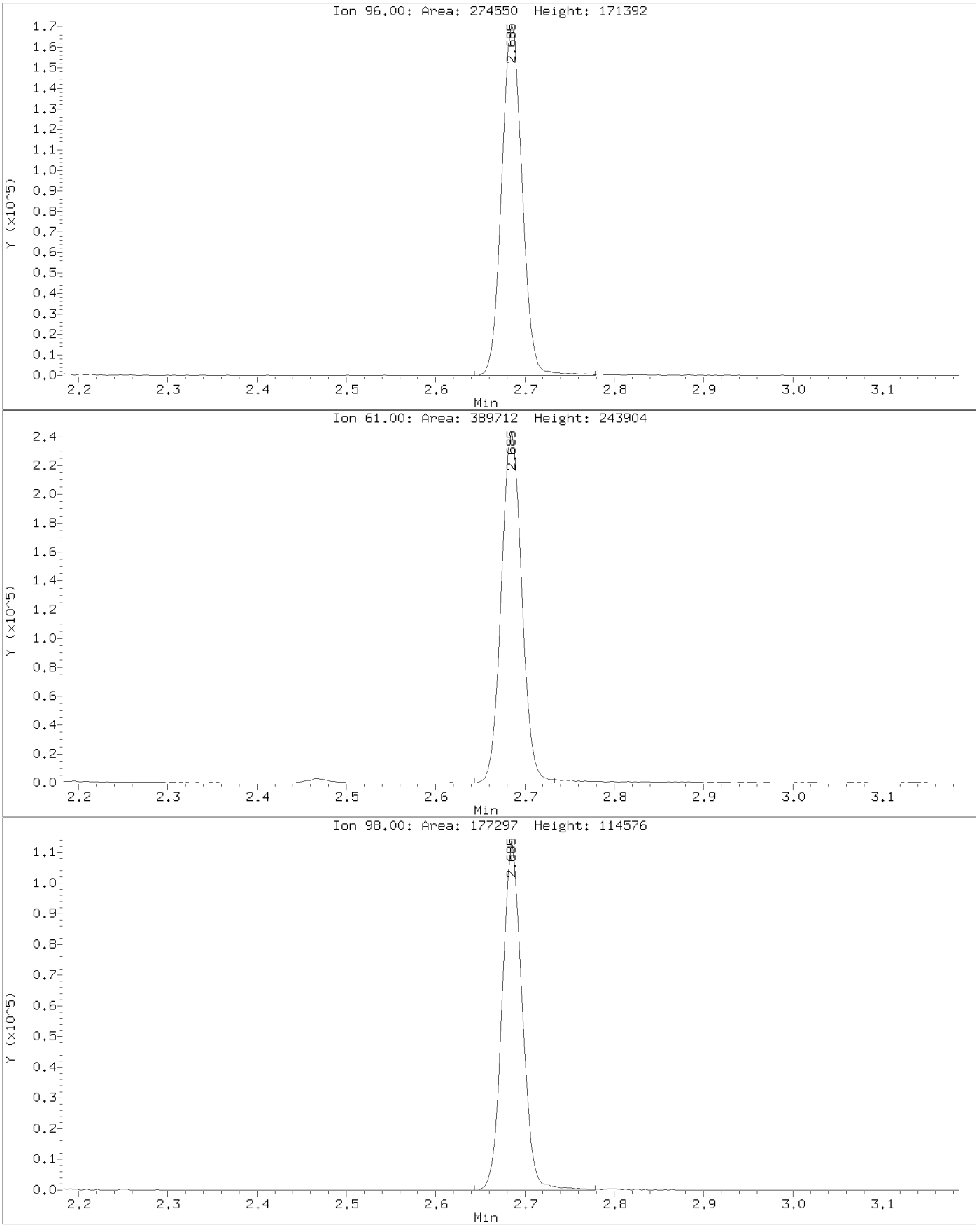
Injection Date: 04-AUG-2021 10:35
Instrument: gcms-t.i
Client Sample ID:

Compound: trans-1,2-Dichloroethene
CAS Number: 156-60-5

BEFORE MANUAL INTEGRATION



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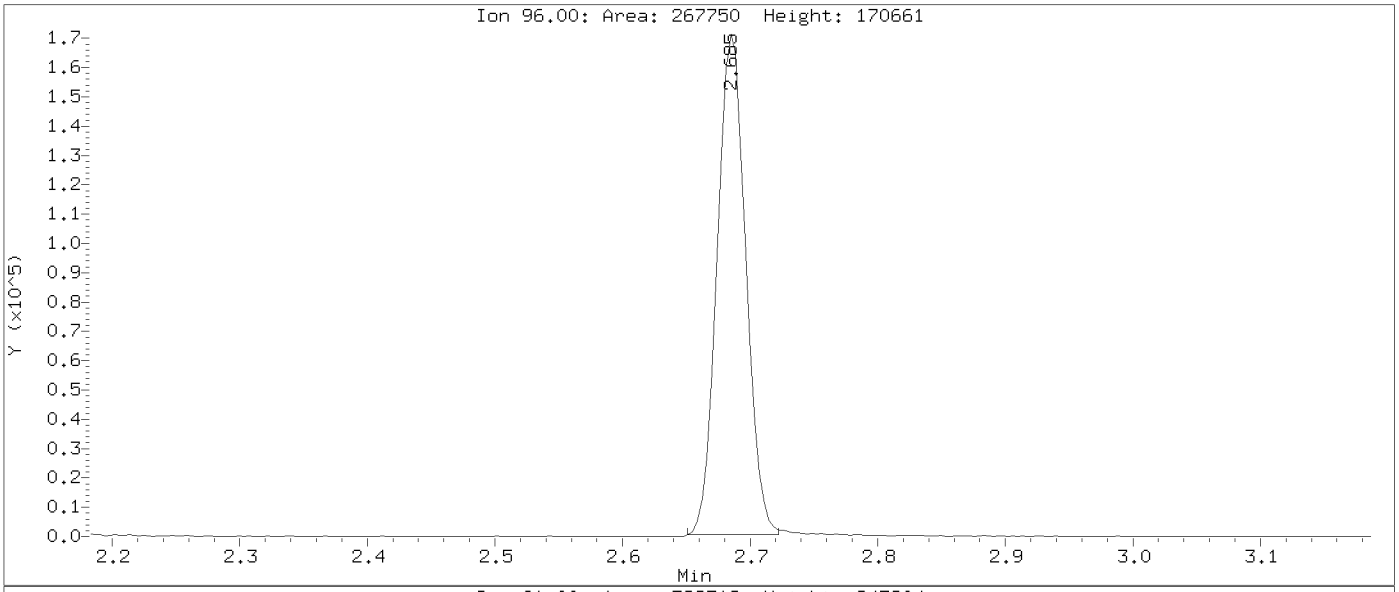
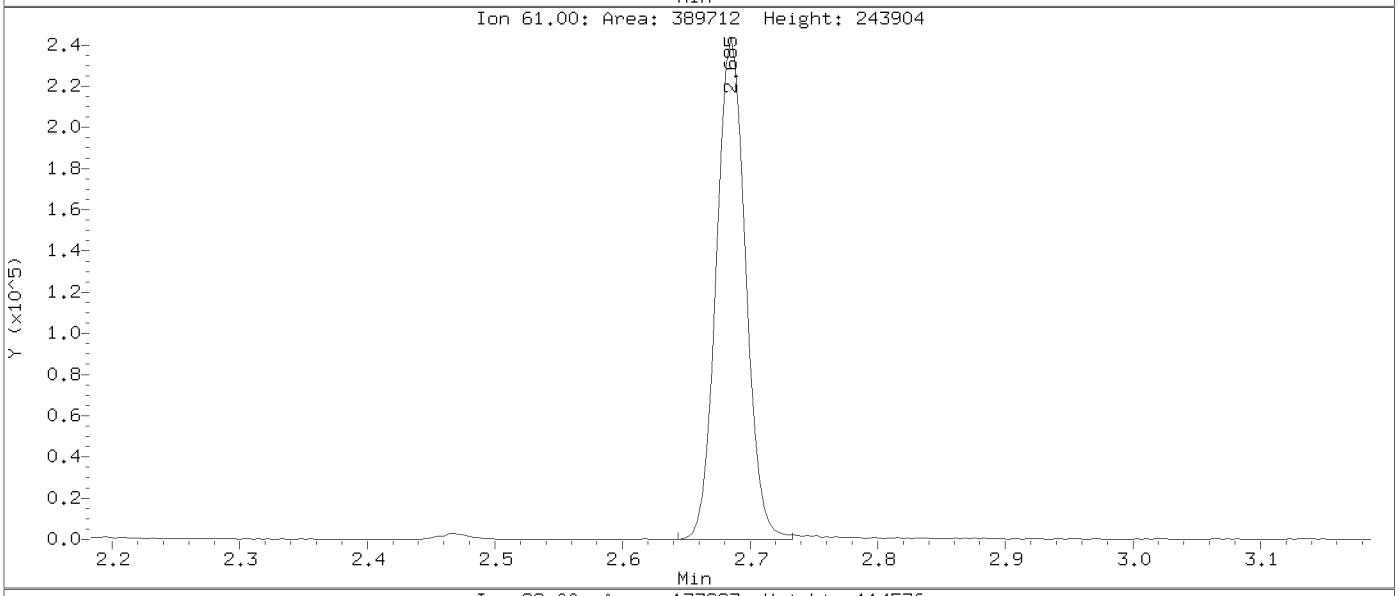
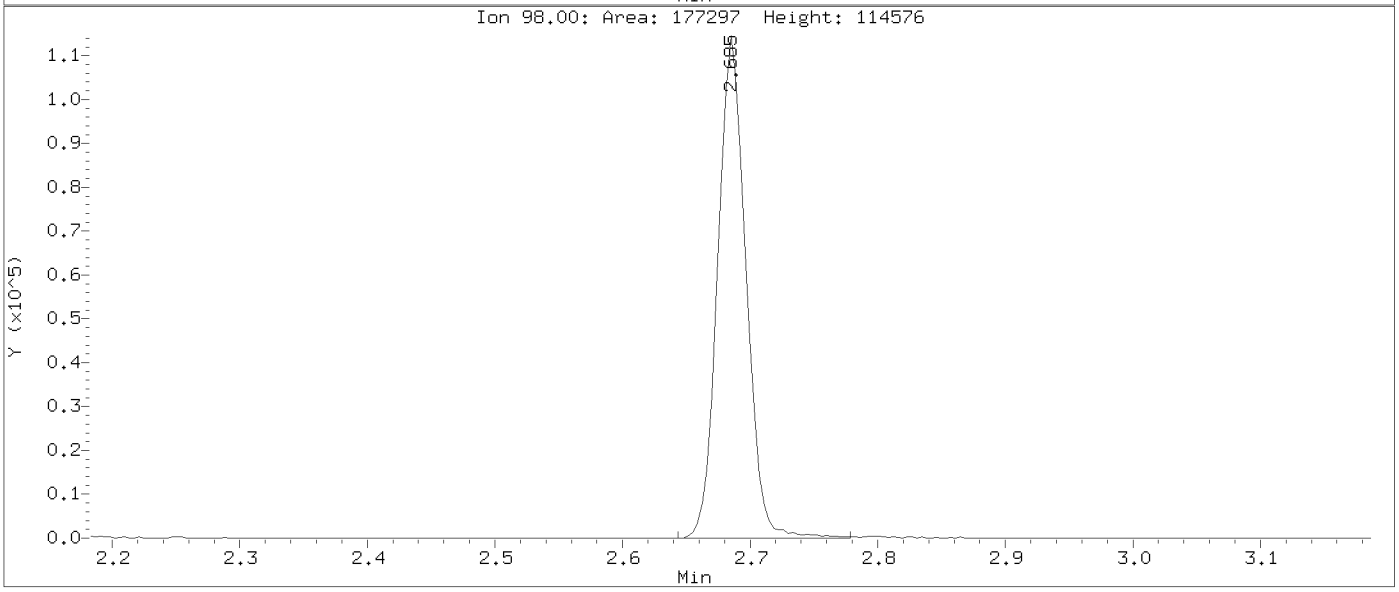
Injection Date: 04-AUG-2021 10:35
Instrument: gcms-t.i
Client Sample ID:

Compound: trans-1,2-Dichloroethene
CAS Number: 156-60-5

AFTER MANUAL INTEGRATION







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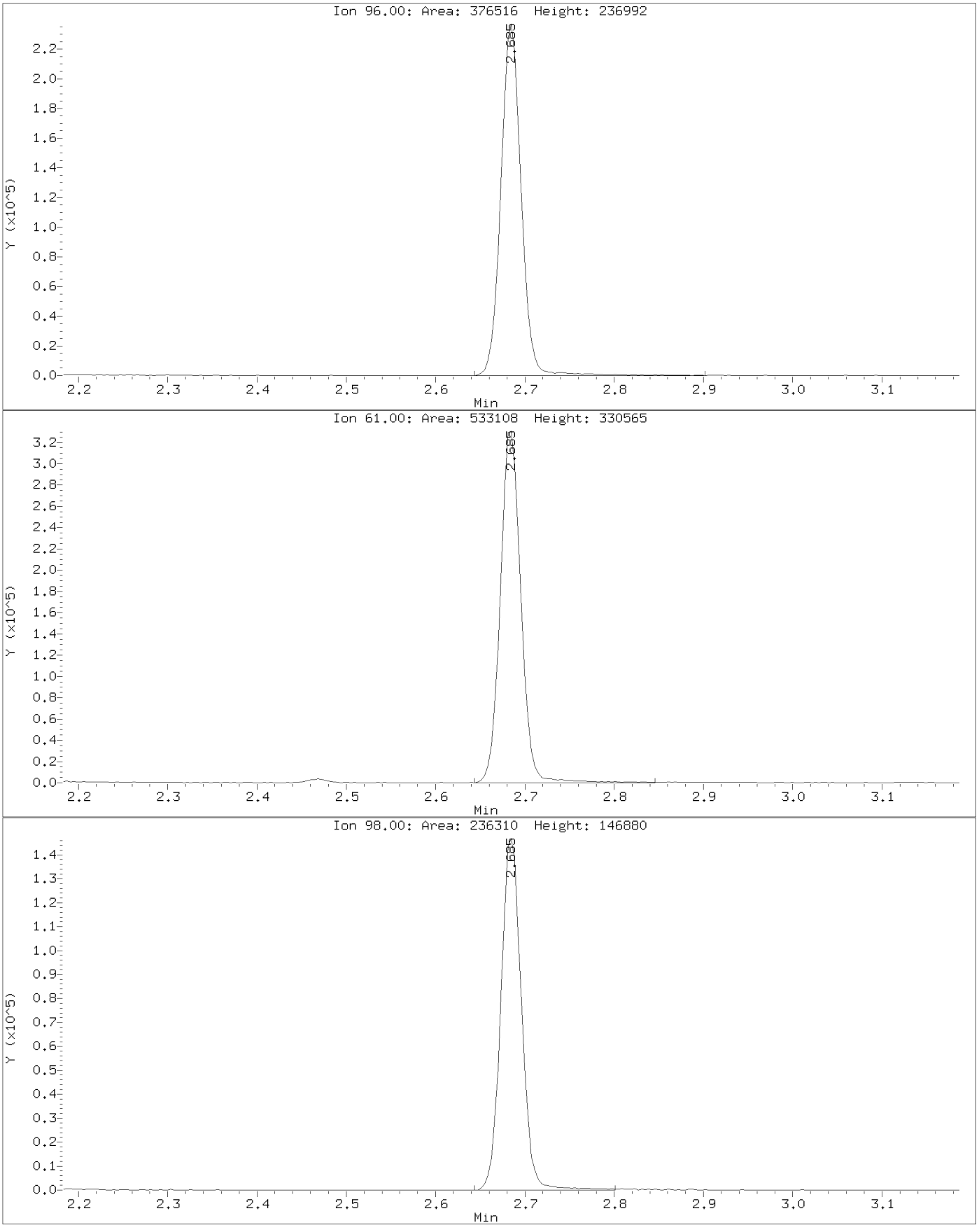
Injection Date: 04-AUG-2021 11:08
Instrument: gcms-t.i
Client Sample ID:

Compound: trans-1,2-Dichloroethene
CAS Number: 156-60-5

BEFORE MANUAL INTEGRATION



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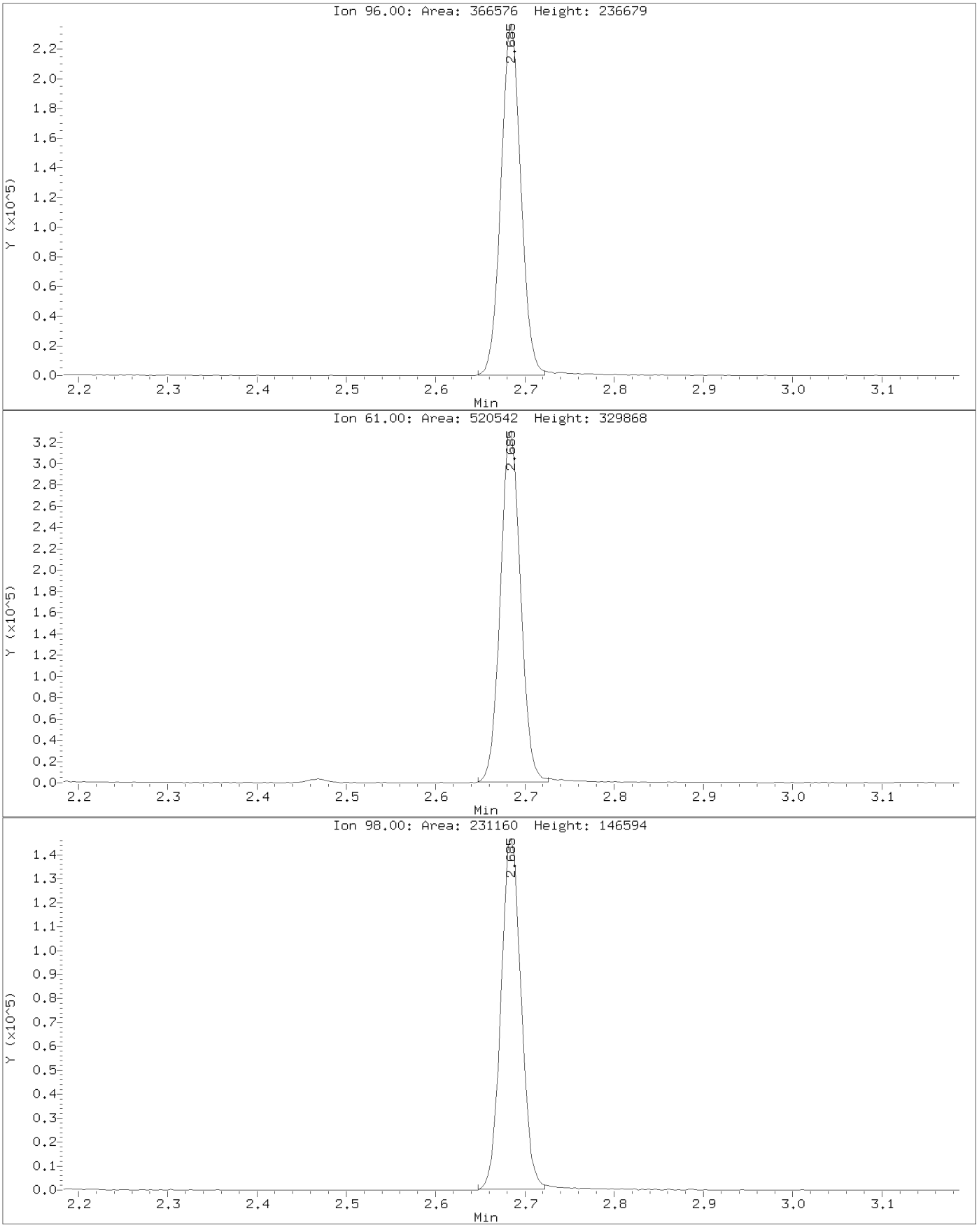
Injection Date: 04-AUG-2021 11:08
Instrument: gcms-t.i
Client Sample ID:

Compound: trans-1,2-Dichloroethene
CAS Number: 156-60-5

AFTER MANUAL INTEGRATION



Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SO4723
Project : LO-58 Nike Missile Battery Launch Site
Instrument ID: GCMS-W
Lab File IDs : W9619.D W9620.D W9622.D W9623.D W9625.D W9626.D W9624.D W9621.D
Calibration Date(s): 28-JUL-21 08:00 28-JUL-21 11:34

	1.0000 Level 1	5.0000 Level 2	20.0000 Level 3	50.0000 Level 4	100.0000 Level 5	150.0000 Level 6	75.0000 Level 7	10.0000 Level 8	Curve Type	b	m1	m2	%RSD	MAX %RSD	
Chloromethane	19858	61332	249394	618313	1149283	1740799	864381	123161	LNR	0	.6016		.9983	.99	O
Vinyl chloride	0.65830	0.45521	0.47899	0.48204	0.45104	0.43082	0.45116	0.46419	AVG		.484		14.94	15	O
Bromomethane	3542	9090	29096	71197	145896	213442	108647	15897	LNR	0	.07431		.999	.99	O
Chloroethane	4860	16892	59771	113978	156282	+++++	133470	32181	QUA	0	1.372	66.34	.9922	.99	O
1,1-Dichloroethene	0.44319	0.33132	0.33964	0.32260	0.30297	0.28299	0.29884	0.32829	AVG		.3312		14.82	15	O
Carbon Disulfide	23578	67292	281363	707614	1390971	1936102	1018867	139478	LNR	0	.691		.9959	.99	O
Methylene Chloride	14950	33949	132269	316960	635195	897623	474511	67374	LNR	0	.3186		.9968	.99	O
Acetone	14364	46526	178620	425914	839035	1190697	633188	101498	LNR	0	.08465		.9961	.99	O
trans-1,2-Dichloroethene	10353	32236	130468	319568	651628	922903	487127	62822	LNR	0	.3265		.9976	.99	O
1,1-Dichloroethane	1.16400	0.85321	0.92110	0.88316	0.84074	0.81493	0.84420	0.88299	AVG		.9005		12.36	15	O
cis-1,2-Dichloroethene	0.69105	0.48730	0.54648	0.53868	0.53359	0.51891	0.52803	0.51761	AVG		.5452		11.3	15	O
Chloroform	1.14928	0.84612	0.88854	0.84349	0.81227	0.80132	0.82275	0.85501	AVG		.8774		12.9	15	O
Carbon Tetrachloride	0.31683	0.29279	0.35712	0.36489	0.36725	0.36881	0.36067	0.31668	AVG		.3431		8.634	15	O
1,1,1-Trichloroethane	0.93836	0.68187	0.74904	0.74152	0.72601	0.70959	0.71757	0.70900	AVG		.7466		10.74	15	O
2-Butanone	0.14915	0.15892	0.17932	0.17961	0.16908	0.16026	0.17339	0.17857	AVG		.1685		6.729	15	O
Benzene	1.63579	1.23107	1.33917	1.28752	1.23953	1.19649	1.25383	1.28053	AVG		1.308		10.64	15	O
1,2-Dichloroethane	0.45499	0.36305	0.37118	0.34732	0.34114	0.33889	0.34438	0.35746	AVG		.3648		10.46	15	O
Trichloroethene	0.40985	0.29620	0.31790	0.30794	0.30560	0.32423	0.30340	0.30461	AVG		.3212		11.48	15	O
1,2-Dichloropropane	0.34897	0.29429	0.32576	0.31494	0.31144	0.31025	0.31226	0.30381	AVG		.3152		5.179	15	O
Bromodichloromethane	0.38485	0.33696	0.38473	0.37816	0.38079	0.38507	0.38203	0.36526	AVG		.3747		4.428	15	O
cis-1,3-dichloropropene	0.39156	0.36805	0.45750	0.47678	0.48646	0.49228	0.48706	0.39495	AVG		.4443		11.46	15	O
Toluene	1.09016	0.78117	0.83922	0.80605	0.77859	0.75249	0.78677	0.80014	AVG		.8293		13.06	15	O
4-methyl-2-pentanone	0.12694	0.16167	0.20342	0.20758	0.19625	0.17980	0.20456	0.19152	AVG		.184		15	15	WO
Tetrachloroethene	0.38022	0.25862	0.28061	0.28364	0.28256	0.29034	0.27716	0.26302	AVG		.2895		13.18	15	O
trans-1,3-Dichloropropene	0.32599	0.31552	0.39461	0.40583	0.41618	0.42034	0.41627	0.35869	AVG		.3817		11.13	15	O
1,1,2-Trichloroethane	0.22437	0.20610	0.22749	0.22140	0.22112	0.22119	0.22508	0.22334	AVG		.2213		2.946	15	O
Dibromochloromethane	0.24289	0.24096	0.28669	0.29646	0.30167	0.31242	0.30256	0.26500	AVG		.2811		9.938	15	O
2-Hexanone	10398	69789	382042	1046250	2072789	2901345	1585527	177617	QUA	0	6.623	.397	.9946	.99	O
Chlorobenzene	1.15164	0.89515	0.93060	0.89296	0.85345	0.83340	0.87047	0.91423	AVG		.9177		10.86	15	O
Ethylbenzene	1.94656	1.48479	1.61567	1.54862	1.42123	1.30882	1.47608	1.54061	AVG		1.543		12.14	15	O
Xylenes (total)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVG		0		0	15	MO
m+p-Xylenes	1.34113	1.11053	1.24809	1.15717	0.97527	0.83599	1.05827	1.18617	AVG		1.114		14.24	15	O
o-Xylene	1.07203	0.96210	1.22217	1.21662	1.14230	1.07938	1.16798	1.09975	AVG		1.12		7.684	15	O
Styrene	0.76724	0.79359	0.98367	0.98741	0.94176	0.89455	0.96614	0.90013	AVG		.9043		9.307	15	O
Bromoform	3540	19347	98306	276295	599496	918557	444018	45169	LNR	0	.2073		.9979	.99	O
1,1,2,2-Tetrachloroethane	0.57462	0.58747	0.60538	0.59355	0.57919	0.56713	0.59624	0.60615	AVG		.5887		2.418	15	O

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Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SO4723
Project : LO-58 Nike Missile Battery Launch Site
Instrument ID: GCMS-W
Lab File IDs : W9619.D W9620.D W9622.D W9623.D W9625.D W9626.D W9624.D W9621.D
Calibration Date(s): 28-JUL-21 08:00 28-JUL-21 11:34

Dibromofluoromethane	0.45530	0.45356	0.45213	0.45224	0.44340	0.44037	0.44035	0.44659	AVG		.448		1.358	15	
1,2-Dichloroethane-D4	0.52428	0.51950	0.50026	0.49630	0.48857	0.47877	0.49326	0.51090	AVG		.5015		3.118	15	
Toluene-D8	1.22431	1.20974	1.21438	1.20433	1.21593	1.21506	1.21499	1.21522	AVG		1.214		.4668	15	
P-Bromofluorobenzene	0.49392	0.49487	0.50268	0.49731	0.50280	0.50498	0.49941	0.49497	AVG		.4989		.8495	15	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9628A.D
Report Date: 29-Jul-2021 13:59

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: SDGa02236
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: WG303228-9
Level: LOW Operator: CR
Data Type: MS DATA SampleType: LCS
SpikeList File: IND_CHECK.spk Quant Type: ISTD
Sublist File: all.sub
Method File: \\target_server\gg\chem\gcms-w.i\W072821.b\W8A05(03).m
Misc Info: WG303228,WG303228-4

	SPIKE	COMPOUND	CONC ADDED ug/l	CONC RECOVERED ug/l	% RECOVERED	LIMITS
	1	Dichlorodifluorome	50.0	45.2	90.44	80-120
	2	Chloromethane	50.0	54.8	109.59	80-120
	3	Vinyl chloride	50.0	49.1	98.14	80-120
	4	Bromomethane	50.0	54.9	109.89	80-120
	5	Chloroethane	50.0	62.3	124.62*	80-120
	6	Trichlorofluoromet	50.0	52.5	105.05	80-120
	7	Diethyl Ether	50.0	50.5	100.93	80-120
	19	Tertiary-butyl alc	250	315	125.84*	80-120
	8	1,1-Dichloroethene	50.0	42.4	84.72	80-120
	10	Carbon Disulfide	50.0	60.5	121.04*	80-120
	9	Freon-113	50.0	47.7	95.47	80-120
	11	Iodomethane	50.0	50.6	101.17	80-120
	12	Acrolein	250	237	94.83	80-120
	14	Methylene Chloride	50.0	49.4	98.83	80-120
	15	Acetone	50.0	58.7	117.42	80-120
	45	Isobutyl Alcohol	1000	1060	106.28	80-120
	16	trans-1,2-Dichloro	50.0	49.9	99.80	80-120
	13	Allyl Chloride	50.0	51.3	102.69	80-120
	18	Methyl tert-butyl	50.0	52.5	104.96	80-120
	20	Acetonitrile	500	505	101.03	80-120
	21	Di-isopropyl ether	50.0	53.4	106.70	80-120
	22	Chloroprene	50.0	51.5	102.98	80-120
	39	Propionitrile	500	521	104.22	80-120
	40	Methacrylonitrile	500	533	106.64	80-120
	23	1,1-Dichloroethane	50.0	47.7	95.34	80-120
	24	Acrylonitrile	250	257	102.89	80-120
	25	Ethyl tertiary-but	50.0	55.3	110.53	80-120
	26	Vinyl Acetate	50.0	52.5	105.02	80-120
	27	cis-1,2-Dichloroet	50.0	47.8	95.61	80-120
M	97	1,2-Dichloroethyle	100	97.7	97.71	80-120
	52	Methyl Methacrylat	50.0	51.0	101.94	80-120
	28	2,2-Dichloropropan	50.0	50.0	99.98	80-120
	29	Bromochloromethane	50.0	49.6	99.29	80-120
	31	Chloroform	50.0	46.0	92.07	80-120
	32	Carbon Tetrachlori	50.0	49.4	98.86	80-120
	33	Tetrahydrofuran	50.0	46.8	93.55	80-120
	35	1,1,1-Trichloroeth	50.0	46.8	93.55	80-120
	37	1,1-Dichloropropen	50.0	49.7	99.34	80-120
	36	2-Butanone	50.0	53.6	107.25	80-120
	38	Benzene	50.0	49.6	99.29	80-120

Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9628A.D
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	SPIKE COMPOUND	CONC ADDED ug/l	CONC RECOVERED ug/l	% RECOVERED	LIMITS
	30 Cyclohexane	50.0	55.5	110.99	80-120
	53 Ethyl Methacrylate	50.0	49.2	98.31	80-120
	43 Tertiary-amyl meth	50.0	54.0	108.10	80-120
	44 1,2-Dichloroethane	50.0	47.2	94.45	80-120
	47 Trichloroethene	50.0	48.6	97.13	80-120
	49 Dibromomethane	50.0	46.5	92.95	80-120
	50 1,2-Dichloropropan	50.0	50.0	99.95	80-120
	51 Bromodichlorometha	50.0	49.7	99.41	80-120
	57 cis-1,3-dichloropr	50.0	53.4	106.78	80-120
	54 1,4-Dioxane	1000	1250	124.94*	80-120
	56 2-Chloroethylvinyl	50.0	60.0	119.91	80-120
	59 Toluene	50.0	49.4	98.91	80-120
	61 4-methyl-2-pentano	50.0	59.8	119.70	80-120
	60 Tetrachloroethene	50.0	47.2	94.47	80-120
	62 trans-1,3-Dichloro	50.0	54.1	108.23	80-120
	63 1,1,2-Trichloroeth	50.0	51.0	102.12	80-120
	64 Dibromochlorometha	50.0	51.4	102.91	80-120
	65 1,3-Dichloropropan	50.0	50.4	100.82	80-120
	66 1,2-Dibromoethane	50.0	51.0	101.91	80-120
	67 2-Hexanone	50.0	51.2	102.32	80-120
	69 Chlorobenzene	50.0	49.1	98.27	80-120
	70 Ethylbenzene	50.0	51.1	102.17	80-120
	71 1,1,1,2-Tetrachlor	50.0	52.1	104.27	80-120
M	105 Xylenes (total)	150	160	106.63	80-120
	72 m+p-Xylenes	100	105	104.99	80-120
	73 o-Xylene	50.0	54.9	109.89	80-120
	74 Styrene	50.0	55.6	111.16	80-120
	75 Bromoform	50.0	45.1	90.21	80-120
	76 Isopropylbenzene	50.0	53.5	107.07	80-120
	78 cis-1,4-Dichloro-2	50.0	54.6	109.30	80-120
	85 trans-1,4-Dichloro	50.0	56.5	112.99	80-120
	79 Bromobenzene	50.0	49.6	99.30	80-120
	80 N-Propylbenzene	50.0	50.6	101.25	80-120
	81 1,1,2,2-Tetrachlor	50.0	49.6	99.14	80-120
	84 1,3,5-Trimethylben	50.0	53.4	106.71	80-120
	82 2-Chlorotoluene	50.0	50.4	100.83	80-120
	83 1,2,3-Trichloropro	50.0	49.5	99.06	80-120
	86 4-Chlorotoluene	50.0	50.6	101.32	80-120
	87 tert-Butylbenzene	50.0	52.8	105.67	80-120
	88 Pentachloroethane	50.0	0.00	*	80-120
	89 1,2,4-Trimethylben	50.0	52.8	105.63	80-120
	91 P-Isopropyltoluene	50.0	55.4	110.90	80-120
	92 1,3-Dichlorobenzen	50.0	49.6	99.20	80-120
	94 1,4-Dichlorobenzen	50.0	47.6	95.30	80-120
	96 N-Butylbenzene	50.0	54.7	109.35	80-120
	90 sec-Butylbenzene	50.0	53.2	106.49	80-120
	98 1,2-Dichlorobenzen	50.0	50.4	100.84	80-120
	99 1,2-Dibromo-3-Chlo	50.0	47.7	95.46	80-120
	100 1,3,5-Trichloroben	50.0	52.4	104.72	80-120
	101 Hexachlorobutadien	50.0	48.3	96.68	80-120
	102 1,2,4-Trichloroben	50.0	48.1	96.15	80-120
	95 1,2,3-Trimethylben	50.0	51.8	103.51	80-120
	103 Naphthalene	50.0	49.4	98.90	80-120
	104 1,2,3-Trichloroben	50.0	47.7	95.35	80-120

Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9628A.D
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	SPIKE COMPOUND	CONC ADDED ug/l	CONC RECOVERED ug/l	% RECOVERED	LIMITS
	17 Methyl Acetate	50.0	50.1	100.16	80-120
	46 Methylcyclohexane	50.0	52.8	105.67	80-120
M	55 Total Alkylbenzene	350	373	106.57	80-120

	SURROGATE COMPOUND	AMOUNT ADDED ug/l	AMOUNT RECOVERED ug/l	% RECOVERED	LIMITS
$	34 Dibromofluorometha	50.0	49.4	98.77	68-128
$	42 1,2-Dichloroethane	50.0	49.3	98.55	67-135
$	58 Toluene-D8	50.0	49.9	99.78	65-128
$	77 P-Bromofluorobenze	50.0	49.5	98.95	56-133

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Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W072821.b\W9628A.D
Lab Smp Id: WG303228-9
Inj Date : 28-JUL-2021 13:02
Operator : CR Inst ID: gcms-w.i
Smp Info : WG303228-9
Misc Info : WG303228,WG303228-4
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-w.i\W072821.b\W8A05(03).m
Meth Date : 29-Jul-2021 13:50 croy Quant Type: ISTD
Cal Date : 28-JUL-2021 11:04 Cal File: W9625.D
Als bottle: 10 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: T6-O360

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.344	1.345	(0.233)	476862	45.2192	45.2	
2	Chloromethane	50	1.489	1.490	(0.258)	624580	54.7972	54.8	
3	Vinyl chloride	62	1.537	1.538	(0.266)	449912	49.0695	49.1	
4	Bromomethane	94	1.762	1.762	(0.305)	77349	54.9462	54.9	
5	Chloroethane	64	1.848	1.849	(0.320)	120408	62.3120	62.3(R)	
6	Trichlorofluoromethane	101	1.948	1.952	(0.337)	489237	52.5240	52.5	
7	Diethyl Ether	59	2.176	2.176	(0.377)	245434	50.4644	50.5	
8	1,1-Dichloroethene	96	2.333	2.333	(0.404)	265821	42.3608	42.4	
9	Freon-113	151	2.358	2.359	(0.408)	250854	47.7375	47.7	
10	Carbon Disulfide	76	2.365	2.366	(0.409)	792193	60.5175	60.5(R)	
11	Iodomethane	142	2.458	2.455	(0.425)	281088	50.5827	50.6	
12	Acrolein	56	2.615	2.619	(0.453)	211729	237.080	237	
13	Allyl Chloride	41	2.728	2.728	(0.472)	378000	51.3437	51.3	
14	Methylene Chloride	84	2.824	2.824	(0.489)	298265	49.4170	49.4	
15	Acetone	43	2.875	2.879	(0.498)	94155	58.7101	58.7	
16	trans-1,2-Dichloroethene	96	2.968	2.969	(0.514)	308674	49.9008	49.9	
17	Methyl Acetate	43	2.987	2.991	(0.517)	172772	50.0816	50.1	
18	Methyl tert-butyl ether	73	3.077	3.078	(0.533)	841923	52.4796	52.5	
19	Tertiary-butyl alcohol	59	3.190	3.184	(0.552)	146758	314.606	315(R)	
20	Acetonitrile	41	3.340	3.341	(0.578)	520136	505.148	505	
21	Di-isopropyl ether	45	3.469	3.473	(0.600)	1350348	53.3502	53.4	
22	Chloroprene	53	3.578	3.582	(0.619)	699113	51.4890	51.5	
23	1,1-Dichloroethane	63	3.610	3.614	(0.625)	813278	47.6690	47.7	

Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9628A.D
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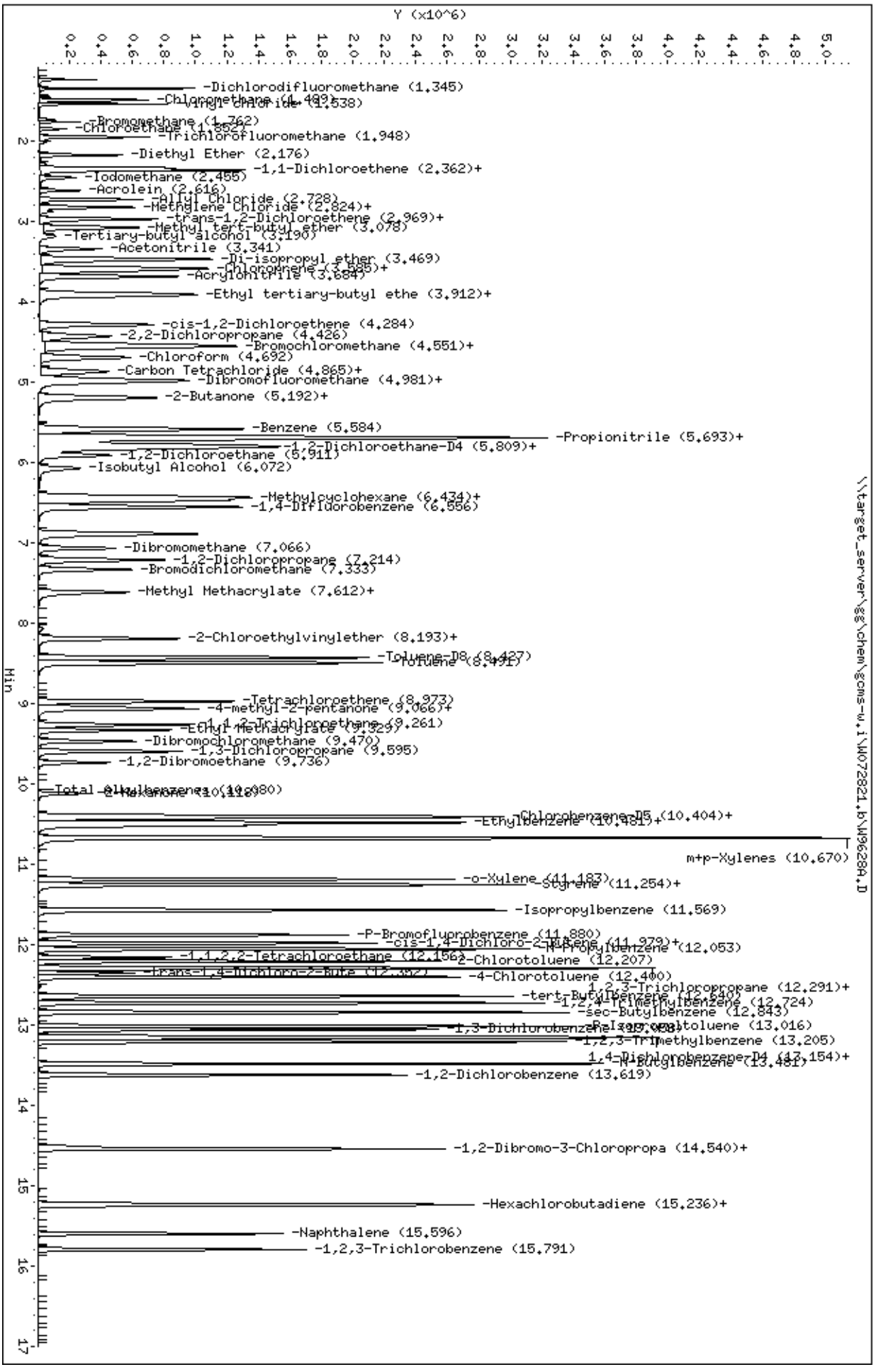
		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
	24	Acrylonitrile	52	3.684	3.688	(0.637)	690796	257.233	257	
	25	Ethyl tertiary-butyl ether	59	3.902	3.906	(0.675)	1190316	55.2628	55.3	
	26	Vinyl Acetate	43	3.928	3.928	(0.599)	708297	52.5125	52.5	
	27	cis-1,2-Dichloroethene	96	4.284	4.288	(0.741)	493769	47.8043	47.8	
	28	2,2-Dichloropropane	77	4.431	4.432	(0.767)	521973	49.9897	50.0	
	29	Bromochloromethane	128	4.566	4.564	(0.790)	212207	49.6430	49.6	
	30	Cyclohexane	56	4.541	4.541	(0.786)	870499	55.4933	55.5	
	31	Chloroform	83	4.695	4.695	(0.812)	765134	46.0327	46.0	
	32	Carbon Tetrachloride	117	4.871	4.872	(0.743)	505079	49.4290	49.4	
	33	Tetrahydrofuran	42	4.951	4.939	(0.857)	105444	46.7744	46.8	
$	34	Dibromofluoromethane	113	4.980	4.981	(0.862)	419126	49.3826	49.4	
	35	1,1,1-Trichloroethane	97	4.987	4.987	(0.863)	661650	46.7768	46.8	
	36	2-Butanone	43	5.218	5.212	(0.903)	171221	53.6247	53.6	
	37	1,1-Dichloropropene	75	5.192	5.193	(0.792)	633655	49.6679	49.7	
	38	Benzene	78	5.583	5.587	(0.852)	1933840	49.6474	49.6	
	39	Propionitrile	54	5.667	5.671	(0.981)	607719	521.090	521	
	40	Methacrylonitrile	41	5.693	5.693	(0.985)	2152429	533.187	533	
*	41	Pentafluorobenzene	168	5.779	5.780	(1.000)	947258	50.0000		
$	42	1,2-Dichloroethane-D4	65	5.808	5.809	(1.005)	468142	49.2750	49.3	
	43	Tertiary-amyl methyl ether	73	5.818	5.822	(1.007)	975516	54.0503	54.0	
	44	1,2-Dichloroethane	62	5.911	5.908	(0.902)	513045	47.2256	47.2	
	45	Isobutyl Alcohol	43	6.068	6.075	(1.050)	262472	1062.80	1060	
	46	Methylcyclohexane	83	6.434	6.431	(1.113)	923629	52.8331	52.8	
	47	Trichloroethene	95	6.472	6.473	(0.987)	464565	48.5658	48.6	
*	48	1,4-Difluorobenzene	114	6.556	6.556	(1.000)	1488980	50.0000		
	49	Dibromomethane	93	7.066	7.067	(1.078)	248149	46.4749	46.5	
	50	1,2-Dichloropropane	63	7.210	7.211	(1.100)	469131	49.9769	50.0	
	51	Bromodichloromethane	83	7.329	7.327	(1.118)	554654	49.7029	49.7	
	52	Methyl Methacrylate	41	7.611	7.612	(1.161)	307421	50.9716	51.0	
	53	Ethyl Methacrylate	69	9.328	9.332	(1.423)	565486	49.1575	49.2	
	54	1,4-Dioxane	88	7.637	7.635	(1.165)	111449	1249.41	1250(R)	
M	55	Total Alkylbenzenes	100				14592731	373.000	373	
	56	2-Chloroethylvinylether	63	8.160	8.157	(1.245)	23879	59.9543	60.0	
	57	cis-1,3-dichloropropene	75	8.189	8.189	(1.249)	706440	53.3891	53.4	
$	58	Toluene-D8	98	8.427	8.427	(1.285)	1804031	49.8906	49.9	
	59	Toluene	92	8.491	8.494	(1.295)	1221408	49.4559	49.4	
	60	Tetrachloroethene	164	8.972	8.973	(0.863)	389294	47.2347	47.2	
	61	4-methyl-2-pentanone	43	9.043	9.040	(1.379)	327898	59.8522	59.8	
	62	trans-1,3-Dichloropropene	75	9.068	9.069	(1.383)	615093	54.1160	54.1	
	63	1,1,2-Trichloroethane	83	9.261	9.265	(1.413)	336423	51.0577	51.0	
	64	Dibromochloromethane	129	9.469	9.467	(0.911)	411711	51.4547	51.4	
	65	1,3-Dichloropropane	76	9.595	9.595	(0.923)	706141	50.4113	50.4	
	66	1,2-Dibromoethane	107	9.733	9.733	(1.485)	385126	50.9547	51.0	
	67	2-Hexanone	43	10.121	10.115	(0.973)	217912	51.1614	51.2	
*	68	Chlorobenzene-D5	117	10.397	10.397	(1.000)	1423330	50.0000		
	69	Chlorobenzene	112	10.416	10.417	(1.002)	1283658	49.1355	49.1	
	70	Ethylbenzene	91	10.480	10.481	(1.008)	2243558	51.0849	51.1	
	71	1,1,1,2-Tetrachloroethane	131	10.516	10.519	(1.011)	424018	52.1343	52.1	
	72	m+p-Xylenes	91	10.673	10.673	(1.027)	3329703	104.991	105	
	73	o-Xylene	91	11.183	11.184	(1.076)	1752298	54.9468	54.9	
	74	Styrene	104	11.254	11.254	(1.082)	1430764	55.5796	55.6	
	75	Bromoform	173	11.257	11.257	(1.083)	266110	45.1032	45.1	
	76	Isopropylbenzene	105	11.568	11.569	(0.880)	2217027	53.5346	53.5	
$	77	P-Bromofluorobenzene	95	11.879	11.880	(1.812)	735025	49.4765	49.5	

Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9628A.D
Report Date: 29-Jul-2021 13:59

			QUANT SIG					CONCENTRATIONS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/l)	REVIEW CODE
	78	cis-1,4-Dichloro-2-Butene	53	11.988	11.989	(0.912)	125802	54.6503	54.6	
	79	Bromobenzene	156	11.979	11.979	(0.911)	547252	49.6523	49.6	
	80	N-Propylbenzene	91	12.053	12.053	(0.917)	2632277	50.6271	50.6	
	81	1,1,2,2-Tetrachloroethane	83	12.159	12.159	(0.925)	477914	49.5692	49.6	
	82	2-Chlorotoluene	91	12.207	12.207	(0.929)	1582283	50.4163	50.4	
	83	1,2,3-Trichloropropane	75	12.284	12.287	(0.935)	405069	49.5318	49.5	
	84	1,3,5-Trimethylbenzene	105	12.293	12.294	(0.935)	1867950	53.3543	53.4	
	85	trans-1,4-Dichloro-2-Butene	53	12.351	12.352	(0.940)	130338	56.4946	56.5	
	86	4-Chlorotoluene	91	12.399	12.400	(0.943)	1650808	50.6581	50.6	
	87	tert-Butylbenzene	119	12.640	12.640	(0.962)	1644493	52.8325	52.8	
	89	1,2,4-Trimethylbenzene	105	12.723	12.727	(0.968)	1884158	52.8139	52.8	
	90	sec-Butylbenzene	105	12.842	12.843	(0.977)	2489046	53.2459	53.2	
	91	P-Isopropyltoluene	119	13.015	13.016	(0.990)	2108356	55.4512	55.4	
	92	1,3-Dichlorobenzene	146	13.057	13.058	(0.993)	1074640	49.6008	49.6	
*	93	1,4-Dichlorobenzene-D4	152	13.144	13.144	(1.000)	818844	50.0000		
	94	1,4-Dichlorobenzene	146	13.160	13.160	(1.001)	1081959	47.6489	47.6	
	95	1,2,3-Trimethylbenzene	105	13.205	13.205	(1.005)	1987602	51.7565	51.8	
	96	N-Butylbenzene	91	13.481	13.481	(1.026)	1966451	54.6749	54.7	
M	97	1,2-Dichloroethylene (total)	96				802443	97.7051	97.7	
	98	1,2-Dichlorobenzene	146	13.622	13.622	(1.036)	996363	50.4184	50.4	
	99	1,2-Dibromo-3-Chloropropane	157	14.511	14.511	(1.104)	84440	47.7312	47.7	
	100	1,3,5-Trichlorobenzene	180	14.540	14.540	(1.106)	829615	52.3612	52.4	
	101	Hexachlorobutadiene	225	15.226	15.227	(1.158)	378976	48.3424	48.3	
	102	1,2,4-Trichlorobenzene	180	15.242	15.243	(1.160)	650658	48.0727	48.1	
	103	Naphthalene	128	15.595	15.596	(1.187)	1166108	49.4492	49.4	
	104	1,2,3-Trichlorobenzene	180	15.794	15.795	(1.202)	529812	47.6757	47.7	
M	105	Xylenes (total)	106				5082001	159.938	160	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.


Y (x10^6)
Min
-Dichlorodifluoromethane (1.345)
-Chloromethane (1.489)
-Vinyl chloride (1.538)
-Bromomethane (1.762)
-Chloroethane (1.852)
-Trichlorofluoromethane (1.948)
-Diethyl Ether (2.176)
-1,1-Dichloroethene (2.362)+
-Iodomethane (2.455)
-Acrolein (2.616)
-Allyl Chloride (2.728)
-Methylene Chloride (2.824)+
-trans-1,2-Dichloroethene (2.969)+
-Methyl tert-butyl ether (3.078)
-Tertiary-butyl alcohol (3.190)
-Acetonitrile (3.341)
-Di-isopropyl ether (3.469)
-Chloroprene (3.595)+
-Acrylonitrile (3.684)
-Ethyl tertiary-butyl ethe (3.912)+
-cis-1,2-Dichloroethene (4.284)
-2,2-Dichloropropane (4.426)
-Bromochloromethane (4.551)+
-Chloroform (4.692)
-Carbon Tetrachloride (4.865)+
-Dibromofluoromethane (4.981)+
-2-Butanone (5.192)+
-Benzene (5.584)
-Propionitrile (5.693)+
-1,2-Dichloroethane-D4 (5.809)+
-1,2-Dichloroethane (5.911)
-Isobutyl Alcohol (6.072)
-Methylcyclohexane (6.434)+
-1,4-Difluorobenzene (6.556)
-Dibromomethane (7.066)
-1,2-Dichloropropane (7.214)
-Bromodichloromethane (7.333)
-Methyl Methacrylate (7.612)+
-2-Chloroethylvinylether (8.193)+
-Toluene-D8 (8.427)
-Toluene (8.491)
-Tetrachloroethene (8.973)
-4-methyl-2-pentanone (9.067)+
-1,1,2-Trichloroethane (9.261)
-Ethyl Methacrylate (9.329)
-Dibromochloromethane (9.470)
-1,3-Dichloropropane (9.595)
-1,2-Dibromoethane (9.736)
-2-Hexanone (10.116)
-Chlorobenzene-D5 (10.404)+
-Ethylbenzene (10.481)+
m+p-Xylenes (10.670)
-o-Xylene (11.187)
-Styrene (11.254)+
-Isopropylbenzene (11.569)
-P-Bromofluorobenzene (11.880)
-cis-1,4-Dichloro-2-Butene (11.979)+
-N-Propylbenzene (12.053)
-1,1,2,2-Tetrachloroethane (12.156)
-2-Chlorotoluene (12.207)
-4-Chlorotoluene (12.400)
-1,2,3-Trichloropropane (12.291)+
-tert-Butylbenzene (12.540)
-1,2,4-Trimethylbenzene (12.724)
-sec-Butylbenzene (12.843)
-1,3-Dichlorobenzene (13.016)
-1,2,3-Trimethylbenzene (13.205)
-1,4-Dichlorobenzene-D4 (13.154)+
-1,2-Dichlorobenzene (13.619)
-1,2-Dibromo-3-Chloropropa (14.540)+
-Hexachlorobutadiene (15.236)+
-Naphthalene (15.596)
-1,2,3-Trichlorobenzene (15.791)
Total Alkylbenzenes (10.080)
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Sample Info: WG303228-9
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: CR
Column diameter: 0.18

Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9619.D
Report Date: 29-Jul-2021 13:50

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W072821.b\W9619.D
Lab Smp Id: WG303228-1
Inj Date : 28-JUL-2021 08:00
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Smp Info : WG303228-1
Misc Info :
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Meth Date : 29-Jul-2021 06:59 CROY   Quant Type: ISTD
Cal Date : 28-JUL-2021 08:00   Cal File: W9619.D
Als bottle: 1   Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12
Processing Host: T6-O360

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.345	1.345	(0.233)	10575	1.00000	1.0	
2	Chloromethane	50	1.486	1.490	(0.257)	19858	1.00000	1.6	
3	Vinyl chloride	62	1.537	1.538	(0.266)	11941	1.00000	1.4	
4	Bromomethane	94	1.762	1.762	(0.305)	3542	1.00000	2.0	
5	Chloroethane	64	1.855	1.849	(0.321)	4860	1.00000	1.9	
6	Trichlorofluoromethane	101	1.951	1.952	(0.337)	9926	1.00000	1.1	
7	Diethyl Ether	59	2.176	2.176	(0.376)	4912	1.00000	1.0	
8	1,1-Dichloroethene	96	2.333	2.333	(0.404)	8039	1.00000	1.3	
9	Freon-113	151	2.365	2.359	(0.409)	5416	1.00000	1.1	
10	Carbon Disulfide	76	2.362	2.366	(0.408)	23578	1.00000	1.6	
11	Iodomethane	142	2.455	2.455	(0.425)	1919	1.00000	0.48(a)	
12	Acrolein	56	2.615	2.619	(0.452)	4855	5.00000	5.7	
13	Allyl Chloride	41	2.731	2.728	(0.472)	8932	1.00000	1.3	
14	Methylene Chloride	84	2.827	2.824	(0.489)	14950	1.00000	2.0(a)	
15	Acetone	43	2.878	2.879	(0.498)	14364	5.00000	7.7	
16	trans-1,2-Dichloroethene	96	2.972	2.969	(0.514)	10353	1.00000	1.5	
17	Methyl Acetate	43	2.994	2.991	(0.518)	6136	1.00000	1.6	
18	Methyl tert-butyl ether	73	3.077	3.078	(0.532)	17962	1.00000	1.2	
19	Tertiary-butyl alcohol	59	3.190	3.184	(0.552)	1837	5.00000	4.1(a)	
20	Acetonitrile	41	3.341	3.341	(0.578)	10777	10.0000	10.9(a)	
21	Di-isopropyl ether	45	3.475	3.473	(0.601)	24594	1.00000	1.0	
22	Chloroprene	53	3.581	3.582	(0.619)	15207	1.00000	1.2	
23	1,1-Dichloroethane	63	3.613	3.614	(0.625)	21114	1.00000	1.3	

Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9619.D
Report Date: 29-Jul-2021 13:50

CR

11:37 am, Aug 10, 2021

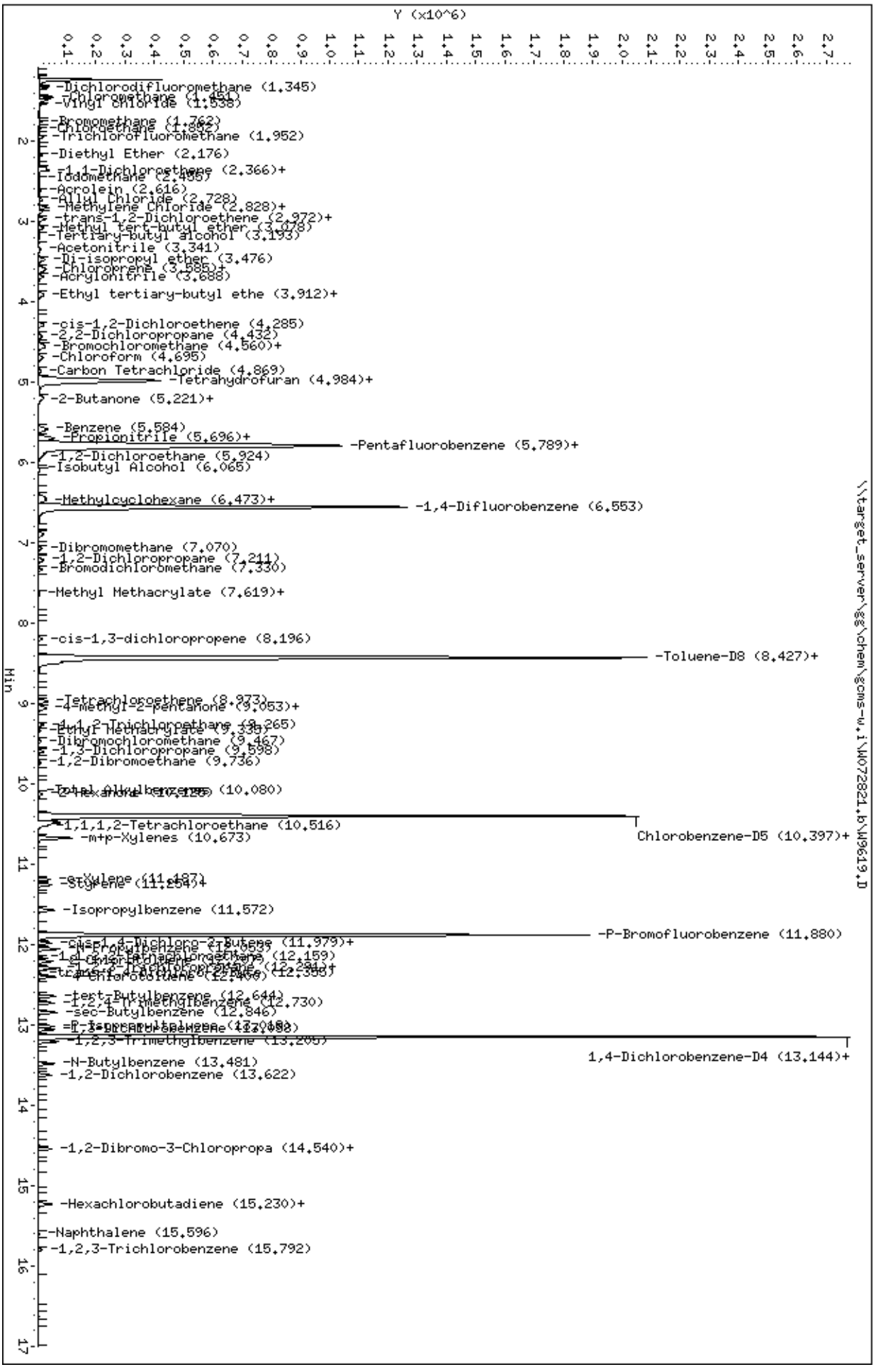
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	24 Acrylonitrile	52	3.687	3.688	(0.638)	13468	5.00000	5.2	
	25 Ethyl tertiary-butyl ether	59	3.902	3.906	(0.675)	17935	1.00000	0.87(a)	
	26 Vinyl Acetate	43	3.925	3.928	(0.599)	10385	1.00000	0.81(a)	
	27 cis-1,2-Dichloroethene	96	4.281	4.288	(0.740)	12535	1.00000	1.3	
	28 2,2-Dichloropropane	77	4.435	4.432	(0.767)	10950	1.00000	1.1	
	29 Bromochloromethane	128	4.570	4.564	(0.790)	4851	1.00000	1.2	
	30 Cyclohexane	56	4.541	4.541	(0.785)	13170	1.00000	0.88(a)	
	31 Chloroform	83	4.688	4.695	(0.811)	20847	1.00000	1.3	
	32 Carbon Tetrachloride	117	4.878	4.872	(0.744)	9060	1.00000	0.93(a)	
	33 Tetrahydrofuran	42	4.964	4.939	(0.859)	8686	5.00000	4.0(a)	
$	34 Dibromofluoromethane	113	4.980	4.981	(0.861)	412937	50.0000	50.8	
	35 1,1,1-Trichloroethane	97	4.990	4.987	(0.863)	17021	1.00000	1.2	
	36 2-Butanone	43	5.221	5.212	(0.903)	13527	5.00000	4.4(a)	
	37 1,1-Dichloropropene	75	5.192	5.193	(0.792)	14104	1.00000	1.2	
	38 Benzene	78	5.590	5.587	(0.853)	46777	1.00000	1.2	
	39 Propionitrile	54	5.667	5.671	(0.980)	10409	10.0000	9.3(a)	
	40 Methacrylonitrile	41	5.699	5.693	(0.986)	35279	10.0000	9.1(a)	
*	41 Pentafluorobenzene	168	5.783	5.780	(1.000)	906956	50.0000		
$	42 1,2-Dichloroethane-D4	65	5.805	5.809	(1.004)	475496	50.0000	52.3	
	43 Tertiary-amyl methyl ether	73	5.831	5.822	(1.008)	15920	1.00000	0.92(a)	
	44 1,2-Dichloroethane	62	5.924	5.908	(0.904)	13011	1.00000	1.2	
	45 Isobutyl Alcohol	43	6.084	6.075	(1.052)	2715	20.0000	13.7(Ta)	
	46 Methylcyclohexane	83	6.428	6.431	(1.112)	13573	1.00000	0.81(a)	
	47 Trichloroethene	95	6.476	6.473	(0.988)	11720	1.00000	1.3	
*	48 1,4-Difluorobenzene	114	6.556	6.556	(1.000)	1429796	50.0000		
	49 Dibromomethane	93	7.069	7.067	(1.078)	5891	1.00000	1.2	
	50 1,2-Dichloropropane	63	7.220	7.211	(1.101)	9979	1.00000	1.1	
	51 Bromodichloromethane	83	7.326	7.327	(1.117)	11005	1.00000	1.0	
	52 Methyl Methacrylate	41	7.618	7.612	(1.162)	3542	1.00000	0.71(a)	
	53 Ethyl Methacrylate	69	9.328	9.332	(1.423)	5255	1.00000	0.57(a)	
	54 1,4-Dioxane	88	7.666	7.635	(1.169)	957	20.0000	12.7(aM)	M9
M	55 Total Alkylbenzenes	100				264242	1.00000	7.3	
	57 cis-1,3-dichloropropene	75	8.199	8.189	(1.251)	11197	1.00000	0.88(a)	
$	58 Toluene-D8	98	8.427	8.427	(1.285)	1750513	50.0000	50.4	
	59 Toluene	92	8.491	8.494	(1.295)	31174	1.00000	1.3	
	60 Tetrachloroethene	164	8.972	8.973	(0.863)	10560	1.00000	1.3	
	61 4-methyl-2-pentanone	43	9.052	9.040	(1.381)	18150	5.00000	3.5(a)	
	62 trans-1,3-Dichloropropene	75	9.072	9.069	(1.384)	9322	1.00000	0.86(a)	
	63 1,1,2-Trichloroethane	83	9.264	9.265	(1.413)	6416	1.00000	1.0	
	64 Dibromochloromethane	129	9.470	9.467	(0.911)	6746	1.00000	0.86(Ta)	
	65 1,3-Dichloropropane	76	9.598	9.595	(0.923)	13219	1.00000	0.97(a)	
	66 1,2-Dibromoethane	107	9.736	9.733	(1.485)	7259	1.00000	1.0(T)	
	67 2-Hexanone	43	10.124	10.115	(0.974)	10398	5.00000	3.2(a)	
*	68 Chlorobenzene-D5	117	10.397	10.397	(1.000)	1388677	50.0000		
	69 Chlorobenzene	112	10.419	10.417	(1.002)	31985	1.00000	1.2	
	70 Ethylbenzene	91	10.484	10.481	(1.008)	54063	1.00000	1.3	
	71 1,1,1,2-Tetrachloroethane	131	10.516	10.519	(1.011)	8122	1.00000	1.0	
	72 m+p-Xylenes	91	10.670	10.673	(1.026)	74496	2.00000	2.4	
	73 o-Xylene	91	11.183	11.184	(1.076)	29774	1.00000	0.96(a)	
	74 Styrene	104	11.257	11.254	(1.083)	21309	1.00000	0.85(a)	
	75 Bromoform	173	11.254	11.257	(1.082)	3540	1.00000	0.72(Ta)	
	76 Isopropylbenzene	105	11.568	11.569	(0.880)	38942	1.00000	1.0	
$	77 P-Bromofluorobenzene	95	11.879	11.880	(1.812)	706204	50.0000	49.6	
	78 cis-1,4-Dichloro-2-Butene	53	11.979	11.989	(0.911)	1733	1.00000	0.83(a)	

Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9619.D
Report Date: 29-Jul-2021 13:50

			QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	79	Bromobenzene	156	11.979	11.979	(0.911)	11726	1.00000	1.2	
	80	N-Propylbenzene	91	12.053	12.053	(0.917)	58399	1.00000	1.2	
	81	1,1,2,2-Tetrachloroethane	83	12.159	12.159	(0.925)	8544	1.00000	0.98(a)	
	82	2-Chlorotoluene	91	12.204	12.207	(0.928)	33962	1.00000	1.2	
	83	1,2,3-Trichloropropane	75	12.284	12.287	(0.935)	7474	1.00000	1.0	
	84	1,3,5-Trimethylbenzene	105	12.293	12.294	(0.935)	32527	1.00000	1.0	
	85	trans-1,4-Dichloro-2-Butene	53	12.354	12.352	(0.940)	1575	1.00000	0.75(a)	
	86	4-Chlorotoluene	91	12.399	12.400	(0.943)	34471	1.00000	1.2	
	87	tert-Butylbenzene	119	12.643	12.640	(0.962)	29149	1.00000	1.0	
	89	1,2,4-Trimethylbenzene	105	12.730	12.727	(0.969)	32077	1.00000	0.99(a)	
	90	sec-Butylbenzene	105	12.845	12.843	(0.977)	46838	1.00000	1.1	
	91	P-Isopropyltoluene	119	13.015	13.016	(0.990)	33437	1.00000	0.97(a)	
	92	1,3-Dichlorobenzene	146	13.057	13.058	(0.993)	23410	1.00000	1.2	
*	93	1,4-Dichlorobenzene-D4	152	13.144	13.144	(1.000)	743444	50.0000		
	94	1,4-Dichlorobenzene	146	13.160	13.160	(1.001)	26713	1.00000	1.3	
	95	1,2,3-Trimethylbenzene	105	13.202	13.205	(1.004)	40692	1.00000	1.2	
	96	N-Butylbenzene	91	13.481	13.481	(1.026)	31815	1.00000	0.97(a)	
M	97	1,2-Dichloroethylene (total)	96				22888	1.00000	2.8	
	98	1,2-Dichlorobenzene	146	13.622	13.622	(1.036)	19376	1.00000	1.1	
	99	1,2-Dibromo-3-Chloropropane	157	14.508	14.511	(1.104)	1041	1.00000	0.78(a)	
	100	1,3,5-Trichlorobenzene	180	14.540	14.540	(1.106)	15658	1.00000	1.1	
	101	Hexachlorobutadiene	225	15.223	15.227	(1.158)	8831	1.00000	1.2	
	102	1,2,4-Trichlorobenzene	180	15.242	15.243	(1.160)	5876	1.00000	0.59(a)	
	103	Naphthalene	128	15.599	15.596	(1.187)	2662	1.00000	0.18(a)	
	104	1,2,3-Trichlorobenzene	180	15.788	15.795	(1.201)	5022	1.00000	0.60(a)	
M	105	Xylenes (total)	106				104270	3.00000	3.4	

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.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Instrument: gcms-w.i
Operator: CR
Column diameter: 0.18
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Y (x10^6)
Min
-Dichlorodifluoromethane (1.345)
-Chloromethane (1.451)
-Vinyl chloride (1.538)
-Bromomethane (1.762)
-Chloroethane (1.862)
-Trichlorofluoromethane (1.952)
-Diethyl Ether (2.176)
-1,1-Dichloroethene (2.366)+
-Iodomethane (2.455)
-Acrolein (2.616)
-Allyl Chloride (2.728)
-Methylene Chloride (2.828)+
-trans-1,2-Dichloroethene (2.972)+
-Methyl tert-butyl ether (3.078)
-Tertiary-butyl alcohol (3.193)
-Acetonitrile (3.341)
-Di-isopropyl ether (3.476)
-Chloroprene (3.586)+
-Acrylonitrile (3.688)
-Ethyl tertiary-butyl ethe (3.912)+
-cis-1,2-Dichloroethene (4.285)
-2,2-Dichloropropane (4.432)
-Bromochloromethane (4.560)+
-Chloroform (4.695)
-Carbon Tetrachloride (4.869)
-Tetrahydrofuran (4.984)+
-2-Butanone (5.221)+
-Benzene (5.584)
-Propionitrile (5.696)+
-Pentafluorobenzene (5.789)+
-1,2-Dichloroethane (5.924)
-Isobutyl Alcohol (6.065)
-Methylcyclohexane (6.473)+
-1,4-Difluorobenzene (6.553)
-Dibromomethane (7.070)
-1,2-Dichloropropane (7.211)
-Bromodichloromethane (7.330)
-Methyl Methacrylate (7.619)+
-cis-1,3-dichloropropene (8.196)
-Toluene-D8 (8.427)+
-Tetrachloroethene (8.973)
-4-methyl-2-pentanone (9.053)+
-1,1,2-Trichloroethane (9.265)
-Ethyl Methacrylate (9.339)+
-Dibromochloromethane (9.467)
-1,3-Dichloropropane (9.598)
-1,2-Dibromoethane (9.736)
-Total Alkylbenzenes (10.080)
-2-Hexanone (10.128)
-1,1,1,2-Tetrachloroethane (10.516)
Chlorobenzene-D5 (10.397)+
-m+p-Xylenes (10.673)
-o-Xylene (11.487)
-Styrene (11.254)+
-Isopropylbenzene (11.572)
-P-Bromofluorobenzene (11.880)
-cis-1,4-Dichloro-2-Butene (11.979)+
-N-Propylbenzene (12.063)
-1-Chloroethylbenzene (12.159)
-2-Chlorotoluene (12.291)+
-trans-1,4-Dichloro-2-Butene (12.298)+
-4-Chlorotoluene (12.366)
-test-Butylbenzene (12.644)
-1,2,4-Trimethylbenzene (12.730)
-sec-Butylbenzene (12.846)
-p-Isopropyltoluene (13.008)
-1,2,3-Trimethylbenzene (13.205)
1,4-Dichlorobenzene-D4 (13.144)+
-N-Butylbenzene (13.481)
-1,2-Dichlorobenzene (13.622)
-1,2-Dibromo-3-Chloropropa (14.540)+
-Hexachlorobutadiene (15.230)+
-Naphthalene (15.596)
-1,2,3-Trichlorobenzene (15.792)

Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9620.D
Report Date: 29-Jul-2021 13:50

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W072821.b\W9620.D
Lab Smp Id: WG303228-2
Inj Date : 28-JUL-2021 08:31
Operator : CR   Inst ID: gcms-w.i
Smp Info : WG303228-2
Misc Info :
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-w.i\W072821.b\W8A05(03).m
Meth Date : 29-Jul-2021 06:59 CROY   Quant Type: ISTD
Cal Date : 28-JUL-2021 08:31   Cal File: W9620.D
Als bottle: 2   Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12
Processing Host: T6-O360

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.345	1.345	(0.233)	51282	5.00000	5.0	
2	Chloromethane	50	1.486	1.490	(0.257)	61332	5.00000	4.7	
3	Vinyl chloride	62	1.537	1.538	(0.266)	41145	5.00000	4.6	
4	Bromomethane	94	1.762	1.762	(0.305)	9090	5.00000	5.0	
5	Chloroethane	64	1.852	1.849	(0.320)	16892	5.00000	6.1	
6	Trichlorofluoromethane	101	1.951	1.952	(0.338)	46664	5.00000	5.2	
7	Diethyl Ether	59	2.176	2.176	(0.377)	23442	5.00000	5.0	
8	1,1-Dichloroethene	96	2.333	2.333	(0.404)	29947	5.00000	4.9	
9	Freon-113	151	2.365	2.359	(0.409)	24628	5.00000	4.9	
10	Carbon Disulfide	76	2.362	2.366	(0.409)	67292	5.00000	4.5	
11	Iodomethane	142	2.455	2.455	(0.425)	8882	5.00000	2.2	
12	Acrolein	56	2.615	2.619	(0.453)	20843	25.0000	24.2	
13	Allyl Chloride	41	2.728	2.728	(0.472)	30650	5.00000	4.3	
14	Methylene Chloride	84	2.824	2.824	(0.489)	33949	5.00000	4.4(a)	
15	Acetone	43	2.878	2.879	(0.498)	46526	25.0000	24.7	
16	trans-1,2-Dichloroethene	96	2.968	2.969	(0.514)	32236	5.00000	4.6	
17	Methyl Acetate	43	2.991	2.991	(0.518)	17722	5.00000	4.6	
18	Methyl tert-butyl ether	73	3.081	3.078	(0.533)	72697	5.00000	4.6	
19	Tertiary-butyl alcohol	59	3.186	3.184	(0.551)	9308	25.0000	21.2	
20	Acetonitrile	41	3.340	3.341	(0.578)	48410	50.0000	49.0	
21	Di-isopropyl ether	45	3.475	3.473	(0.601)	108563	5.00000	4.5	
22	Chloroprene	53	3.578	3.582	(0.619)	56585	5.00000	4.3	
23	1,1-Dichloroethane	63	3.610	3.614	(0.625)	77119	5.00000	4.6	

Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9620.D
Report Date: 29-Jul-2021 13:50

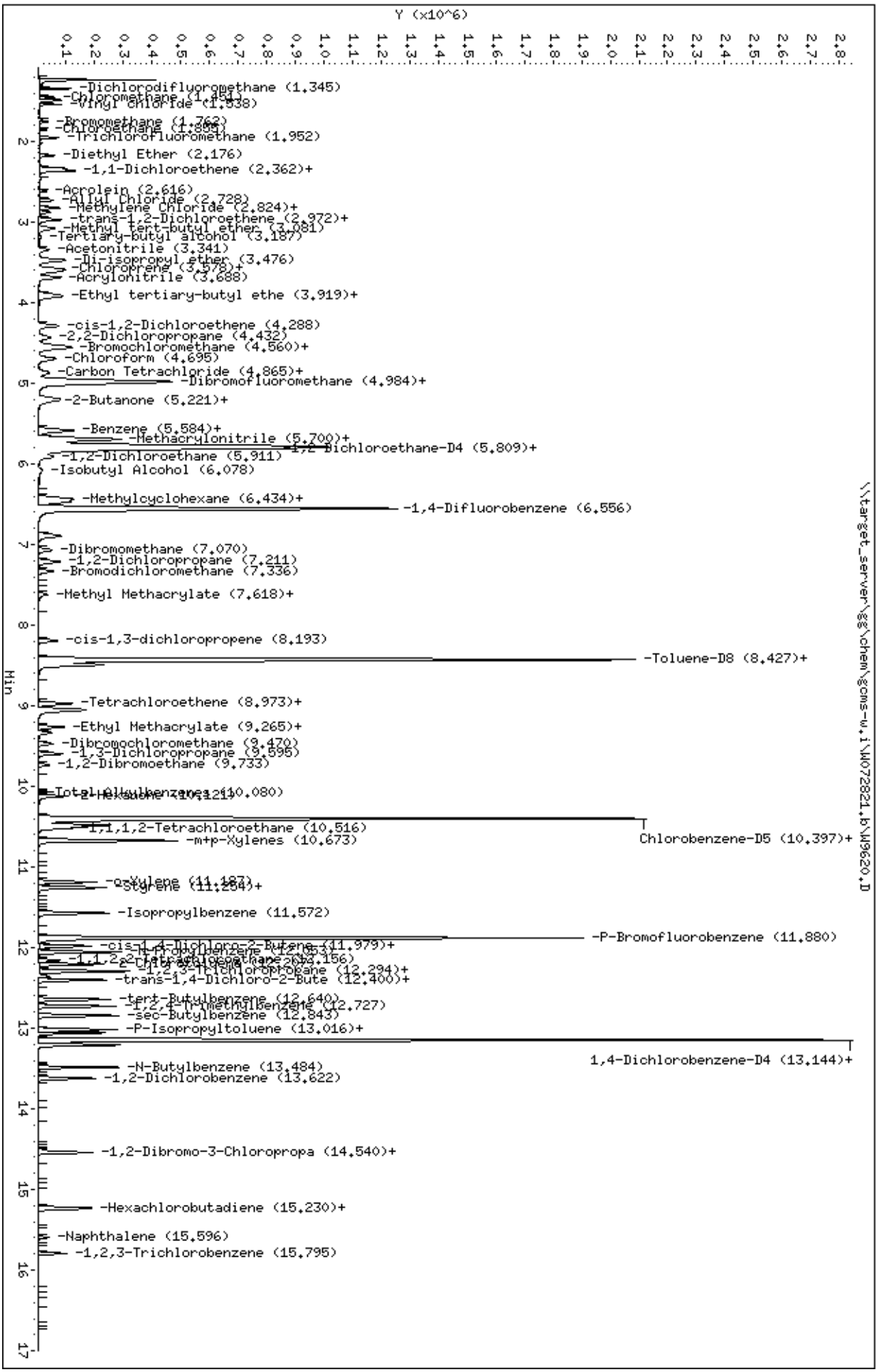
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	24 Acrylonitrile	52	3.687	3.688	(0.638)	61048	25.0000	23.7	
	25 Ethyl tertiary-butyl ether	59	3.912	3.906	(0.677)	87852	5.00000	4.3	
	26 Vinyl Acetate	43	3.925	3.928	(0.599)	57550	5.00000	4.5	
	27 cis-1,2-Dichloroethene	96	4.287	4.288	(0.742)	44045	5.00000	4.4	
	28 2,2-Dichloropropane	77	4.432	4.432	(0.767)	41052	5.00000	4.1	
	29 Bromochloromethane	128	4.560	4.564	(0.789)	20572	5.00000	5.0	
	30 Cyclohexane	56	4.537	4.541	(0.785)	68378	5.00000	4.6	
	31 Chloroform	83	4.695	4.695	(0.812)	76478	5.00000	4.7	
	32 Carbon Tetrachloride	117	4.865	4.872	(0.742)	41765	5.00000	4.3	
	33 Tetrahydrofuran	42	4.958	4.939	(0.858)	46928	25.0000	21.9	
$	34 Dibromofluoromethane	113	4.983	4.981	(0.862)	409960	50.0000	50.4	
	35 1,1,1-Trichloroethane	97	4.990	4.987	(0.863)	61632	5.00000	4.5	
	36 2-Butanone	43	5.221	5.212	(0.903)	71822	25.0000	23.6	
	37 1,1-Dichloropropene	75	5.189	5.193	(0.791)	55095	5.00000	4.5	
	38 Benzene	78	5.584	5.587	(0.852)	175603	5.00000	4.6	
	39 Propionitrile	54	5.673	5.671	(0.982)	55065	50.0000	49.4	
	40 Methacrylonitrile	41	5.699	5.693	(0.986)	195401	50.0000	50.5	
*	41 Pentafluorobenzene	168	5.779	5.780	(1.000)	903866	50.0000		
$	42 1,2-Dichloroethane-D4	65	5.808	5.809	(1.005)	469561	50.0000	51.6	
	43 Tertiary-amyl methyl ether	73	5.821	5.822	(1.007)	72754	5.00000	4.2	
	44 1,2-Dichloroethane	62	5.911	5.908	(0.902)	51786	5.00000	4.9	
	45 Isobutyl Alcohol	43	6.078	6.075	(1.052)	13379	100.000	69.0	
	46 Methylcyclohexane	83	6.431	6.431	(1.113)	72689	5.00000	4.4	
	47 Trichloroethene	95	6.472	6.473	(0.987)	42251	5.00000	4.6	
*	48 1,4-Difluorobenzene	114	6.556	6.556	(1.000)	1426429	50.0000		
	49 Dibromomethane	93	7.066	7.067	(1.078)	23622	5.00000	4.6	
	50 1,2-Dichloropropane	63	7.217	7.211	(1.101)	41979	5.00000	4.6	
	51 Bromodichloromethane	83	7.336	7.327	(1.119)	48065	5.00000	4.5	
	52 Methyl Methacrylate	41	7.615	7.612	(1.162)	17554	5.00000	3.6	
	53 Ethyl Methacrylate	69	9.332	9.332	(1.423)	33664	5.00000	3.7	
	54 1,4-Dioxane	88	7.656	7.635	(1.168)	5541	100.000	75.8	
M	55 Total Alkylbenzenes	100				1187036	5.00000	32.3	
	57 cis-1,3-dichloropropene	75	8.199	8.189	(1.251)	52500	5.00000	4.2	
$	58 Toluene-D8	98	8.427	8.427	(1.285)	1725603	50.0000	49.8	
	59 Toluene	92	8.491	8.494	(1.295)	111429	5.00000	4.6	
	60 Tetrachloroethene	164	8.969	8.973	(0.863)	35696	5.00000	4.4	
	61 4-methyl-2-pentanone	43	9.046	9.040	(1.380)	115304	25.0000	22.5	
	62 trans-1,3-Dichloropropene	75	9.068	9.069	(1.383)	45006	5.00000	4.2	
	63 1,1,2-Trichloroethane	83	9.264	9.265	(1.413)	29398	5.00000	4.7	
	64 Dibromochloromethane	129	9.470	9.467	(0.911)	33259	5.00000	4.3	
	65 1,3-Dichloropropane	76	9.598	9.595	(0.923)	63283	5.00000	4.7	
	66 1,2-Dibromoethane	107	9.736	9.733	(1.485)	32479	5.00000	4.5	
	67 2-Hexanone	43	10.121	10.115	(0.973)	69789	25.0000	20.3	
*	68 Chlorobenzene-D5	117	10.397	10.397	(1.000)	1380266	50.0000		
	69 Chlorobenzene	112	10.419	10.417	(1.002)	123555	5.00000	4.8	
	70 Ethylbenzene	91	10.480	10.481	(1.008)	204941	5.00000	4.7	
	71 1,1,1,2-Tetrachloroethane	131	10.516	10.519	(1.011)	35060	5.00000	4.4	
	72 m+p-Xylenes	91	10.673	10.673	(1.027)	306564	10.0000	9.7	
	73 o-Xylene	91	11.186	11.184	(1.076)	132795	5.00000	4.2	
	74 Styrene	104	11.254	11.254	(1.082)	109536	5.00000	4.4	
	75 Bromoform	173	11.260	11.257	(1.083)	19347	5.00000	4.0	
	76 Isopropylbenzene	105	11.571	11.569	(0.880)	176240	5.00000	4.6	
$	77 P-Bromofluorobenzene	95	11.879	11.880	(1.812)	705903	50.0000	49.7	
	78 cis-1,4-Dichloro-2-Butene	53	11.989	11.989	(0.912)	8816	5.00000	4.2	

Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9620.D
Report Date: 29-Jul-2021 13:50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	79 Bromobenzene	156	11.979	11.979	(0.911)	48050	5.00000	4.7	
	80 N-Propylbenzene	91	12.053	12.053	(0.917)	236197	5.00000	4.8	
	81 1,1,2,2-Tetrachloroethane	83	12.155	12.159	(0.925)	44095	5.00000	5.0	
	82 2-Chlorotoluene	91	12.207	12.207	(0.929)	139980	5.00000	4.8	
	83 1,2,3-Trichloropropane	75	12.287	12.287	(0.935)	37769	5.00000	5.0	
	84 1,3,5-Trimethylbenzene	105	12.293	12.294	(0.935)	151696	5.00000	4.6	
	85 trans-1,4-Dichloro-2-Butene	53	12.354	12.352	(0.940)	8802	5.00000	4.2	
	86 4-Chlorotoluene	91	12.399	12.400	(0.943)	145200	5.00000	4.8	
	87 tert-Butylbenzene	119	12.643	12.640	(0.962)	129631	5.00000	4.5	
	89 1,2,4-Trimethylbenzene	105	12.727	12.727	(0.968)	156075	5.00000	4.7	
	90 sec-Butylbenzene	105	12.842	12.843	(0.977)	208788	5.00000	4.8	
	91 P-Isopropyltoluene	119	13.015	13.016	(0.990)	158442	5.00000	4.5	
	92 1,3-Dichlorobenzene	146	13.057	13.058	(0.993)	95522	5.00000	4.7	
*	93 1,4-Dichlorobenzene-D4	152	13.144	13.144	(1.000)	750595	50.0000		
	94 1,4-Dichlorobenzene	146	13.160	13.160	(1.001)	101068	5.00000	4.8	
	95 1,2,3-Trimethylbenzene	105	13.208	13.205	(1.005)	169884	5.00000	4.7	
	96 N-Butylbenzene	91	13.481	13.481	(1.026)	146207	5.00000	4.4	
M	97 1,2-Dichloroethylene (total)	96				76281	5.00000	9.0	
	98 1,2-Dichlorobenzene	146	13.622	13.622	(1.036)	85393	5.00000	4.7	
	99 1,2-Dibromo-3-Chloropropane	157	14.511	14.511	(1.104)	5174	5.00000	3.9	
	100 1,3,5-Trichlorobenzene	180	14.540	14.540	(1.106)	60059	5.00000	4.1	
	101 Hexachlorobutadiene	225	15.226	15.227	(1.158)	31291	5.00000	4.3	
	102 1,2,4-Trichlorobenzene	180	15.242	15.243	(1.160)	34670	5.00000	3.5	
	103 Naphthalene	128	15.595	15.596	(1.187)	26852	5.00000	1.8	
	104 1,2,3-Trichlorobenzene	180	15.794	15.795	(1.202)	29642	5.00000	3.6	
M	105 Xylenes (total)	106				439359	15.0000	13.9	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).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Date : 28-JUL-2021 08:31
Client ID:
Sample Info: WG303228-2
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: CR
Column diameter: 0.18
\\target_server\gg\chem\gcms-w.i\W072821.b\W9620.D
Y (x10^6)
Min
-Dichlorodiflyoromethane (1,345)
-Chloromethane (1,454)
-Vinyl Chloride (1,538)
-Bromomethane (1,762)
-Chloroethane (1,884)
-Trichlorofluoromethane (1,952)
-Diethyl Ether (2,176)
-1,1-Dichloroethene (2,362)+
-Acrolein (2,616)
-Allyl Chloride (2,728)
-Methylene Chloride (2,824)+
-trans-1,2-Dichloroethene (2,972)+
-Methyl tert-butyl ether (3,081)
-Tertiary-butyl alcohol (3,187)
-Acetonitrile (3,341)
-Di-isopropyl ether (3,476)
-Chloroprene (3,578)+
-Acrylonitrile (3,688)
-Ethyl tertiary-butyl ethe (3,919)+
-cis-1,2-Dichloroethene (4,288)
-2,2-Dichloropropane (4,432)
-Bromochloromethane (4,560)+
-Chloroform (4,695)
-Carbon Tetrachloride (4,865)+
-Dibromofluoromethane (4,984)+
-2-Butanone (5,221)+
-Benzene (5,584)+
-Methacrylonitrile (5,700)+
1,2-Dichloroethane-D4 (5,809)+
-1,2-Dichloroethane (5,911)
-Isobutyl Alcohol (6,078)
-Methylcyclohexane (6,434)+
-1,4-Difluorobenzene (6,556)
-Dibromomethane (7,070)
-1,2-Dichloropropane (7,211)
-Bromodichloromethane (7,336)
-Methyl Methacrylate (7,618)+
-cis-1,3-dichloropropene (8,193)
-Toluene-D8 (8,427)+
-Tetrachloroethene (8,973)+
-Ethyl Methacrylate (9,265)+
-Dibromochloromethane (9,470)
-1,3-Dichloropropane (9,595)
-1,2-Dibromoethane (9,733)
Total Alkylbenzenes (10,080)
-2-Hexanone (10,121)+
-1,1,1,2-Tetrachloroethane (10,516)
Chlorobenzene-D5 (10,397)+
-m+p-Xylenes (10,673)
-o-Xylene (11,187)
-Styrene (11,284)+
-Isopropylbenzene (11,572)
-P-Bromofluorobenzene (11,880)
-cis-1,4-Dichloro-2-Butene (11,979)+
-N-Propylbenzene (12,053)
-1,1,2,2-Tetrachloroethane (12,156)
-2-Chlorotoluene (12,209)
-1,2,3-Trichloropropane (12,294)+
-trans-1,4-Dichloro-2-Bute (12,400)+
-tert-Butylbenzene (12,640)
-1,2,4-Trimethylbenzene (12,727)
-sec-Butylbenzene (12,843)
-P-Isopropyltoluene (13,016)+
1,4-Dichlorobenzene-D4 (13,144)+
-N-Butylbenzene (13,484)
-1,2-Dichlorobenzene (13,622)
-1,2-Dibromo-3-Chloropropa (14,540)+
-Hexachlorobutadiene (15,230)+
-Naphthalene (15,596)
-1,2,3-Trichlorobenzene (15,795)

Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9621.D
Report Date: 29-Jul-2021 13:50

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W072821.b\W9621.D
Lab Smp Id: WG303228-8
Inj Date : 28-JUL-2021 09:01
Operator : CR   Inst ID: gcms-w.i
Smp Info : WG303228-8
Misc Info :
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-w.i\W072821.b\W8A05(03).m
Meth Date : 29-Jul-2021 06:59 CROY   Quant Type: ISTD
Cal Date : 28-JUL-2021 09:01   Cal File: W9621.D
Als bottle: 3   Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12
Processing Host: T6-O360

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.348	1.345	(0.233)	106766	10.0000	10.4	
2	Chloromethane	50	1.489	1.490	(0.258)	123161	10.0000	9.4	
3	Vinyl chloride	62	1.540	1.538	(0.266)	84578	10.0000	9.4	
4	Bromomethane	94	1.765	1.762	(0.305)	15897	10.0000	8.7	
5	Chloroethane	64	1.855	1.849	(0.321)	32181	10.0000	11.6	
6	Trichlorofluoromethane	101	1.954	1.952	(0.338)	97905	10.0000	10.8	
7	Diethyl Ether	59	2.179	2.176	(0.377)	50548	10.0000	10.8	
8	1,1-Dichloroethene	96	2.336	2.333	(0.404)	59816	10.0000	9.7	
9	Freon-113	151	2.362	2.359	(0.408)	54994	10.0000	10.8	
10	Carbon Disulfide	76	2.365	2.366	(0.409)	139478	10.0000	9.2	
11	Iodomethane	142	2.461	2.455	(0.426)	28255	10.0000	7.0	
12	Acrolein	56	2.618	2.619	(0.453)	45967	50.0000	53.0	
13	Allyl Chloride	41	2.731	2.728	(0.472)	70069	10.0000	9.7	
14	Methylene Chloride	84	2.827	2.824	(0.489)	67374	10.0000	8.7	
15	Acetone	43	2.878	2.879	(0.498)	101498	50.0000	53.5	
16	trans-1,2-Dichloroethene	96	2.971	2.969	(0.514)	62822	10.0000	9.0	
17	Methyl Acetate	43	2.991	2.991	(0.517)	36695	10.0000	9.5	
18	Methyl tert-butyl ether	73	3.081	3.078	(0.533)	142232	10.0000	9.0	
19	Tertiary-butyl alcohol	59	3.190	3.184	(0.552)	22065	50.0000	49.8	
20	Acetonitrile	41	3.347	3.341	(0.579)	105904	100.000	106	
21	Di-isopropyl ether	45	3.475	3.473	(0.601)	244815	10.0000	10.0	
22	Chloroprene	53	3.584	3.582	(0.620)	130289	10.0000	9.9	
23	1,1-Dichloroethane	63	3.616	3.614	(0.625)	160887	10.0000	9.6	

Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9621.D
Report Date: 29-Jul-2021 13:50

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
	24	Acrylonitrile	52	3.690	3.688	(0.638)	136662	50.0000	52.7	
	25	Ethyl tertiary-butyl ether	59	3.912	3.906	(0.676)	204744	10.0000	9.9	
	26	Vinyl Acetate	43	3.931	3.928	(0.600)	129760	10.0000	10.0	
	27	cis-1,2-Dichloroethene	96	4.287	4.288	(0.741)	94312	10.0000	9.3	
	28	2,2-Dichloropropane	77	4.432	4.432	(0.766)	88646	10.0000	8.8	
	29	Bromochloromethane	128	4.566	4.564	(0.790)	41155	10.0000	9.9	
	30	Cyclohexane	56	4.541	4.541	(0.785)	152779	10.0000	10.1	
	31	Chloroform	83	4.695	4.695	(0.812)	155789	10.0000	9.6	
	32	Carbon Tetrachloride	117	4.874	4.872	(0.744)	91134	10.0000	9.3	
	33	Tetrahydrofuran	42	4.951	4.939	(0.856)	110214	50.0000	51.0	
$	34	Dibromofluoromethane	113	4.983	4.981	(0.862)	406856	50.0000	49.7	
	35	1,1,1-Trichloroethane	97	4.987	4.987	(0.862)	129184	10.0000	9.3	
	36	2-Butanone	43	5.218	5.212	(0.902)	162683	50.0000	53.1	
	37	1,1-Dichloropropene	75	5.198	5.193	(0.793)	116765	10.0000	9.4	
	38	Benzene	78	5.587	5.587	(0.853)	368512	10.0000	9.6	
	39	Propionitrile	54	5.673	5.671	(0.981)	123303	100.000	110	
	40	Methacrylonitrile	41	5.696	5.693	(0.985)	438776	100.000	113	
*	41	Pentafluorobenzene	168	5.782	5.780	(1.000)	911035	50.0000		
$	42	1,2-Dichloroethane-D4	65	5.808	5.809	(1.004)	465447	50.0000	50.7	
	43	Tertiary-amyl methyl ether	73	5.821	5.822	(1.007)	161055	10.0000	9.3	
	44	1,2-Dichloroethane	62	5.914	5.908	(0.903)	102871	10.0000	9.6	
	45	Isobutyl Alcohol	43	6.071	6.075	(1.050)	36650	200.000	188	
	46	Methylcyclohexane	83	6.434	6.431	(1.113)	170052	10.0000	10.2	
	47	Trichloroethene	95	6.476	6.473	(0.988)	87662	10.0000	9.4	
*	48	1,4-Difluorobenzene	114	6.553	6.556	(1.000)	1438906	50.0000		
	49	Dibromomethane	93	7.066	7.067	(1.078)	50786	10.0000	9.8	
	50	1,2-Dichloropropane	63	7.214	7.211	(1.101)	87430	10.0000	9.6	
	51	Bromodichloromethane	83	7.332	7.327	(1.119)	105116	10.0000	9.8	
	52	Methyl Methacrylate	41	7.615	7.612	(1.162)	45775	10.0000	9.3	
	53	Ethyl Methacrylate	69	9.332	9.332	(1.424)	88059	10.0000	9.7	
	54	1,4-Dioxane	88	7.637	7.635	(1.166)	15171	200.000	206	
M	55	Total Alkylbenzenes	100				2659684	10.0000	70.6	
	56	2-Chloroethylvinylether	63	8.163	8.157	(1.246)	2584	10.0000	5.9	
	57	cis-1,3-dichloropropene	75	8.196	8.189	(1.251)	113659	10.0000	8.9	
$	58	Toluene-D8	98	8.430	8.427	(1.286)	1748581	50.0000	50.0	
	59	Toluene	92	8.491	8.494	(1.296)	230264	10.0000	9.4	
	60	Tetrachloroethene	164	8.972	8.973	(0.863)	72875	10.0000	9.0	
	61	4-methyl-2-pentanone	43	9.043	9.040	(1.380)	275582	50.0000	53.4	
	62	trans-1,3-Dichloropropene	75	9.068	9.069	(1.384)	103225	10.0000	9.5	
	63	1,1,2-Trichloroethane	83	9.264	9.265	(1.414)	64273	10.0000	10.2	
	64	Dibromochloromethane	129	9.470	9.467	(0.911)	73423	10.0000	9.5	
	65	1,3-Dichloropropane	76	9.595	9.595	(0.923)	136924	10.0000	10.0	
	66	1,2-Dibromoethane	107	9.736	9.733	(1.486)	70008	10.0000	9.6	
	67	2-Hexanone	43	10.118	10.115	(0.973)	177617	100.000	51.6	
*	68	Chlorobenzene-D5	117	10.397	10.397	(1.000)	1385363	50.0000		
	69	Chlorobenzene	112	10.416	10.417	(1.002)	253308	10.0000	9.8	
	70	Ethylbenzene	91	10.480	10.481	(1.008)	426861	10.0000	9.7	
	71	1,1,1,2-Tetrachloroethane	131	10.519	10.519	(1.012)	75440	10.0000	9.5	
	72	m+p-Xylenes	91	10.670	10.673	(1.026)	657311	20.0000	20.6	
	73	o-Xylene	91	11.186	11.184	(1.076)	304710	10.0000	9.7	
	74	Styrene	104	11.257	11.254	(1.083)	249400	10.0000	9.9	
	75	Bromoform	173	11.260	11.257	(1.083)	45169	10.0000	9.4	
	76	Isopropylbenzene	105	11.571	11.569	(0.880)	398126	10.0000	10.0	
$	77	P-Bromofluorobenzene	95	11.879	11.880	(1.813)	712209	50.0000	49.7	

Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9621.D
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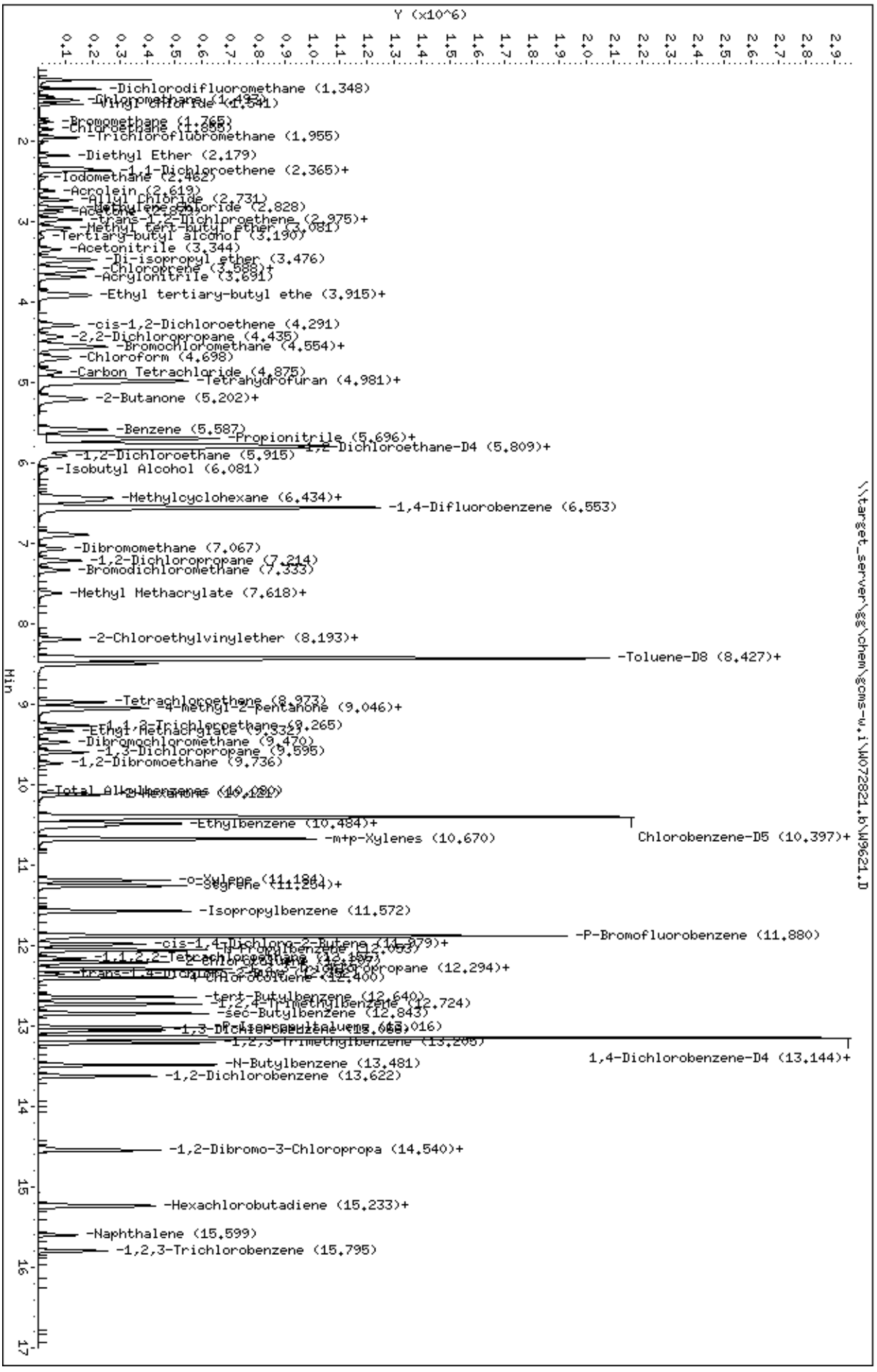
			QUANT SIG					AMOUNTS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	78	cis-1,4-Dichloro-2-Butene	53	11.992	11.989	(0.912)	21361	10.0000	10	
	79	Bromobenzene	156	11.979	11.979	(0.911)	100695	10.0000	9.6	
	80	N-Propylbenzene	91	12.053	12.053	(0.917)	513377	10.0000	10.2	
	81	1,1,2,2-Tetrachloroethane	83	12.159	12.159	(0.925)	93479	10.0000	10.3	
	82	2-Chlorotoluene	91	12.207	12.207	(0.929)	297772	10.0000	9.9	
	83	1,2,3-Trichloropropane	75	12.287	12.287	(0.935)	80780	10.0000	10.4	
	84	1,3,5-Trimethylbenzene	105	12.293	12.294	(0.935)	338513	10.0000	10.1	
	85	trans-1,4-Dichloro-2-Butene	53	12.351	12.352	(0.940)	21606	10.0000	10.1	
	86	4-Chlorotoluene	91	12.399	12.400	(0.943)	313464	10.0000	10.0	
	87	tert-Butylbenzene	119	12.640	12.640	(0.962)	292690	10.0000	9.8	
	89	1,2,4-Trimethylbenzene	105	12.723	12.727	(0.968)	346321	10.0000	10.2	
	90	sec-Butylbenzene	105	12.842	12.843	(0.977)	457443	10.0000	10.2	
	91	P-Isopropyltoluene	119	13.015	13.016	(0.990)	364158	10.0000	10.0	
	92	1,3-Dichlorobenzene	146	13.054	13.058	(0.993)	199828	10.0000	9.7	
*	93	1,4-Dichlorobenzene-D4	152	13.144	13.144	(1.000)	771094	50.0000		
	94	1,4-Dichlorobenzene	146	13.160	13.160	(1.001)	207405	10.0000	9.5	
	95	1,2,3-Trimethylbenzene	105	13.205	13.205	(1.005)	378333	10.0000	10.3	
	96	N-Butylbenzene	91	13.481	13.481	(1.026)	347182	10.0000	10.1	
M	97	1,2-Dichloroethylene (total)	96				157134	10.0000	18.3	
	98	1,2-Dichlorobenzene	146	13.622	13.622	(1.036)	182468	10.0000	9.7	
	99	1,2-Dibromo-3-Chloropropane	157	14.508	14.511	(1.104)	12085	10.0000	8.8	
	100	1,3,5-Trichlorobenzene	180	14.540	14.540	(1.106)	139857	10.0000	9.3	
	101	Hexachlorobutadiene	225	15.226	15.227	(1.158)	66631	10.0000	9.0	
	102	1,2,4-Trichlorobenzene	180	15.242	15.243	(1.160)	90063	10.0000	8.8	
	103	Naphthalene	128	15.599	15.596	(1.187)	108030	10.0000	7.2	
	104	1,2,3-Trichlorobenzene	180	15.794	15.795	(1.202)	78164	10.0000	9.2	
M	105	Xylenes (total)	106				962021	10.0000	30.4	


Y (x10^6)
Min
-Dichlorodifluoromethane (1.348)
-Chloromethane (1.435)
-Vinyl Chloride (1.541)
-Bromomethane (1.765)
-Chloroethane (1.868)
-Trichlorofluoromethane (1.955)
-Diethyl Ether (2.179)
-1,1-Dichloroethene (2.365)+
-Iodomethane (2.462)
-Acrolein (2.619)
-Allyl Chloride (2.731)
-Methylene Chloride (2.828)
-Acetone
-trans-1,2-Dichloroethene (2.975)+
-Methyl tert-butyl ether (3.081)
-Tertiary-butyl alcohol (3.190)
-Acetonitrile (3.344)
-Di-isopropyl ether (3.476)
-Chloroprene (3.588)+
-Acrylonitrile (3.691)
-Ethyl tertiary-butyl ethe (3.915)+
-cis-1,2-Dichloroethene (4.291)
-2,2-Dichloropropane (4.435)
-Bromochloromethane (4.554)+
-Chloroform (4.698)
-Carbon Tetrachloride (4.875)
-Tetrahydrofuran (4.981)+
-2-Butanone (5.202)+
-Benzene (5.587)
-Propionitrile (5.696)+
-1,2-Dichloroethane-D4 (5.809)+
-1,2-Dichloroethane (5.915)
-Isobutyl Alcohol (6.081)
-Methylcyclohexane (6.434)+
-1,4-Difluorobenzene (6.553)
-Dibromomethane (7.067)
-1,2-Dichloropropane (7.214)
-Bromodichloromethane (7.333)
-Methyl Methacrylate (7.618)+
-2-Chloroethylvinylether (8.193)+
-Toluene-D8 (8.427)+
-Tetrachloroethene (8.973)
-4-methyl-2-pentanone (9.046)+
-1,1,2-Trichloroethane (9.265)
-Ethyl Methacrylate (9.332)
-Dibromochloromethane (9.470)
-1,3-Dichloropropane (9.595)
-1,2-Dibromoethane (9.736)
-Total Alkylbenzenes (10.080)
-2-Hexanone (10.121)
-Ethylbenzene (10.484)+
-m+p-Xylenes (10.670)
Chlorobenzene-D5 (10.397)+
-o-Xylene (11.186)
-Styrene (11.254)+
-Isopropylbenzene (11.572)
-P-Bromofluorobenzene (11.880)
-cis-1,4-Dichloro-2-Butene (11.979)+
-n-Propylbenzene (12.093)
-1,1,2,2-Tetrachloroethane (12.197)
-2-Chlorotoluene (12.237)
-1,2,4-Trimethylbenzene (12.724)
-sec-Butylbenzene (12.843)
-1,3-Dichlorobenzene (13.016)
-1,2,3-Trimethylbenzene (13.205)
-N-Butylbenzene (13.481)
1,4-Dichlorobenzene-D4 (13.144)+
-1,2-Dichlorobenzene (13.622)
-1,2-Dibromo-3-Chloropropa (14.540)+
-Hexachlorobutadiene (15.233)+
-Naphthalene (15.599)
-1,2,3-Trichlorobenzene (15.795)
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Instrument: gcms-w.i
Operator: CR
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Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9622.D
Report Date: 29-Jul-2021 13:50

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W072821.b\W9622.D
Lab Smp Id: WG303228-3
Inj Date : 28-JUL-2021 09:32
Operator : CR   Inst ID: gcms-w.i
Smp Info : WG303228-3
Misc Info :
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-w.i\W072821.b\W8A05(03).m
Meth Date : 29-Jul-2021 06:59 CROY   Quant Type: ISTD
Cal Date : 28-JUL-2021 09:32   Cal File: W9622.D
Als bottle: 4   Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.348	1.345	(0.233)	217107	20.0000	21.4	
2	Chloromethane	50	1.489	1.490	(0.258)	249394	20.0000	19.6	
3	Vinyl chloride	62	1.540	1.538	(0.267)	174306	20.0000	19.8	
4	Bromomethane	94	1.765	1.762	(0.305)	29096	20.0000	16.8	
5	Chloroethane	64	1.855	1.849	(0.321)	59771	20.0000	21.1	
6	Trichlorofluoromethane	101	1.951	1.952	(0.338)	195083	20.0000	21.8	
7	Diethyl Ether	59	2.176	2.176	(0.377)	96494	20.0000	20.6	
8	1,1-Dichloroethene	96	2.336	2.333	(0.404)	123594	20.0000	20.5	
9	Freon-113	151	2.362	2.359	(0.409)	106035	20.0000	21.0	
10	Carbon Disulfide	76	2.365	2.366	(0.409)	281363	20.0000	19.2	
11	Iodomethane	142	2.458	2.455	(0.425)	84007	20.0000	20.9	
12	Acrolein	56	2.618	2.619	(0.453)	82605	100.000	96.3	
13	Allyl Chloride	41	2.728	2.728	(0.472)	141471	20.0000	20.0	
14	Methylene Chloride	84	2.827	2.824	(0.489)	132269	20.0000	18.0	
15	Acetone	43	2.878	2.879	(0.498)	178620	100.000	96.0	
16	trans-1,2-Dichloroethene	96	2.971	2.969	(0.514)	130468	20.0000	19.4	
17	Methyl Acetate	43	2.991	2.991	(0.518)	61886	20.0000	16.5	
18	Methyl tert-butyl ether	73	3.077	3.078	(0.533)	319105	20.0000	20.7	
19	Tertiary-butyl alcohol	59	3.190	3.184	(0.552)	42463	100.000	94.8	
20	Acetonitrile	41	3.347	3.341	(0.579)	200068	200.000	202	
21	Di-isopropyl ether	45	3.472	3.473	(0.601)	505572	20.0000	20.8	
22	Chloroprene	53	3.581	3.582	(0.620)	269218	20.0000	20.6	
23	1,1-Dichloroethane	63	3.613	3.614	(0.625)	335190	20.0000	20.4	
24	Acrylonitrile	52	3.690	3.688	(0.639)	260601	100.000	101	

Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9622.D
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	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	25 Ethyl tertiary-butyl ether	59	3.908	3.906	(0.676)	427045	20.0000	20.6	
	26 Vinyl Acetate	43	3.931	3.928	(0.600)	275252	20.0000	21.2	
	27 cis-1,2-Dichloroethene	96	4.290	4.288	(0.742)	198863	20.0000	20.0	
	28 2,2-Dichloropropane	77	4.425	4.432	(0.766)	201933	20.0000	20.1	
	29 Bromochloromethane	128	4.566	4.564	(0.790)	88768	20.0000	21.6	
	30 Cyclohexane	56	4.547	4.541	(0.787)	328859	20.0000	21.8	
	31 Chloroform	83	4.695	4.695	(0.812)	323341	20.0000	20.2	
	32 Carbon Tetrachloride	117	4.874	4.872	(0.744)	204255	20.0000	20.8	
	33 Tetrahydrofuran	42	4.948	4.939	(0.856)	228328	100.000	105	
$	34 Dibromofluoromethane	113	4.980	4.981	(0.862)	411330	50.0000	50.5	
	35 1,1,1-Trichloroethane	97	4.993	4.987	(0.864)	272577	20.0000	20.1	
	36 2-Butanone	43	5.218	5.212	(0.903)	326282	100.000	106	
	37 1,1-Dichloropropene	75	5.192	5.193	(0.792)	250187	20.0000	20.4	
	38 Benzene	78	5.583	5.587	(0.852)	765947	20.0000	20.5	
	39 Propionitrile	54	5.667	5.671	(0.981)	232216	200.000	207	
	40 Methacrylonitrile	41	5.693	5.693	(0.985)	843087	200.000	217	
*	41 Pentafluorobenzene	168	5.779	5.780	(1.000)	909752	50.0000		
$	42 1,2-Dichloroethane-D4	65	5.805	5.809	(1.004)	455108	50.0000	49.9	
	43 Tertiary-amyl methyl ether	73	5.821	5.822	(1.007)	341140	20.0000	19.7	
	44 1,2-Dichloroethane	62	5.911	5.908	(0.902)	212300	20.0000	20.3	
	45 Isobutyl Alcohol	43	6.074	6.075	(1.051)	75850	400.000	382	
	46 Methylcyclohexane	83	6.434	6.431	(1.113)	363169	20.0000	21.6	
	47 Trichloroethene	95	6.472	6.473	(0.987)	181825	20.0000	19.8	
*	48 1,4-Difluorobenzene	114	6.556	6.556	(1.000)	1429894	50.0000		
	49 Dibromomethane	93	7.072	7.067	(1.079)	104394	20.0000	20.4	
	50 1,2-Dichloropropane	63	7.210	7.211	(1.100)	186319	20.0000	20.7	
	51 Bromodichloromethane	83	7.332	7.327	(1.118)	220052	20.0000	20.5	
	52 Methyl Methacrylate	41	7.615	7.612	(1.162)	102475	20.0000	20.5	
	53 Ethyl Methacrylate	69	9.331	9.332	(1.423)	190621	20.0000	20.5	
	54 1,4-Dioxane	88	7.637	7.635	(1.165)	30814	400.000	409	
M	55 Total Alkylbenzenes	100				5780688	20.0000	155	
	56 2-Chloroethylvinylether	63	8.160	8.157	(1.245)	5829	20.0000	15.2	
	57 cis-1,3-dichloropropene	75	8.196	8.189	(1.250)	261669	20.0000	20.6	
$	58 Toluene-D8	98	8.427	8.427	(1.285)	1736438	50.0000	50.0	
	59 Toluene	92	8.491	8.494	(1.295)	480000	20.0000	20.2	
	60 Tetrachloroethene	164	8.972	8.973	(0.863)	156488	20.0000	19.4	
	61 4-methyl-2-pentanone	43	9.043	9.040	(1.379)	581728	100.000	110	
	62 trans-1,3-Dichloropropene	75	9.068	9.069	(1.383)	225699	20.0000	20.7	
	63 1,1,2-Trichloroethane	83	9.261	9.265	(1.413)	130112	20.0000	20.6	
	64 Dibromochloromethane	129	9.469	9.467	(0.911)	159878	20.0000	20.4	
	65 1,3-Dichloropropane	76	9.595	9.595	(0.923)	285478	20.0000	20.8	
	66 1,2-Dibromoethane	107	9.733	9.733	(1.485)	148116	20.0000	20.4	
	67 2-Hexanone	43	10.118	10.115	(0.973)	382042	100.000	116	
*	68 Chlorobenzene-D5	117	10.397	10.397	(1.000)	1394165	50.0000		
	69 Chlorobenzene	112	10.416	10.417	(1.002)	518966	20.0000	20.3	
	70 Ethylbenzene	91	10.483	10.481	(1.008)	901006	20.0000	20.9	
	71 1,1,1,2-Tetrachloroethane	131	10.519	10.519	(1.012)	161367	20.0000	20.2	
	72 m+p-Xylenes	91	10.670	10.673	(1.026)	1392039	40.0000	44.8	
	73 o-Xylene	91	11.183	11.184	(1.076)	681560	20.0000	21.8	
	74 Styrene	104	11.254	11.254	(1.082)	548559	20.0000	21.8	
	75 Bromoform	173	11.257	11.257	(1.083)	98306	20.0000	19.9	
	76 Isopropylbenzene	105	11.571	11.569	(0.880)	873371	20.0000	22.2	
$	77 P-Bromofluorobenzene	95	11.879	11.880	(1.812)	718782	50.0000	50.4	
	78 cis-1,4-Dichloro-2-Butene	53	11.985	11.989	(0.912)	43479	20.0000	19.9	

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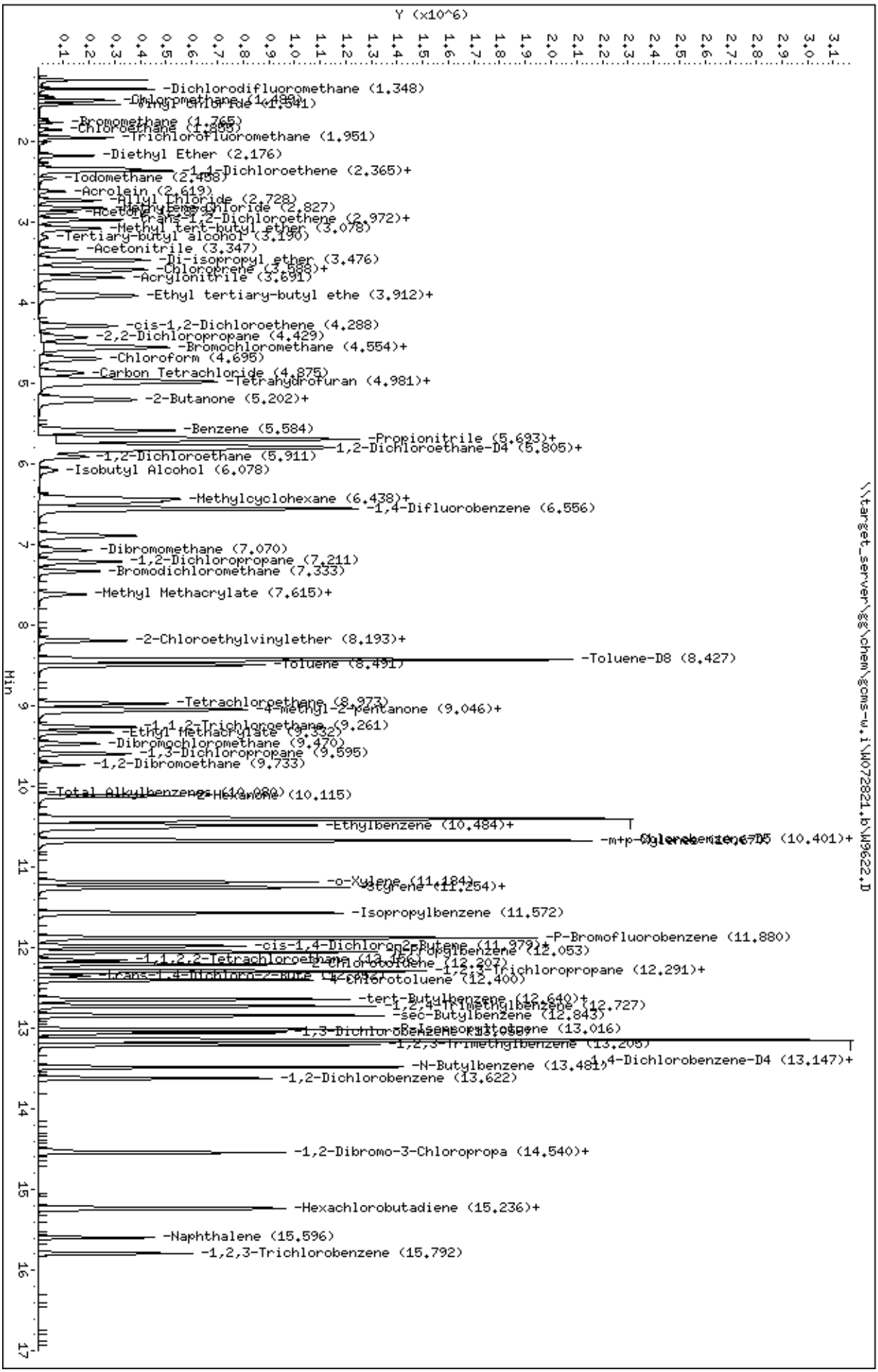
Report Date: 29-Jul-2021 13:50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	79 Bromobenzene	156	11.979	11.979	(0.911)	210953	20.0000	20.1	
	80 N-Propylbenzene	91	12.053	12.053	(0.917)	1094426	20.0000	22.1	
	81 1,1,2,2-Tetrachloroethane	83	12.155	12.159	(0.925)	188524	20.0000	20.6	
	82 2-Chlorotoluene	91	12.207	12.207	(0.929)	632409	20.0000	21.2	
	83 1,2,3-Trichloropropane	75	12.284	12.287	(0.935)	162227	20.0000	20.9	
	84 1,3,5-Trimethylbenzene	105	12.293	12.294	(0.935)	734764	20.0000	22.1	
	85 trans-1,4-Dichloro-2-Butene	53	12.351	12.352	(0.940)	44840	20.0000	20.4	
	86 4-Chlorotoluene	91	12.399	12.400	(0.943)	665586	20.0000	21.5	
	87 tert-Butylbenzene	119	12.640	12.640	(0.962)	636731	20.0000	21.5	
	88 Pentachloroethane	165	12.653	12.653	(0.963)	1327	20.0000	20.0	
	89 1,2,4-Trimethylbenzene	105	12.726	12.727	(0.968)	749365	20.0000	22.1	
	90 sec-Butylbenzene	105	12.842	12.843	(0.977)	988055	20.0000	22.2	
	91 P-Isopropyltoluene	119	13.015	13.016	(0.990)	808288	20.0000	22.4	
	92 1,3-Dichlorobenzene	146	13.057	13.058	(0.993)	418603	20.0000	20.3	
*	93 1,4-Dichlorobenzene-D4	152	13.144	13.144	(1.000)	778538	50.0000		
	94 1,4-Dichlorobenzene	146	13.160	13.160	(1.001)	433476	20.0000	20.1	
	95 1,2,3-Trimethylbenzene	105	13.205	13.205	(1.005)	778006	20.0000	21.3	
	96 N-Butylbenzene	91	13.481	13.481	(1.026)	769059	20.0000	22.5	
M	97 1,2-Dichloroethylene (total)	96				329331	20.0000	39.4	
	98 1,2-Dichlorobenzene	146	13.622	13.622	(1.036)	387944	20.0000	20.6	
	99 1,2-Dibromo-3-Chloropropane	157	14.511	14.511	(1.104)	26077	20.0000	18.6	
	100 1,3,5-Trichlorobenzene	180	14.540	14.540	(1.106)	299477	20.0000	19.9	
	101 Hexachlorobutadiene	225	15.223	15.227	(1.158)	142526	20.0000	19.1	
	102 1,2,4-Trichlorobenzene	180	15.242	15.243	(1.160)	217464	20.0000	20.7	
	103 Naphthalene	128	15.595	15.596	(1.187)	315662	20.0000	20.3	
	104 1,2,3-Trichlorobenzene	180	15.791	15.795	(1.201)	180379	20.0000	20.6	
M	105 Xylenes (total)	106				2073599	60.0000	66.6	



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Client ID:
Sample Info: WG303228-3
Purge Volume: 5.0
Column phase: RTX-VMS

Instrument: gcms-w.i
Operator: CR
Column diameter: 0.18

Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9623.D
Report Date: 29-Jul-2021 13:50

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W072821.b\W9623.D
Lab Smp Id: WG303228-4
Inj Date : 28-JUL-2021 10:02
Operator : CR   Inst ID: gcms-w.i
Smp Info : WG303228-4
Misc Info :
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Meth Date : 29-Jul-2021 06:59 CROY   Quant Type: ISTD
Cal Date : 27-JUL-2021 13:13   Cal File: W9613.D
Als bottle: 5   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.345	1.345	(0.233)	543491	50.0000	(a)	
2	Chloromethane	50	1.489	1.490	(0.258)	618313	50.0000	(a)	
3	Vinyl chloride	62	1.537	1.538	(0.266)	453846	50.0000	(a)	
4	Bromomethane	94	1.762	1.762	(0.305)	71197	50.0000	(a)	
5	Chloroethane	64	1.848	1.849	(0.320)	113978	50.0000	(a)	
6	Trichlorofluoromethane	101	1.951	1.952	(0.338)	470280	50.0000	(a)	
7	Diethyl Ether	59	2.176	2.176	(0.377)	240435	50.0000	(a)	
8	1,1-Dichloroethene	96	2.333	2.333	(0.404)	303728	50.0000	(a)	
9	Freon-113	151	2.359	2.359	(0.408)	264412	50.0000	(a)	
10	Carbon Disulfide	76	2.365	2.366	(0.409)	707614	50.0000	(a)	
11	Iodomethane	142	2.455	2.455	(0.425)	269190	50.0000	(a)	
12	Acrolein	56	2.619	2.619	(0.453)	221764	250.000	(a)	
13	Allyl Chloride	41	2.728	2.728	(0.472)	370339	50.0000	(a)	
14	Methylene Chloride	84	2.824	2.824	(0.489)	316960	50.0000	(a)	
15	Acetone	43	2.878	2.879	(0.498)	425914	250.000	(a)	
16	trans-1,2-Dichloroethene	96	2.968	2.969	(0.514)	319568	50.0000	(a)	
17	Methyl Acetate	43	2.991	2.991	(0.518)	175313	50.0000	(a)	
18	Methyl tert-butyl ether	73	3.077	3.078	(0.533)	796838	50.0000	(a)	
19	Tertiary-butyl alcohol	59	3.183	3.184	(0.551)	128192	250.000	(a)	
20	Acetonitrile	41	3.341	3.341	(0.578)	517292	500.000	(a)	
21	Di-isopropyl ether	45	3.472	3.473	(0.601)	1312873	50.0000	(a)	
22	Chloroprene	53	3.581	3.582	(0.620)	694743	50.0000	(a)	
23	1,1-Dichloroethane	63	3.613	3.614	(0.625)	831508	50.0000	(a)	
24	Acrylonitrile	52	3.687	3.688	(0.638)	691532	250.000	(a)	

Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9623.D
Report Date: 29-Jul-2021 13:50

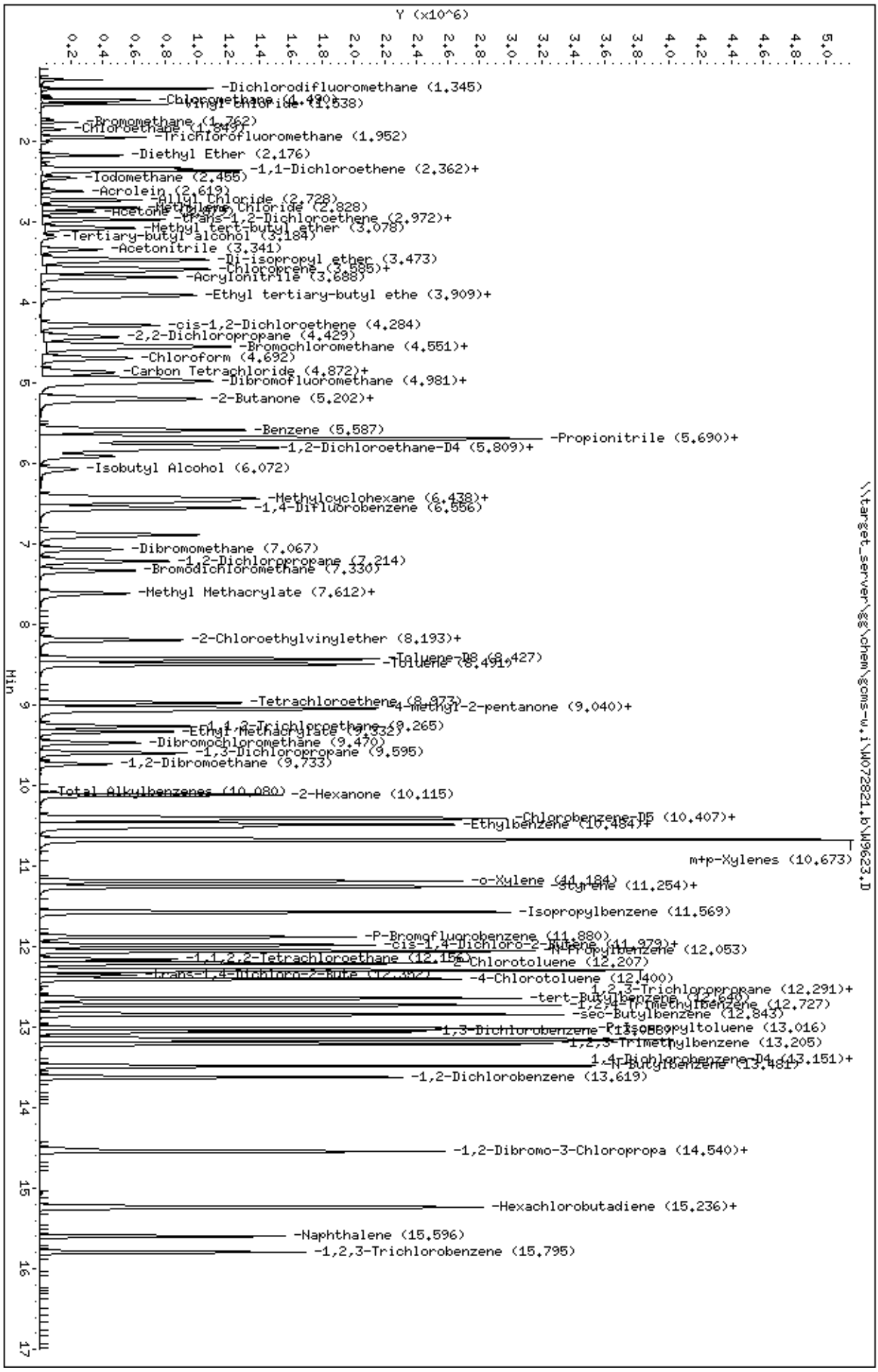
		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	25	Ethyl tertiary-butyl ether	59	3.905	3.906	(0.676)	1139759	50.0000	(a)	
	26	Vinyl Acetate	43	3.928	3.928	(0.599)	708939	50.0000	(a)	
	27	cis-1,2-Dichloroethene	96	4.287	4.288	(0.742)	507169	50.0000	(a)	
	28	2,2-Dichloropropane	77	4.432	4.432	(0.767)	548312	50.0000	(a)	
	29	Bromochloromethane	128	4.563	4.564	(0.790)	204242	50.0000	(a)	
	30	Cyclohexane	56	4.541	4.541	(0.786)	833461	50.0000	(a)	
	31	Chloroform	83	4.695	4.695	(0.812)	794157	50.0000	(a)	
	32	Carbon Tetrachloride	117	4.871	4.872	(0.743)	543309	50.0000	(a)	
	33	Tetrahydrofuran	42	4.939	4.939	(0.855)	614224	250.000	(a)	
$	34	Dibromofluoromethane	113	4.980	4.981	(0.862)	425792	50.0000	(a)	
	35	1,1,1-Trichloroethane	97	4.987	4.987	(0.863)	698147	50.0000	(a)	
	36	2-Butanone	43	5.211	5.212	(0.902)	845517	250.000	(a)	
	37	1,1-Dichloropropene	75	5.192	5.193	(0.792)	649054	50.0000	(a)	
	38	Benzene	78	5.587	5.587	(0.852)	1917092	50.0000	(a)	
	39	Propionitrile	54	5.670	5.671	(0.981)	611221	500.000	(a)	
	40	Methacrylonitrile	41	5.693	5.693	(0.985)	2132910	500.000	(a)	
*	41	Pentafluorobenzene	168	5.779	5.780	(1.000)	941510	50.0000		
$	42	1,2-Dichloroethane-D4	65	5.808	5.809	(1.005)	467270	50.0000	(a)	
	43	Tertiary-amyl methyl ether	73	5.821	5.822	(1.007)	940537	50.0000	(a)	
	44	1,2-Dichloroethane	62	5.908	5.908	(0.901)	517154	50.0000	(a)	
	45	Isobutyl Alcohol	43	6.075	6.075	(1.051)	241504	1000.00	(a)	
	46	Methylcyclohexane	83	6.431	6.431	(1.113)	953923	50.0000	(a)	
	47	Trichloroethene	95	6.472	6.473	(0.987)	458520	50.0000	(a)	
*	48	1,4-Difluorobenzene	114	6.556	6.556	(1.000)	1488981	50.0000		
	49	Dibromomethane	93	7.066	7.067	(1.078)	259166	50.0000	(a)	
	50	1,2-Dichloropropane	63	7.210	7.211	(1.100)	468940	50.0000	(a)	
	51	Bromodichloromethane	83	7.326	7.327	(1.117)	563067	50.0000	(a)	
	52	Methyl Methacrylate	41	7.612	7.612	(1.161)	296154	50.0000	(a)	
	53	Ethyl Methacrylate	69	9.332	9.332	(1.423)	561926	50.0000	(a)	
	54	1,4-Dioxane	88	7.634	7.635	(1.164)	89918	1000.00	(a)	
M	55	Total Alkylbenzenes	100				14541462	50.0000	(a)	
	56	2-Chloroethylvinylether	63	8.157	8.157	(1.244)	19891	50.0000	(a)	
	57	cis-1,3-dichloropropene	75	8.189	8.189	(1.249)	709919	50.0000	(a)	
$	58	Toluene-D8	98	8.427	8.427	(1.285)	1793231	50.0000	(a)	
	59	Toluene	92	8.494	8.494	(1.296)	1200190	50.0000	(a)	
	60	Tetrachloroethene	164	8.972	8.973	(0.863)	407499	50.0000	(a)	
	61	4-methyl-2-pentanone	43	9.040	9.040	(1.379)	1545412	250.000	(a)	
	62	trans-1,3-Dichloropropene	75	9.068	9.069	(1.383)	604270	50.0000	(a)	
	63	1,1,2-Trichloroethane	83	9.264	9.265	(1.413)	329667	50.0000	(a)	
	64	Dibromochloromethane	129	9.466	9.467	(0.910)	425920	50.0000	(a)	
	65	1,3-Dichloropropane	76	9.595	9.595	(0.923)	725551	50.0000	(a)	
	66	1,2-Dibromoethane	107	9.733	9.733	(1.485)	383544	50.0000	(a)	
	67	2-Hexanone	43	10.115	10.115	(0.973)	1046250	250.000	(a)	
*	68	Chlorobenzene-D5	117	10.397	10.397	(1.000)	1436663	50.0000		
	69	Chlorobenzene	112	10.416	10.417	(1.002)	1282879	50.0000	(a)	
	70	Ethylbenzene	91	10.480	10.481	(1.008)	2224844	50.0000	(a)	
	71	1,1,1,2-Tetrachloroethane	131	10.519	10.519	(1.012)	415688	50.0000	(a)	
	72	m+p-Xylenes	91	10.673	10.673	(1.027)	3324938	100.000	(a)	
	73	o-Xylene	91	11.183	11.184	(1.076)	1747876	50.0000	(a)	
	74	Styrene	104	11.254	11.254	(1.082)	1418570	50.0000	(a)	
	75	Bromoform	173	11.257	11.257	(1.083)	276295	50.0000	(a)	
	76	Isopropylbenzene	105	11.568	11.569	(0.880)	2212189	50.0000	(a)	
$	77	P-Bromofluorobenzene	95	11.879	11.880	(1.812)	740479	50.0000	(a)	
	78	cis-1,4-Dichloro-2-Butene	53	11.989	11.989	(0.912)	125417	50.0000	(a)	

Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9623.D
Report Date: 29-Jul-2021 13:50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	79 Bromobenzene	156	11.979	11.979	(0.911)	539835	50.0000	(a)	
	80 N-Propylbenzene	91	12.053	12.053	(0.917)	2668128	50.0000	(a)	
	81 1,1,2,2-Tetrachloroethane	83	12.159	12.159	(0.925)	488847	50.0000	(a)	
	82 2-Chlorotoluene	91	12.207	12.207	(0.929)	1573581	50.0000	(a)	
	83 1,2,3-Trichloropropane	75	12.287	12.287	(0.935)	414596	50.0000	(a)	
	84 1,3,5-Trimethylbenzene	105	12.293	12.294	(0.935)	1844931	50.0000	(a)	
	85 trans-1,4-Dichloro-2-Butene	53	12.351	12.352	(0.940)	125107	50.0000	(a)	
	86 4-Chlorotoluene	91	12.399	12.400	(0.943)	1642256	50.0000	(a)	
	87 tert-Butylbenzene	119	12.640	12.640	(0.962)	1646200	50.0000	(a)	
	89 1,2,4-Trimethylbenzene	105	12.727	12.727	(0.968)	1894375	50.0000	(a)	
	90 sec-Butylbenzene	105	12.842	12.843	(0.977)	2453831	50.0000	(a)	
	91 P-Isopropyltoluene	119	13.015	13.016	(0.990)	2069833	50.0000	(a)	
	92 1,3-Dichlorobenzene	146	13.057	13.058	(0.993)	1072613	50.0000	(a)	
*	93 1,4-Dichlorobenzene-D4	152	13.144	13.144	(1.000)	823599	50.0000		
	94 1,4-Dichlorobenzene	146	13.160	13.160	(1.001)	1101515	50.0000	(a)	
	95 1,2,3-Trimethylbenzene	105	13.205	13.205	(1.005)	1969694	50.0000	(a)	
	96 N-Butylbenzene	91	13.481	13.481	(1.026)	1964164	50.0000	(a)	
M	97 1,2-Dichloroethylene (total)	96				826737	50.0000	(a)	
	98 1,2-Dichlorobenzene	146	13.622	13.622	(1.036)	993395	50.0000	(a)	
	99 1,2-Dibromo-3-Chloropropane	157	14.511	14.511	(1.104)	79318	50.0000	(a)	
	100 1,3,5-Trichlorobenzene	180	14.540	14.540	(1.106)	823377	50.0000	(a)	
	101 Hexachlorobutadiene	225	15.226	15.227	(1.158)	384007	50.0000	(a)	
	102 1,2,4-Trichlorobenzene	180	15.242	15.243	(1.160)	637516	50.0000	(a)	
	103 Naphthalene	128	15.595	15.596	(1.187)	1124341	50.0000	(a)	
	104 1,2,3-Trichlorobenzene	180	15.794	15.795	(1.202)	521872	50.0000	(a)	
M	105 Xylenes (total)	106				5072814	150.000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).


Y (x10^6)
Min
Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9623.D
Date : 28-JUL-2021 10:02
Client ID:
Sample Info: WG303228-4
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: CR
Column diameter: 0.18
\\target_server\gg\chem\gcms-w.i\W072821.b\W9623.D
-Dichlorodifluoromethane (1.345)
-Chloromethane (1.490)
Vinyl chloride (1.538)
-Bromomethane (1.762)
-Chloroethane (1.849)
-Trichlorofluoromethane (1.952)
-Diethyl Ether (2.176)
-1,1-Dichloroethene (2.362)+
-Iodomethane (2.455)
-Acrolein (2.619)
-Allyl Chloride (2.728)
-Methylene Chloride (2.828)
-Acetone
-trans-1,2-Dichloroethene (2.972)+
-Methyl tert-butyl ether (3.078)
-Tertiary-butyl alcohol (3.184)
-Acetonitrile (3.341)
-Di-isopropyl ether (3.473)
-Chloroprene (3.585)+
-Acrylonitrile (3.688)
-Ethyl tertiary-butyl ethe (3.909)+
-cis-1,2-Dichloroethene (4.284)
-2,2-Dichloropropane (4.429)
-Bromochloromethane (4.551)+
-Chloroform (4.692)
-Carbon Tetrachloride (4.872)+
-Dibromofluoromethane (4.981)+
-2-Butanone (5.202)+
-Benzene (5.587)
-Propionitrile (5.690)+
-1,2-Dichloroethane-D4 (5.809)+
-Isobutyl Alcohol (6.072)
-Methylcyclohexane (6.438)+
-1,4-Difluorobenzene (6.556)
-Dibromomethane (7.067)
-1,2-Dichloropropane (7.214)
-Bromodichloromethane (7.330)
-Methyl Methacrylate (7.612)+
-2-Chloroethylvinylether (8.193)+
-Toluene-D8 (8.427)
-Toluene (8.491)
-Tetrachloroethene (8.977)
-4-Methyl-2-pentanone (9.040)+
-Ethyl Methacrylate (9.332)
-1,1,2-Trichloroethane (9.265)
-Dibromochloromethane (9.470)
-1,3-Dichloropropane (9.595)
-1,2-Dibromoethane (9.733)
-Total Alkylbenzenes (10.080)
-2-Hexanone (10.115)
-Chlorobenzene-D5 (10.407)+
-Ethylbenzene (10.484)+
m+p-Xylenes (10.673)
-o-Xylene (11.184)
-Styrene (11.254)+
-Isopropylbenzene (11.569)
-P-Bromofluorobenzene (11.880)
-cis-1,4-Dichloro-2-Butene (11.979)+
-N-Propylbenzene (12.053)
-1,1,2,2-Tetrachloroethane (12.156)
-2-Chlorotoluene (12.207)
-trans-1,4-Dichloro-2-Bute (12.302)
-4-Chlorotoluene (12.400)
-1,2,3-Trichloropropane (12.291)+
-tert-Butylbenzene (12.649)
-1,2,4-Trimethylbenzene (12.727)
-sec-Butylbenzene (12.843)
-1,3-Dichlorobenzene (13.008)
-P-Isopropyltoluene (13.016)
-1,2,3-Trimethylbenzene (13.205)
-1,4-Dichlorobenzene-D4 (13.151)+
-N-Butylbenzene (13.481)
-1,2-Dichlorobenzene (13.619)
-1,2-Dibromo-3-Chloropropa (14.540)+
-Hexachlorobutadiene (15.236)+
-Naphthalene (15.596)
-1,2,3-Trichlorobenzene (15.795)

Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9624.D
Report Date: 29-Jul-2021 13:50

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Data file : \\target_server\gg\chem\gcms-w.i\W072821.b\W9624.D
Lab Smp Id: WG303228-7
Inj Date : 28-JUL-2021 10:33
Operator : CR   Inst ID: gcms-w.i
Smp Info : WG303228-7
Misc Info :
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-w.i\W072821.b\W8A05(03).m
Meth Date : 29-Jul-2021 06:59 CROY   Quant Type: ISTD
Cal Date : 28-JUL-2021 10:33   Cal File: W9624.D
Als bottle: 6   Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12
Processing Host: T6-O360

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.345	1.345	(0.233)	765463	75.0000	70.9	
2	Chloromethane	50	1.486	1.490	(0.257)	864381	75.0000	62.7	
3	Vinyl chloride	62	1.537	1.538	(0.266)	649040	75.0000	68.2	
4	Bromomethane	94	1.762	1.762	(0.305)	108647	75.0000	56.4	
5	Chloroethane	64	1.848	1.849	(0.320)	133470	75.0000	45.7	
6	Trichlorofluoromethane	101	1.948	1.952	(0.337)	648007	75.0000	67.7	
7	Diethyl Ether	59	2.173	2.176	(0.376)	356488	75.0000	72.3	
8	1,1-Dichloroethene	96	2.333	2.333	(0.404)	429913	75.0000	66.0	
9	Freon-113	151	2.359	2.359	(0.408)	376958	75.0000	70.5	
10	Carbon Disulfide	76	2.362	2.366	(0.409)	1018867	75.0000	63.8	
11	Iodomethane	142	2.455	2.455	(0.425)	428963	75.0000	101	
12	Acrolein	56	2.615	2.619	(0.453)	336185	375.000	368	
13	Allyl Chloride	41	2.728	2.728	(0.472)	552877	75.0000	72.5	
14	Methylene Chloride	84	2.824	2.824	(0.489)	474511	75.0000	58.0	
15	Acetone	43	2.878	2.879	(0.498)	633188	375.000	317	
16	trans-1,2-Dichloroethene	96	2.968	2.969	(0.514)	487127	75.0000	66.2	
17	Methyl Acetate	43	2.988	2.991	(0.517)	276515	75.0000	68.2	
18	Methyl tert-butyl ether	73	3.074	3.078	(0.532)	1217545	75.0000	73.4	
19	Tertiary-butyl alcohol	59	3.187	3.184	(0.551)	208353	375.000	447	
20	Acetonitrile	41	3.344	3.341	(0.579)	768515	750.000	733	
21	Di-isopropyl ether	45	3.469	3.473	(0.600)	1962258	75.0000	76.3	
22	Chloroprene	53	3.581	3.582	(0.620)	1008676	75.0000	72.6	
23	1,1-Dichloroethane	63	3.610	3.614	(0.625)	1214452	75.0000	69.0	

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Report Date: 29-Jul-2021 13:50

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
	24	Acrylonitrile	52	3.687	3.688	(0.638)	1020697	375.000	374	
	25	Ethyl tertiary-butyl ether	59	3.905	3.906	(0.676)	1756140	75.0000	81.0	
	26	Vinyl Acetate	43	3.925	3.928	(0.599)	1180948	75.0000	87.9	
	27	cis-1,2-Dichloroethene	96	4.284	4.288	(0.741)	759613	75.0000	71.4	
	28	2,2-Dichloropropane	77	4.432	4.432	(0.767)	835098	75.0000	78.4	
	29	Bromochloromethane	128	4.566	4.564	(0.790)	304827	75.0000	69.4	
	30	Cyclohexane	56	4.544	4.541	(0.786)	1224680	75.0000	77.1	
	31	Chloroform	83	4.695	4.695	(0.812)	1183594	75.0000	69.0	
	32	Carbon Tetrachloride	117	4.868	4.872	(0.743)	808645	75.0000	79.4	
	33	Tetrahydrofuran	42	4.939	4.939	(0.855)	934287	375.000	411	
$	34	Dibromofluoromethane	113	4.977	4.981	(0.861)	422325	50.0000	49.0	
	35	1,1,1-Trichloroethane	97	4.984	4.987	(0.862)	1032286	75.0000	70.9	
	36	2-Butanone	43	5.211	5.212	(0.902)	1247165	375.000	386	
	37	1,1-Dichloropropene	75	5.192	5.193	(0.792)	943552	75.0000	73.0	
	38	Benzene	78	5.587	5.587	(0.853)	2811185	75.0000	70.7	
	39	Propionitrile	54	5.667	5.671	(0.981)	900199	750.000	761	
	40	Methacrylonitrile	41	5.693	5.693	(0.985)	3063634	750.000	747	
*	41	Pentafluorobenzene	168	5.779	5.780	(1.000)	959059	50.0000		
$	42	1,2-Dichloroethane-D4	65	5.808	5.809	(1.005)	473069	50.0000	49.0	
	43	Tertiary-amyl methyl ether	73	5.815	5.822	(1.006)	1478744	75.0000	81.4	
	44	1,2-Dichloroethane	62	5.908	5.908	(0.902)	772138	75.0000	69.8	
	45	Isobutyl Alcohol	43	6.071	6.075	(1.051)	370191	1500.00	1800	
	46	Methylcyclohexane	83	6.431	6.431	(1.113)	1392600	75.0000	79.2	
	47	Trichloroethene	95	6.472	6.473	(0.988)	680243	75.0000	70.1	
*	48	1,4-Difluorobenzene	114	6.553	6.556	(1.000)	1494722	50.0000		
	49	Dibromomethane	93	7.066	7.067	(1.078)	396234	75.0000	73.7	
	50	1,2-Dichloropropane	63	7.214	7.211	(1.101)	700121	75.0000	74.0	
	51	Bromodichloromethane	83	7.332	7.327	(1.119)	856552	75.0000	76.9	
	52	Methyl Methacrylate	41	7.612	7.612	(1.162)	463659	75.0000	90.6	
	53	Ethyl Methacrylate	69	9.328	9.332	(1.424)	877397	75.0000	93.0	
	54	1,4-Dioxane	88	7.628	7.635	(1.164)	139577	1500.00	1820	
M	55	Total Alkylbenzenes	100				21037466	75.0000	518	
	56	2-Chloroethylvinylether	63	8.157	8.157	(1.245)	35524	75.0000	78.0	
	57	cis-1,3-dichloropropene	75	8.192	8.189	(1.250)	1092019	75.0000	82.6	
$	58	Toluene-D8	98	8.427	8.427	(1.286)	1816070	50.0000	50.0	
	59	Toluene	92	8.491	8.494	(1.296)	1764004	75.0000	69.5	
	60	Tetrachloroethene	164	8.975	8.973	(0.863)	604092	75.0000	70.8	
	61	4-methyl-2-pentanone	43	9.040	9.040	(1.379)	2293256	375.000	428	
	62	trans-1,3-Dichloropropene	75	9.068	9.069	(1.384)	933306	75.0000	83.0	
	63	1,1,2-Trichloroethane	83	9.261	9.265	(1.413)	504659	75.0000	76.9	
	64	Dibromochloromethane	129	9.470	9.467	(0.911)	659448	75.0000	81.5	
	65	1,3-Dichloropropane	76	9.595	9.595	(0.923)	1096415	75.0000	76.8	
	66	1,2-Dibromoethane	107	9.733	9.733	(1.485)	591712	75.0000	78.3	
	67	2-Hexanone	43	10.115	10.115	(0.973)	1585527	375.000	439	
*	68	Chlorobenzene-D5	117	10.397	10.397	(1.000)	1453035	50.0000		
	69	Chlorobenzene	112	10.416	10.417	(1.002)	1897226	75.0000	70.0	
	70	Ethylbenzene	91	10.480	10.481	(1.008)	3217186	75.0000	70.0	
	71	1,1,1,2-Tetrachloroethane	131	10.516	10.519	(1.011)	637960	75.0000	76.9	
	72	m+p-Xylenes	91	10.670	10.673	(1.026)	4613111	150.000	138	
	73	o-Xylene	91	11.183	11.184	(1.076)	2545670	75.0000	77.5	
	74	Styrene	104	11.254	11.254	(1.082)	2105762	75.0000	79.9	
	75	Bromoform	173	11.257	11.257	(1.083)	444018	75.0000	87.8	
	76	Isopropylbenzene	105	11.568	11.569	(0.880)	3190711	75.0000	74.1	
$	77	P-Bromofluorobenzene	95	11.879	11.880	(1.813)	746483	50.0000	50.2	

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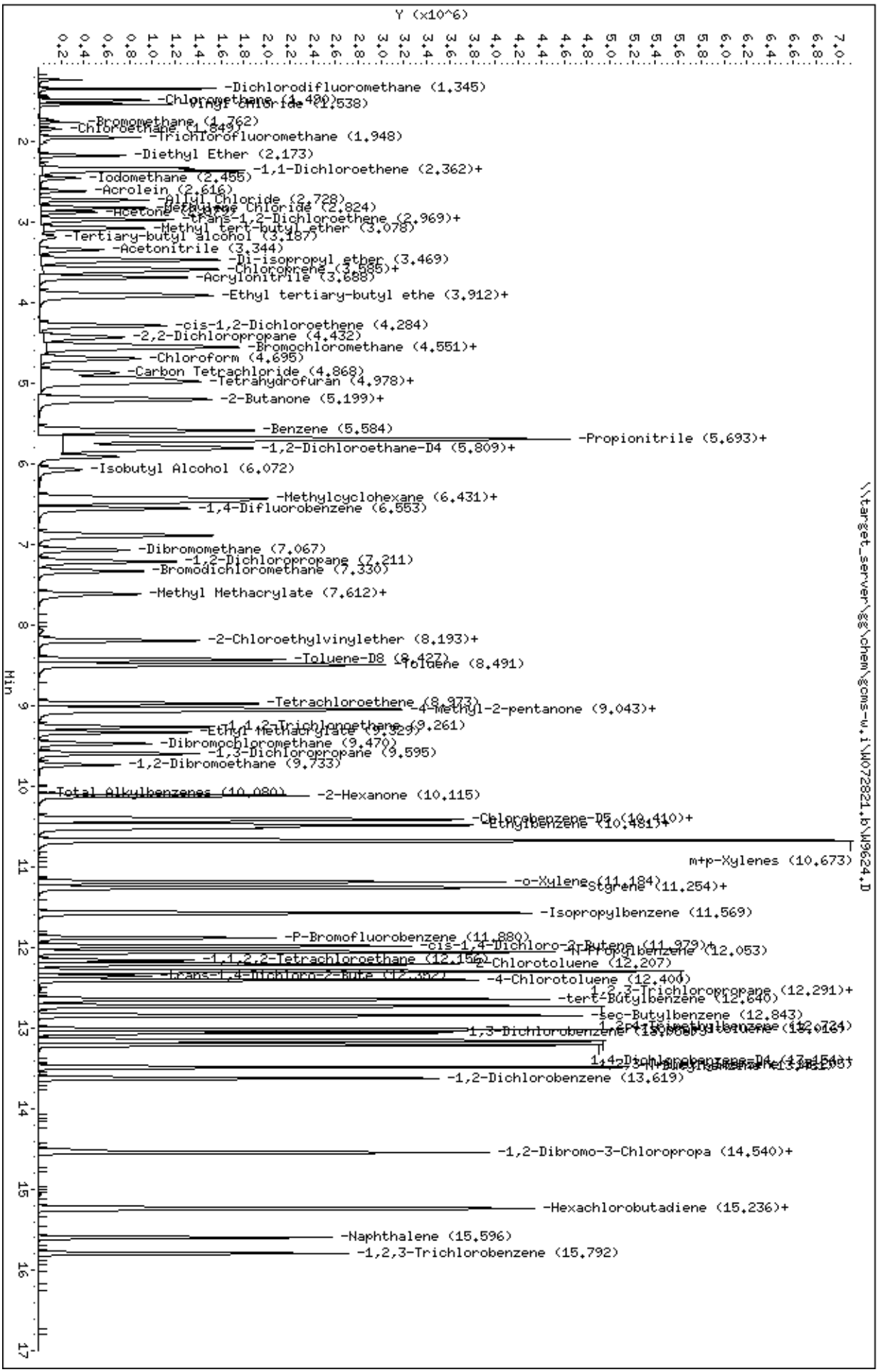
Report Date: 29-Jul-2021 13:50

			QUANT SIG					AMOUNTS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	78	cis-1,4-Dichloro-2-Butene	53	11.989	11.989	(0.912)	195787	75.0000	84.1	
	79	Bromobenzene	156	11.979	11.979	(0.911)	824455	75.0000	72.6	
	80	N-Propylbenzene	91	12.053	12.053	(0.917)	3757249	75.0000	68.7	
	81	1,1,2,2-Tetrachloroethane	83	12.155	12.159	(0.925)	748240	75.0000	75.9	
	82	2-Chlorotoluene	91	12.207	12.207	(0.929)	2315141	75.0000	70.8	
	83	1,2,3-Trichloropropane	75	12.284	12.287	(0.935)	624166	75.0000	74.4	
	84	1,3,5-Trimethylbenzene	105	12.293	12.294	(0.935)	2694046	75.0000	74.2	
	85	trans-1,4-Dichloro-2-Butene	53	12.351	12.352	(0.940)	197990	75.0000	85.4	
	86	4-Chlorotoluene	91	12.399	12.400	(0.943)	2417349	75.0000	71.3	
	87	tert-Butylbenzene	119	12.640	12.640	(0.962)	2427123	75.0000	75.4	
	89	1,2,4-Trimethylbenzene	105	12.723	12.727	(0.968)	2768070	75.0000	74.9	
	90	sec-Butylbenzene	105	12.842	12.843	(0.977)	3514443	75.0000	71.9	
	91	P-Isopropyltoluene	119	13.015	13.016	(0.990)	3013140	75.0000	76.4	
	92	1,3-Dichlorobenzene	146	13.057	13.058	(0.993)	1614914	75.0000	72.0	
*	93	1,4-Dichlorobenzene-D4	152	13.144	13.144	(1.000)	836617	50.0000		
	94	1,4-Dichlorobenzene	146	13.163	13.160	(1.001)	1664067	75.0000	70.3	
	95	1,2,3-Trimethylbenzene	105	13.205	13.205	(1.005)	2865110	75.0000	71.6	
	96	N-Butylbenzene	91	13.481	13.481	(1.026)	2863395	75.0000	76.7	
M	97	1,2-Dichloroethylene (total)	96				1246740	75.0000	138	
	98	1,2-Dichlorobenzene	146	13.622	13.622	(1.036)	1528933	75.0000	75.1	
	99	1,2-Dibromo-3-Chloropropane	157	14.511	14.511	(1.104)	132391	75.0000	89.2	
	100	1,3,5-Trichlorobenzene	180	14.540	14.540	(1.106)	1270880	75.0000	78.2	
	101	Hexachlorobutadiene	225	15.226	15.227	(1.158)	600006	75.0000	74.3	
	102	1,2,4-Trichlorobenzene	180	15.242	15.243	(1.160)	1025003	75.0000	92.7	
	103	Naphthalene	128	15.595	15.596	(1.187)	1858722	75.0000	114	
	104	1,2,3-Trichlorobenzene	180	15.794	15.795	(1.202)	843643	75.0000	91.9	
M	105	Xylenes (total)	106				7158781	225.000	216	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Client ID:
Sample Info: WG303228-7
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Instrument: gcms-w.i
Operator: CR
Column diameter: 0.18
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Y (x10^6)
Min
-Dichlorodifluoromethane (1.345)
-Chloromethane (1.420)
-Vinyl Chloride (1.538)
-Bromomethane (1.762)
-Chloroethane (1.849)
-Trichlorofluoromethane (1.948)
-Diethyl Ether (2.173)
-1,1-Dichloroethene (2.362)+
-Iodomethane (2.455)
-Acrolein (2.616)
-Allyl Chloride (2.728)
-Methylene Chloride (2.824)
-Acetone
-trans-1,2-Dichloroethene (2.969)+
-Methyl tert-butyl ether (3.078)
-Tertiary-butyl alcohol (3.187)
-Acetonitrile (3.344)
-Di-isopropyl ether (3.469)
-Chloroprene (3.685)+
-Acrylonitrile (3.688)
-Ethyl tertiary-butyl ethe (3.912)+
-cis-1,2-Dichloroethene (4.284)
-2,2-Dichloropropane (4.432)
-Bromochloromethane (4.551)+
-Chloroform (4.695)
-Carbon Tetrachloride (4.868)
-Tetrahydrofuran (4.978)+
-2-Butanone (5.199)+
-Benzene (5.584)
-Propionitrile (5.693)+
-1,2-Dichloroethane-D4 (5.809)+
-Isobutyl Alcohol (6.072)
-Methylcyclohexane (6.431)+
-1,4-Difluorobenzene (6.553)
-Dibromomethane (7.067)
-1,2-Dichloropropane (7.211)
-Bromodichloromethane (7.330)
-Methyl Methacrylate (7.612)+
-2-Chloroethylvinylether (8.193)+
-Toluene-D8 (8.427)
Toluene (8.491)
-Tetrachloroethene (8.973)
-4-Methyl-2-pentanone (9.043)+
-1,1,2-Trichloroethane (9.261)
-Ethyl Methacrylate (9.329)
-Dibromochloromethane (9.470)
-1,3-Dichloropropane (9.595)
-1,2-Dibromoethane (9.733)
-Total Alkylbenzenes (10.080)
-2-Hexanone (10.115)
-Chlorobenzene-D5 (10.410)+
-Ethylbenzene (10.481)+
m+p-Xylenes (10.673)
-o-Xylene (11.184)
-Styrene (11.254)+
-Isopropylbenzene (11.569)
-P-Bromofluorobenzene (11.880)
-cis-1,4-Dichloro-2-Butene (11.979)+
-n-Propylbenzene (12.053)
-1,1,2,2-Tetrachloroethane (12.156)
-2-Chlorotoluene (12.207)
-trans-1,4-Dichloro-2-Bute (12.402)
-4-Chlorotoluene (12.400)
-1,2,3-Trichloropropane (12.291)+
-tert-Butylbenzene (12.640)
-sec-Butylbenzene (12.843)
-1,3-Dichlorobenzene
-1,2-Dichlorobenzene (13.619)
-1,2-Dibromo-3-Chloropropa (14.540)+
-Hexachlorobutadiene (15.236)+
-Naphthalene (15.596)
-1,2,3-Trichlorobenzene (15.792)

Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9625.D
Report Date: 29-Jul-2021 13:50

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W072821.b\W9625.D
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Inj Date : 28-JUL-2021 11:04
Operator : CR   Inst ID: gcms-w.i
Smp Info : WG303228-5
Misc Info :
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Method   : \\target_server\gg\chem\gcms-w.i\W072821.b\W8A05(03).m
Meth Date : 29-Jul-2021 06:59 CROY   Quant Type: ISTD
Cal Date : 28-JUL-2021 11:04   Cal File: W9625.D
Als bottle: 7   Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12
Processing Host: T6-O360

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.348	1.345	(0.233)	1011609	100.000	93.8	
2	Chloromethane	50	1.489	1.490	(0.258)	1149283	100.000	98.6	
3	Vinyl chloride	62	1.540	1.538	(0.266)	873810	100.000	93.2	
4	Bromomethane	94	1.762	1.762	(0.305)	145896	100.000	101	
5	Chloroethane	64	1.848	1.849	(0.320)	156282	100.000	97.4	
6	Trichlorofluoromethane	101	1.951	1.952	(0.337)	863003	100.000	90.6	
7	Diethyl Ether	59	2.176	2.176	(0.376)	472656	100.000	95.0	
8	1,1-Dichloroethene	96	2.336	2.333	(0.404)	586947	100.000	91.5	
9	Freon-113	151	2.362	2.359	(0.408)	515471	100.000	95.9	
10	Carbon Disulfide	76	2.365	2.366	(0.409)	1390971	100.000	104	
11	Iodomethane	142	2.458	2.455	(0.425)	592375	100.000	104	
12	Acrolein	56	2.619	2.619	(0.453)	449851	500.000	492	
13	Allyl Chloride	41	2.731	2.728	(0.472)	750392	100.000	99.7	
14	Methylene Chloride	84	2.827	2.824	(0.489)	635195	100.000	103	
15	Acetone	43	2.878	2.879	(0.498)	839035	500.000	512	
16	trans-1,2-Dichloroethene	96	2.968	2.969	(0.513)	651628	100.000	103	
17	Methyl Acetate	43	2.991	2.991	(0.517)	358720	100.000	102	
18	Methyl tert-butyl ether	73	3.077	3.078	(0.532)	1596566	100.000	97.3	
19	Tertiary-butyl alcohol	59	3.190	3.184	(0.552)	246632	500.000	517	
20	Acetonitrile	41	3.344	3.341	(0.578)	999264	1000.00	949	
21	Di-isopropyl ether	45	3.472	3.473	(0.600)	2599000	100.000	100	
22	Chloroprene	53	3.581	3.582	(0.619)	1358164	100.000	97.8	
23	1,1-Dichloroethane	63	3.610	3.614	(0.624)	1628807	100.000	93.4	

Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9625.D
Report Date: 29-Jul-2021 13:50

11:37 am, Aug 10, 2021

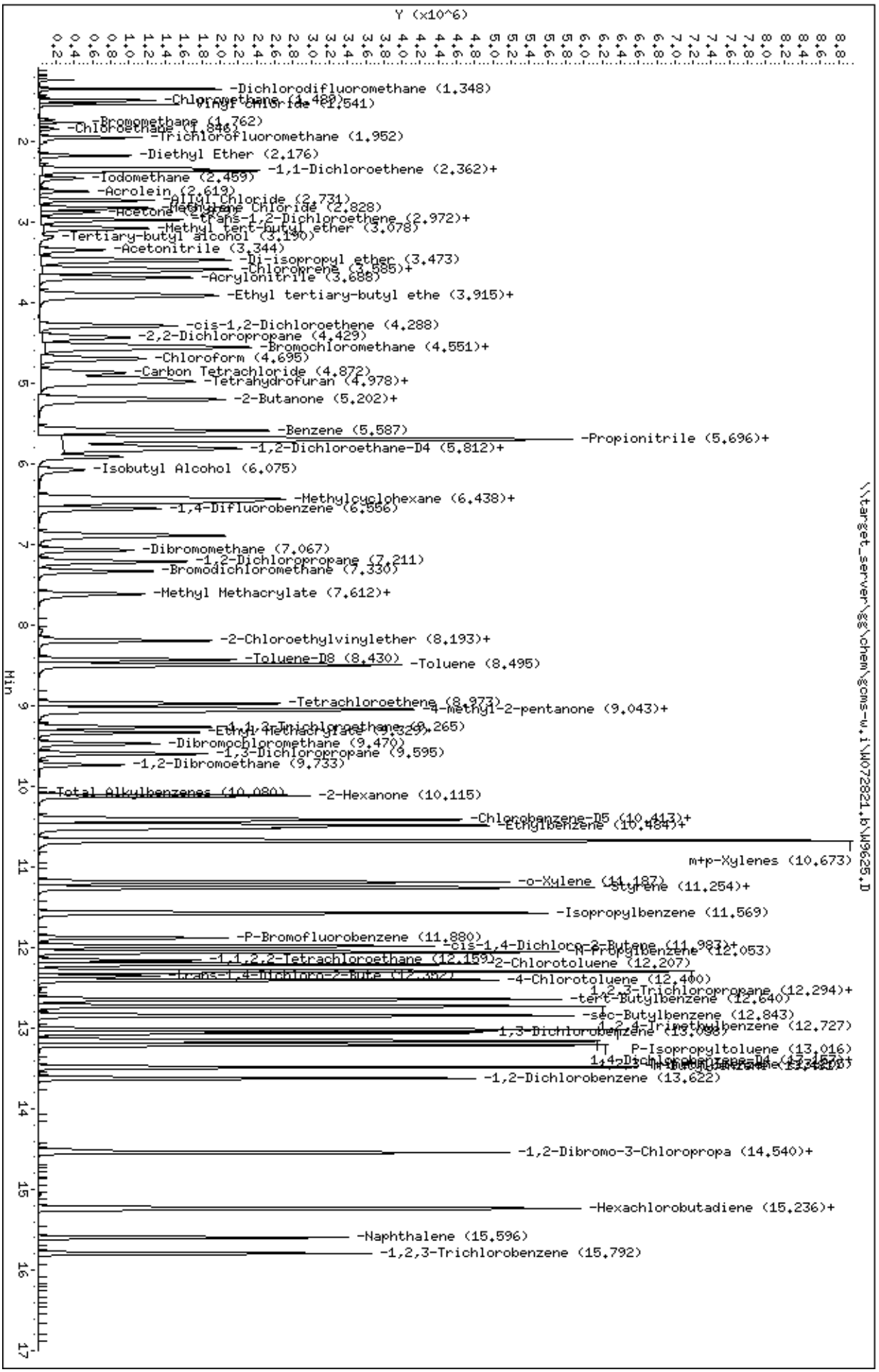
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	24 Acrylonitrile	52	3.687	3.688	(0.638)	1337260	500.000	487	
	25 Ethyl tertiary-butyl ether	59	3.905	3.906	(0.675)	2352808	100.000	107	
	26 Vinyl Acetate	43	3.928	3.928	(0.599)	1439993	100.000	105	
	27 cis-1,2-Dichloroethene	96	4.287	4.288	(0.741)	1033741	100.000	97.9	
	28 2,2-Dichloropropane	77	4.432	4.432	(0.766)	1066234	100.000	99.8(M)	M6
	29 Bromochloromethane	128	4.570	4.564	(0.790)	399141	100.000	91.3	
	30 Cyclohexane	56	4.544	4.541	(0.786)	1641113	100.000	102	
	31 Chloroform	83	4.695	4.695	(0.812)	1573651	100.000	92.6	
	32 Carbon Tetrachloride	117	4.871	4.872	(0.743)	1107357	100.000	107	
	33 Tetrahydrofuran	42	4.935	4.939	(0.854)	1217758	500.000	528	
$	34 Dibromofluoromethane	113	4.983	4.981	(0.862)	429510	50.0000	49.5	
	35 1,1,1-Trichloroethane	97	4.990	4.987	(0.863)	1406524	100.000	97.2	
	36 2-Butanone	43	5.215	5.212	(0.902)	1637795	500.000	502	
	37 1,1-Dichloropropene	75	5.192	5.193	(0.792)	1284347	100.000	99.4	
	38 Benzene	78	5.587	5.587	(0.852)	3737493	100.000	94.8	
	39 Propionitrile	54	5.673	5.671	(0.981)	1165969	1000.00	978	
	40 Methacrylonitrile	41	5.696	5.693	(0.985)	3899260	1000.00	944	
*	41 Pentafluorobenzene	168	5.783	5.780	(1.000)	968669	50.0000		
$	42 1,2-Dichloroethane-D4	65	5.811	5.809	(1.005)	473261	50.0000	48.7	
	43 Tertiary-amyl methyl ether	73	5.818	5.822	(1.006)	2011423	100.000	109	
	44 1,2-Dichloroethane	62	5.911	5.908	(0.902)	1028633	100.000	93.5	
	45 Isobutyl Alcohol	43	6.075	6.075	(1.050)	516015	2000.00	2040	
	46 Methylcyclohexane	83	6.434	6.431	(1.113)	1874853	100.000	105	
	47 Trichloroethene	95	6.476	6.473	(0.988)	921443	100.000	95.1	
*	48 1,4-Difluorobenzene	114	6.556	6.556	(1.000)	1507619	50.0000		
	49 Dibromomethane	93	7.066	7.067	(1.078)	532249	100.000	98.4	
	50 1,2-Dichloropropane	63	7.214	7.211	(1.100)	939061	100.000	98.8	
	51 Bromodichloromethane	83	7.332	7.327	(1.118)	1148181	100.000	102	
	52 Methyl Methacrylate	41	7.608	7.612	(1.161)	613366	100.000	100	
	53 Ethyl Methacrylate	69	9.332	9.332	(1.423)	1173211	100.000	101	
	54 1,4-Dioxane	88	7.631	7.635	(1.164)	184759	2000.00	2040	
M	55 Total Alkylbenzenes	100				26905752	100.000	669	
	56 2-Chloroethylvinylether	63	8.160	8.157	(1.245)	49663	100.000	123	
	57 cis-1,3-dichloropropene	75	8.192	8.189	(1.250)	1466783	100.000	109	
$	58 Toluene-D8	98	8.430	8.427	(1.286)	1833157	50.0000	50.1	
	59 Toluene	92	8.494	8.494	(1.296)	2347632	100.000	93.9	
	60 Tetrachloroethene	164	8.975	8.973	(0.863)	828004	100.000	97.6	
	61 4-methyl-2-pentanone	43	9.040	9.040	(1.379)	2958679	500.000	533	
	62 trans-1,3-Dichloropropene	75	9.068	9.069	(1.383)	1254874	100.000	109	
	63 1,1,2-Trichloroethane	83	9.264	9.265	(1.413)	666738	100.000	99.9	
	64 Dibromochloromethane	129	9.470	9.467	(0.911)	883991	100.000	107	
	65 1,3-Dichloropropane	76	9.595	9.595	(0.923)	1446348	100.000	100	
	66 1,2-Dibromoethane	107	9.733	9.733	(1.485)	785862	100.000	103	
	67 2-Hexanone	43	10.115	10.115	(0.973)	2072789	500.000	508	
*	68 Chlorobenzene-D5	117	10.397	10.397	(1.000)	1465180	50.0000		
	69 Chlorobenzene	112	10.416	10.417	(1.002)	2500914	100.000	93.0	
	70 Ethylbenzene	91	10.484	10.481	(1.008)	4164728	100.000	92.1	
	71 1,1,1,2-Tetrachloroethane	131	10.519	10.519	(1.012)	861791	100.000	103	
	72 m+p-Xylenes	91	10.673	10.673	(1.027)	5715787	200.000	175	
	73 o-Xylene	91	11.186	11.184	(1.076)	3347351	100.000	102	
	74 Styrene	104	11.254	11.254	(1.082)	2759695	100.000	104	
	75 Bromoform	173	11.257	11.257	(1.083)	599496	100.000	98.7	
	76 Isopropylbenzene	105	11.568	11.569	(0.880)	4119830	100.000	96.4	
$	77 P-Bromofluorobenzene	95	11.879	11.880	(1.812)	758025	50.0000	50.4	

Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9625.D
Report Date: 29-Jul-2021 13:50

			QUANT SIG					AMOUNTS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	78	cis-1,4-Dichloro-2-Butene	53	11.989	11.989	(0.912)	259003	100.000	109	
	79	Bromobenzene	156	11.979	11.979	(0.911)	1102749	100.000	96.9	
	80	N-Propylbenzene	91	12.053	12.053	(0.917)	4720686	100.000	88.0	
	81	1,1,2,2-Tetrachloroethane	83	12.155	12.159	(0.925)	979053	100.000	98.4	
	82	2-Chlorotoluene	91	12.207	12.207	(0.929)	3020929	100.000	93.2	
	83	1,2,3-Trichloropropane	75	12.284	12.287	(0.935)	811899	100.000	96.2	
	84	1,3,5-Trimethylbenzene	105	12.293	12.294	(0.935)	3491248	100.000	96.6	
	85	trans-1,4-Dichloro-2-Butene	53	12.354	12.352	(0.940)	261237	100.000	110	
	86	4-Chlorotoluene	91	12.399	12.400	(0.943)	3127835	100.000	93.0	
	87	tert-Butylbenzene	119	12.640	12.640	(0.962)	3185508	100.000	99.2	
	89	1,2,4-Trimethylbenzene	105	12.727	12.727	(0.968)	3554421	100.000	96.5	
	90	sec-Butylbenzene	105	12.842	12.843	(0.977)	4463423	100.000	92.5	
	91	P-Isopropyltoluene	119	13.015	13.016	(0.990)	3846624	100.000	98.0	
	92	1,3-Dichlorobenzene	146	13.057	13.058	(0.993)	2142686	100.000	95.8	
*	93	1,4-Dichlorobenzene-D4	152	13.144	13.144	(1.000)	845185	50.0000		
	94	1,4-Dichlorobenzene	146	13.163	13.160	(1.001)	2182733	100.000	93.1	
	95	1,2,3-Trimethylbenzene	105	13.205	13.205	(1.005)	3664217	100.000	92.4	
	96	N-Butylbenzene	91	13.481	13.481	(1.026)	3643842	100.000	98.2	
M	97	1,2-Dichloroethylene (total)	96				1685369	100.000	201	
	98	1,2-Dichlorobenzene	146	13.622	13.622	(1.036)	2009401	100.000	98.5	
	99	1,2-Dibromo-3-Chloropropane	157	14.511	14.511	(1.104)	182482	100.000	99.9	
	100	1,3,5-Trichlorobenzene	180	14.540	14.540	(1.106)	1688856	100.000	103	
	101	Hexachlorobutadiene	225	15.226	15.227	(1.158)	814798	100.000	101	
	102	1,2,4-Trichlorobenzene	180	15.242	15.243	(1.160)	1380697	100.000	98.8	
	103	Naphthalene	128	15.595	15.596	(1.187)	2488867	100.000	102	
	104	1,2,3-Trichlorobenzene	180	15.791	15.795	(1.201)	1137902	100.000	99.2	
M	105	Xylenes (total)	106				9063138	300.000	277	

QC Flag Legend

M - Compound response manually integrated.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Date : 28-JUL-2021 11:04
Client ID:
Sample Info: WG303228-5
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: CR
Column diameter: 0.18
\\target_server\gg\chem\gcms-w.i\W072821.b\W9625.D
-Dichlorodifluoromethane (1.348)
-Chloromethane (1.488)
-Vinyl Chloride (1.541)
-Bromomethane (1.762)
-Chloroethane (1.846)
-Trichlorofluoromethane (1.952)
-Diethyl Ether (2.176)
-1,1-Dichloroethene (2.362)+
-Iodomethane (2.459)
-Acrolein (2.619)
-Allyl Chloride (2.731)
-Methylene Chloride (2.828)
-Acetone
-trans-1,2-Dichloroethene (2.972)+
-Methyl tert-butyl ether (3.078)
-Tertiary-butyl alcohol (3.190)
-Acetonitrile (3.344)
-Di-isopropyl ether (3.473)
-Chloroprene (3.585)+
-Acrylonitrile (3.688)
-Ethyl tertiary-butyl ethe (3.915)+
-cis-1,2-Dichloroethene (4.288)
-2,2-Dichloropropane (4.429)
-Bromochloromethane (4.551)+
-Chloroform (4.695)
-Carbon Tetrachloride (4.872)
-Tetrahydrofuran (4.978)+
-2-Butanone (5.202)+
-Benzene (5.587)
-Propionitrile (5.696)+
-1,2-Dichloroethane-D4 (5.812)+
-Isobutyl Alcohol (6.075)
-Methylcyclohexane (6.438)+
-1,4-Difluorobenzene (6.556)
-Dibromomethane (7.067)
-1,2-Dichloropropane (7.211)
-Bromodichloromethane (7.330)
-Methyl Methacrylate (7.612)+
-2-Chloroethylvinylether (8.193)+
-Toluene-D8 (8.430)
-Toluene (8.495)
-Tetrachloroethene (8.973)
-4-methyl-2-pentanone (9.043)+
-1,1,2-Trichloroethane (9.265)
-Ethyl Methacrylate (9.329)+
-Dibromochloromethane (9.470)
-1,3-Dichloropropane (9.595)
-1,2-Dibromoethane (9.733)
-Total Alkylbenzenes (10.080)
-2-Hexanone (10.115)
-Chlorobenzene-D5 (10.413)+
-Ethylbenzene (10.484)+
m+p-Xylenes (10.673)
-o-Xylene (11.187)
-Styrene (11.254)+
-Isopropylbenzene (11.569)
-P-Bromofluorobenzene (11.880)
-cis-1,4-Dichloro-2-Butene (11.987)+
-N-Propylbenzene (12.053)
-1,1,2,2-Tetrachloroethane (12.159)
-2-Chlorotoluene (12.207)
-trans-1,4-Dichloro-2-Bute (12.352)
-4-Chlorotoluene (12.400)
-1,2,3-Trichloropropane (12.294)+
-tert-Butylbenzene (12.640)
-sec-Butylbenzene (12.843)
-1,2,4-Trimethylbenzene (12.727)
-1,3-Dichlorobenzene (13.098)
P-Isopropyltoluene (13.016)
-1,2-Dichlorobenzene (13.622)
-1,2-Dibromo-3-Chloropropa (14.540)+
-Hexachlorobutadiene (15.236)+
-Naphthalene (15.596)
-1,2,3-Trichlorobenzene (15.792)

Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9626.D
Report Date: 29-Jul-2021 13:50

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W072821.b\W9626.D
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Inj Date : 28-JUL-2021 11:34
Operator : CR   Inst ID: gcms-w.i
Smp Info : WG303228-6
Misc Info :
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-w.i\W072821.b\W8A05(03).m
Meth Date : 29-Jul-2021 06:59 CROY   Quant Type: ISTD
Cal Date : 28-JUL-2021 11:34   Cal File: W9626.D
Als bottle: 8   Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12
Processing Host: T6-O360

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.345	1.345	(0.232)	1425872	150.000	132	
2	Chloromethane	50	1.486	1.490	(0.257)	1740799	150.000	128	
3	Vinyl chloride	62	1.540	1.538	(0.266)	1257109	150.000	134	
4	Bromomethane	94	1.762	1.762	(0.305)	213442	150.000	115	
5	Chloroethane	64	1.842	1.849	(0.318)	168959	150.000	60.5	
6	Trichlorofluoromethane	101	1.948	1.952	(0.337)	1169994	150.000	122	
7	Diethyl Ether	59	2.176	2.176	(0.376)	682326	150.000	137	
8	1,1-Dichloroethene	96	2.333	2.333	(0.403)	825740	150.000	128	
9	Freon-113	151	2.359	2.359	(0.408)	717158	150.000	133	
10	Carbon Disulfide	76	2.365	2.366	(0.409)	1936102	150.000	124	
11	Iodomethane	142	2.455	2.455	(0.424)	841270	150.000	196(A)	
12	Acrolein	56	2.615	2.619	(0.452)	602922	750.000	657	
13	Allyl Chloride	41	2.728	2.728	(0.471)	989167	150.000	131	
14	Methylene Chloride	84	2.824	2.824	(0.488)	897623	150.000	114	
15	Acetone	43	2.882	2.879	(0.498)	1190697	750.000	599	
16	trans-1,2-Dichloroethene	96	2.968	2.969	(0.513)	922903	150.000	128	
17	Methyl Acetate	43	2.991	2.991	(0.517)	518030	150.000	129	
18	Methyl tert-butyl ether	73	3.074	3.078	(0.531)	2350769	150.000	143	
19	Tertiary-butyl alcohol	59	3.199	3.184	(0.553)	392691	750.000	820(A)	
20	Acetonitrile	41	3.347	3.341	(0.579)	1423481	1500.00	1350	
21	Di-isopropyl ether	45	3.469	3.473	(0.600)	3788270	150.000	146	
22	Chloroprene	53	3.581	3.582	(0.619)	1967267	150.000	141	
23	1,1-Dichloroethane	63	3.610	3.614	(0.624)	2377925	150.000	136	

Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9626.D
Report Date: 29-Jul-2021 13:50

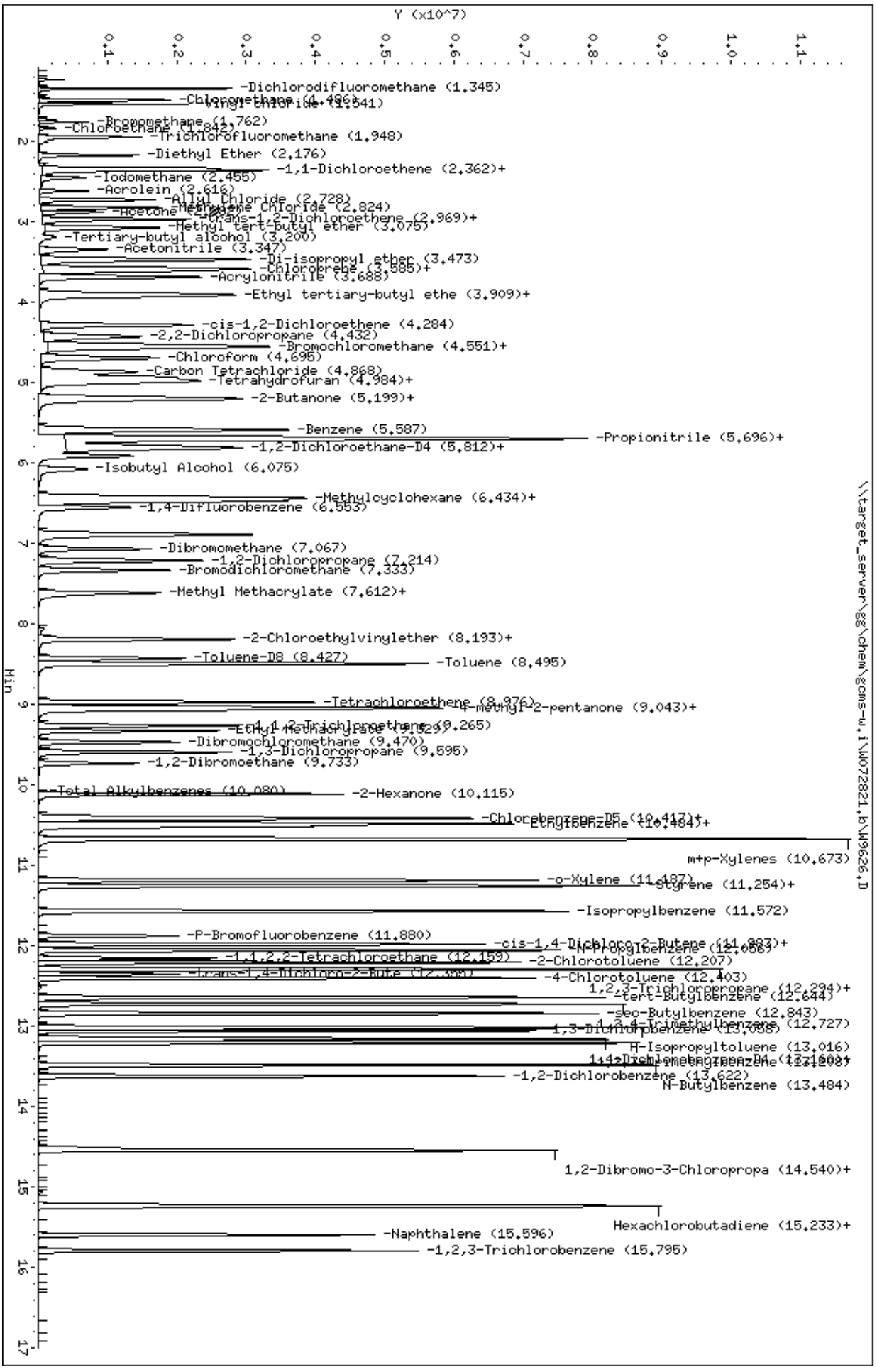
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	24 Acrylonitrile	52	3.687	3.688	(0.637)	1901621	750.000	690	
	25 Ethyl tertiary-butyl ether	59	3.905	3.906	(0.675)	3477345	150.000	157(A)	
	26 Vinyl Acetate	43	3.928	3.928	(0.599)	1996739	150.000	148	
	27 cis-1,2-Dichloroethene	96	4.284	4.288	(0.740)	1514144	150.000	143	
	28 2,2-Dichloropropane	77	4.432	4.432	(0.766)	1741089	150.000	162(A)	
	29 Bromochloromethane	128	4.570	4.564	(0.790)	599288	150.000	136	
	30 Cyclohexane	56	4.541	4.541	(0.785)	2379845	150.000	148	
	31 Chloroform	83	4.695	4.695	(0.811)	2338209	150.000	137	
	32 Carbon Tetrachloride	117	4.868	4.872	(0.743)	1657541	150.000	162(A)	
	33 Tetrahydrofuran	42	4.935	4.939	(0.853)	1747489	750.000	755(A)	
$	34 Dibromofluoromethane	113	4.980	4.981	(0.861)	428324	50.0000	49.1	
	35 1,1,1-Trichloroethane	97	4.990	4.987	(0.862)	2070557	150.000	142	
	36 2-Butanone	43	5.211	5.212	(0.901)	2338102	750.000	713	
	37 1,1-Dichloropropene	75	5.192	5.193	(0.792)	1896345	150.000	148	
	38 Benzene	78	5.587	5.587	(0.853)	5377325	150.000	138	
	39 Propionitrile	54	5.677	5.671	(0.981)	1604958	1500.00	1340	
	40 Methacrylonitrile	41	5.699	5.693	(0.985)	5273724	1500.00	1270	
*	41 Pentafluorobenzene	168	5.786	5.780	(1.000)	972649	50.0000		
$	42 1,2-Dichloroethane-D4	65	5.811	5.809	(1.004)	465675	50.0000	47.7	
	43 Tertiary-amyl methyl ether	73	5.818	5.822	(1.006)	3070313	150.000	166(A)	
	44 1,2-Dichloroethane	62	5.911	5.908	(0.902)	1523066	150.000	140	
	45 Isobutyl Alcohol	43	6.074	6.075	(1.050)	760037	3000.00	3580(A)	
	46 Methylcyclohexane	83	6.434	6.431	(1.112)	2770433	150.000	154(A)	
	47 Trichloroethene	95	6.472	6.473	(0.988)	1457171	150.000	151(A)	
*	48 1,4-Difluorobenzene	114	6.553	6.556	(1.000)	1498083	50.0000		
	49 Dibromomethane	93	7.066	7.067	(1.078)	793124	150.000	148	
	50 1,2-Dichloropropane	63	7.214	7.211	(1.101)	1394340	150.000	148	
	51 Bromodichloromethane	83	7.332	7.327	(1.119)	1730619	150.000	155(A)	
	52 Methyl Methacrylate	41	7.612	7.612	(1.162)	907882	150.000	174(A)	
	53 Ethyl Methacrylate	69	9.328	9.332	(1.424)	1734447	150.000	178(A)	
	54 1,4-Dioxane	88	7.631	7.635	(1.165)	263996	3000.00	3350(A)	
M	55 Total Alkylbenzenes	100				36229173	150.000	909	
	56 2-Chloroethylvinylether	63	8.160	8.157	(1.245)	69224	150.000	165(A)	
	57 cis-1,3-dichloropropene	75	8.192	8.189	(1.250)	2212412	150.000	167(A)	
$	58 Toluene-D8	98	8.427	8.427	(1.286)	1820257	50.0000	50.0	
	59 Toluene	92	8.494	8.494	(1.296)	3381892	150.000	136	
	60 Tetrachloroethene	164	8.972	8.973	(0.863)	1261331	150.000	150(A)	
	61 4-methyl-2-pentanone	43	9.040	9.040	(1.379)	4040232	750.000	744	
	62 trans-1,3-Dichloropropene	75	9.068	9.069	(1.384)	1889097	150.000	166(A)	
	63 1,1,2-Trichloroethane	83	9.264	9.265	(1.414)	994085	150.000	150(A)	
	64 Dibromochloromethane	129	9.470	9.467	(0.911)	1357230	150.000	167(A)	
	65 1,3-Dichloropropane	76	9.595	9.595	(0.923)	2147773	150.000	151(A)	
	66 1,2-Dibromoethane	107	9.736	9.733	(1.486)	1188889	150.000	157(A)	
	67 2-Hexanone	43	10.115	10.115	(0.973)	2901345	750.000	850(A)	
*	68 Chlorobenzene-D5	117	10.397	10.397	(1.000)	1448099	50.0000		
	69 Chlorobenzene	112	10.419	10.417	(1.002)	3620541	150.000	136	
	70 Ethylbenzene	91	10.484	10.481	(1.008)	5685898	150.000	127	
	71 1,1,1,2-Tetrachloroethane	131	10.516	10.519	(1.011)	1309635	150.000	158(A)	
	72 m+p-Xylenes	91	10.673	10.673	(1.027)	7263605	300.000	225	
	73 o-Xylene	91	11.186	11.184	(1.076)	4689136	150.000	144	
	74 Styrene	104	11.254	11.254	(1.082)	3886171	150.000	148	
	75 Bromoform	173	11.257	11.257	(1.083)	918557	150.000	179(A)	
	76 Isopropylbenzene	105	11.571	11.569	(0.880)	5570913	150.000	131	
$	77 P-Bromofluorobenzene	95	11.879	11.880	(1.813)	756499	50.0000	50.7	

Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9626.D
Report Date: 29-Jul-2021 13:50

			QUANT SIG					AMOUNTS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	78	cis-1,4-Dichloro-2-Butene	53	11.989	11.989	(0.912)	380037	150.000	161(A)	
	79	Bromobenzene	156	11.979	11.979	(0.911)	1663138	150.000	147	
	80	N-Propylbenzene	91	12.056	12.053	(0.917)	6184298	150.000	116	
	81	1,1,2,2-Tetrachloroethane	83	12.159	12.159	(0.925)	1428926	150.000	144	
	82	2-Chlorotoluene	91	12.207	12.207	(0.929)	4227381	150.000	131	
	83	1,2,3-Trichloropropane	75	12.284	12.287	(0.935)	1167107	150.000	139	
	84	1,3,5-Trimethylbenzene	105	12.293	12.294	(0.935)	4754451	150.000	132	
	85	trans-1,4-Dichloro-2-Butene	53	12.351	12.352	(0.940)	391794	150.000	166(A)	
	86	4-Chlorotoluene	91	12.402	12.400	(0.944)	4347018	150.000	130	
	87	tert-Butylbenzene	119	12.643	12.640	(0.962)	4428804	150.000	139	
	89	1,2,4-Trimethylbenzene	105	12.727	12.727	(0.968)	4862638	150.000	133	
	90	sec-Butylbenzene	105	12.845	12.843	(0.977)	5906188	150.000	123	
	91	P-Isopropyltoluene	119	13.015	13.016	(0.990)	5208172	150.000	134	
	92	1,3-Dichlorobenzene	146	13.057	13.058	(0.993)	3123814	150.000	140	
*	93	1,4-Dichlorobenzene-D4	152	13.144	13.144	(1.000)	839855	50.0000		
	94	1,4-Dichlorobenzene	146	13.163	13.160	(1.001)	3168418	150.000	136	
	95	1,2,3-Trimethylbenzene	105	13.208	13.205	(1.005)	4952605	150.000	126	
	96	N-Butylbenzene	91	13.484	13.481	(1.026)	4884622	150.000	132	
M	97	1,2-Dichloroethylene (total)	96				2437047	150.000	271	
	98	1,2-Dichlorobenzene	146	13.622	13.622	(1.036)	2949388	150.000	146	
	99	1,2-Dibromo-3-Chloropropane	157	14.511	14.511	(1.104)	277766	150.000	183(A)	
	100	1,3,5-Trichlorobenzene	180	14.543	14.540	(1.106)	2535740	150.000	156(A)	
	101	Hexachlorobutadiene	225	15.226	15.227	(1.158)	1266264	150.000	157(A)	
	102	1,2,4-Trichlorobenzene	180	15.242	15.243	(1.160)	2119481	150.000	187(A)	
	103	Naphthalene	128	15.595	15.596	(1.187)	3602152	150.000	214(A)	
	104	1,2,3-Trichlorobenzene	180	15.794	15.795	(1.202)	1736664	150.000	184(A)	
M	105	Xylenes (total)	106				11952741	450.000	370	

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.


Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\W9626.D
Date : 28-JUL-2021 11:34
Client ID:
Sample Info: WG303228-6
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: CR
Column diameter: 0.18
\\target_server\gg\chem\gcms-w.i\W072821.b\W9626.D
Y (x10^7)
Min
-Dichlorodifluoromethane (1.345)
-Chloromethane (1.486)
Vinyl chloride (1.541)
-Bromomethane (1.762)
-Chloroethane (1.842)
-Trichlorofluoromethane (1.948)
-Diethyl Ether (2.176)
-1,1-Dichloroethene (2.362)+
-Iodomethane (2.455)
-Acrolein (2.616)
-Allyl Chloride (2.728)
-Methylene Chloride (2.824)
-Acetone (2.892)
-trans-1,2-Dichloroethene (2.969)+
-Methyl tert-butyl ether (3.075)
-Tertiary-butyl alcohol (3.200)
-Acetonitrile (3.347)
-Di-isopropyl ether (3.473)
-Chloroprene (3.585)+
-Acrylonitrile (3.688)
-Ethyl tertiary-butyl ethe (3.909)+
-cis-1,2-Dichloroethene (4.284)
-2,2-Dichloropropane (4.432)
-Bromochloromethane (4.551)+
-Chloroform (4.695)
-Carbon Tetrachloride (4.868)
-Tetrahydrofuran (4.984)+
-2-Butanone (5.199)+
-Benzene (5.587)
-Propionitrile (5.696)+
-1,2-Dichloroethane-D4 (5.812)+
-Isobutyl Alcohol (6.075)
-Methylcyclohexane (6.434)+
-1,4-Difluorobenzene (6.553)
-Dibromomethane (7.067)
-1,2-Dichloropropane (7.214)
-Bromodichloromethane (7.333)
-Methyl Methacrylate (7.612)+
-2-Chloroethylvinylether (8.193)+
-Toluene-D8 (8.427)
-Toluene (8.495)
-Tetrachloroethene (8.976)
4-methyl-2-pentanone (9.043)+
-1,1,2-Trichloroethane (9.265)
-Ethyl Methacrylate (9.523)
-Dibromochloromethane (9.470)
-1,3-Dichloropropane (9.595)
-1,2-Dibromoethane (9.733)
-Total Alkylbenzenes (10.080)
-2-Hexanone (10.115)
-Chlorobenzene-D5 (10.417)+
Ethylbenzene (10.484)+
m+p-Xylenes (10.673)
-o-Xylene (11.187)
Styrene (11.254)+
-Isopropylbenzene (11.572)
-P-Bromofluorobenzene (11.880)
-cis-1,4-Dichloro-2-Butene (11.883)+
N-Propylbenzene (12.058)
-1,1,2,2-Tetrachloroethane (12.159)
-2-Chlorotoluene (12.207)
-trans-1,4-Dichloro-2-Bute (12.399)
-4-Chlorotoluene (12.403)
1,2,3-Trichloropropane (12.294)+
-tert-Butylbenzene (12.644)
-sec-Butylbenzene (12.843)
1,3,5-Trimethylbenzene (12.727)
1,3-Dichlorobenzene (13.008)
N-Isopropyltoluene (13.016)
1,4-Dichlorobenzene-D4 (13.100)+
1,4-Dichlorobenzene (13.208)
-1,2-Dichlorobenzene (13.622)
N-Butylbenzene (13.484)
1,2-Dibromo-3-Chloropropa (14.540)+
Hexachlorobutadiene (15.233)+
-Naphthalene (15.596)
-1,2,3-Trichlorobenzene (15.795)

Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site **SDG:** SO4723
Lab ID : WG303684-12 **Analytical Date:** 08/04/21 19:08
Lab File ID : T2702.D **Instrument ID:** GCMS-T
Initial Calibration Date(s): 08/04/21 08:24 08/04/21 12:24 **Column ID:**

	Compound	$\overline{RRF}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
2	Chloromethane	0.51570	0.50300	0.50300	0.100	-2.46292	50.00000	Averaged	
3	Vinyl chloride	0.38253	0.37357	0.37357	0.100	-2.34089	50.00000	Averaged	
4	Bromomethane	50.00000	49.55139	0.12696	0.100	-0.89721	50.00000	Linear	
5	Chloroethane	0.16037	0.16119	0.16119	0.100	0.50597	50.00000	Averaged	
8	1,1-Dichloroethene	0.27234	0.27626	0.27626	0.100	1.43801	50.00000	Averaged	
10	Carbon Disulfide	0.69843	0.69966	0.69966	0.100	0.17620	50.00000	Averaged	
14	Methylene Chloride	50.00000	51.56145	0.30671	0.100	3.12291	50.00000	Linear	
15	Acetone	250	207	0.08996	0.100	-17.03066	50.00000	Quadratic	*
16	trans-1,2-Dichloroethene	50.00000	36.71724	0.29918	0.100	-26.56553	50.00000	Linear	
23	1,1-Dichloroethane	0.82247	0.84004	0.84004	0.200	2.13657	50.00000	Averaged	
27	cis-1,2-Dichloroethene	0.47582	0.48118	0.48118	0.100	1.12545	50.00000	Averaged	
31	Chloroform	0.85510	0.86227	0.86227	0.200	0.83865	50.00000	Averaged	
32	Carbon Tetrachloride	0.38090	0.38734	0.38734	0.100	1.69164	50.00000	Averaged	
35	1,1,1-Trichloroethane	0.78380	0.79608	0.79608	0.100	1.56644	50.00000	Averaged	
37	2-Butanone	0.20281	0.19743	0.19743	0.100	-2.65203	50.00000	Averaged	
38	Benzene	1.02627	1.04307	1.04307	0.500	1.63707	50.00000	Averaged	
44	1,2-Dichloroethane	0.36817	0.37212	0.37212	0.100	1.07164	50.00000	Averaged	
47	Trichloroethene	0.26273	0.26421	0.26421	0.200	0.56512	50.00000	Averaged	
50	1,2-Dichloropropane	0.24721	0.25641	0.25641	0.100	3.72390	50.00000	Averaged	
51	Bromodichloromethane	0.35143	0.37082	0.37082	0.200	5.51799	50.00000	Averaged	
55	cis-1,3-dichloropropene	0.41512	0.43372	0.43372	0.200	4.48167	50.00000	Averaged	
57	Toluene	0.63787	0.65109	0.65109	0.400	2.07316	50.00000	Averaged	
58	Tetrachloroethene	0.24615	0.23822	0.23822	0.200	-3.22136	50.00000	Averaged	
59	4-methyl-2-pentanone	0.22278	0.24459	0.24459	0.100	9.79287	50.00000	Averaged	
60	trans-1,3-Dichloropropene	0.37193	0.39812	0.39812	0.100	7.04260	50.00000	Averaged	
61	1,1,2-Trichloroethane	0.18771	0.19314	0.19314	0.100	2.88981	50.00000	Averaged	
63	Dibromochloromethane	0.29648	0.31340	0.31340	0.100	5.70777	50.00000	Averaged	
67	2-Hexanone	0.18032	0.18904	0.18904	0.100	4.83367	50.00000	Averaged	
69	Chlorobenzene	0.79291	0.80600	0.80600	0.500	1.65201	50.00000	Averaged	
70	Ethylbenzene	1.34585	1.37031	1.37031	0.100	1.81785	50.00000	Averaged	
72	m+p-Xylenes	1.02382	1.05259	1.05259	0.100	2.81067	50.00000	Averaged	
73	o-Xylene	1.04077	1.07127	1.07127	0.300	2.93024	50.00000	Averaged	
74	Styrene	0.79726	0.84179	0.84179	0.300	5.58497	50.00000	Averaged	
75	Bromoform	50.00000	48.94711	0.18945	0.100	-2.10579	50.00000	Linear	
81	1,1,2,2-Tetrachloroethane	0.67961	0.72863	0.72863	0.300	7.21284	50.00000	Averaged	
105	Xylenes (total)	++++	1.05882	1.05882	0.010	++++	50.00000	Averaged	*
34	Dibromofluoromethane	0.54234	0.55005	0.55005	0.010	1.42089	50.00000	Averaged	
42	1,2-Dichloroethane-D4	0.64992	0.64918	0.64918	0.010	-0.11331	50.00000	Averaged	
56	Toluene-D8	1.13400	1.12954	1.12954	0.010	-0.39318	50.00000	Averaged	
77	P-Bromofluorobenzene	0.41148	0.41364	0.41364	0.010	0.52401	50.00000	Averaged	

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Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site **SDG:** SO4723
Lab ID : WG303684-12 **Analytical Date:** 08/04/21 19:08
Lab File ID : T2702.D **Instrument ID:** GCMS-T
Initial Calibration Date(s): 08/04/21 08:24 08/04/21 12:24 **Column ID:**

Compound	RRF/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type

*** = Compound out of QC criteria**

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sales@katahdinlab.com

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2702.D
Report Date: 10-Aug-2021 11:01

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-t.i\T080421.b\T2702.D
Lab Smp Id: WG303684-12
Inj Date : 04-AUG-2021 19:08
Operator : HG   Inst ID: gcms-t.i
Smp Info : WG303684-12,SO4723
Misc Info : WG303684,WG303684-4,SO4723-1
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-t.i\T080421.b\T8A05(66)D.m
Meth Date : 10-Aug-2021 10:55 croy   Quant Type: ISTD
Cal Date : 04-AUG-2021 12:24   Cal File: T2690.D
Als bottle: 21   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.225	1.226	(0.231)	193851	50.0000	45.5	
2	Chloromethane	50	1.352	1.353	(0.255)	212631	50.0000	48.8	
3	Vinyl chloride	62	1.401	1.398	(0.264)	157920	50.0000	48.8	
4	Bromomethane	94	1.599	1.600	(0.302)	53669	50.0000	49.6	
5	Chloroethane	64	1.674	1.678	(0.316)	68138	50.0000	50.2	
6	Trichlorofluoromethane	101	1.768	1.768	(0.333)	207854	50.0000	51.1	
7	Diethyl Ether	59	1.970	1.970	(0.371)	104285	50.0000	51.8	
8	1,1-Dichloroethene	96	2.116	2.113	(0.399)	116781	50.0000	50.7	
9	Freon-113	151	2.138	2.138	(0.403)	80616	50.0000	47.4	
10	Carbon Disulfide	76	2.142	2.142	(0.404)	295765	50.0000	50.1	
11	Iodomethane	142	2.224	2.225	(0.419)	109157	50.0000	48.7	
12	Acrolein	56	2.366	2.367	(0.446)	52023	250.000	248	
13	Allyl Chloride	41	2.467	2.468	(0.465)	194358	50.0000	49.0	
14	Methylene Chloride	84	2.557	2.554	(0.482)	129657	50.0000	51.6	
15	Acetone	43	2.602	2.599	(0.491)	190135	250.000	207	
16	trans-1,2-Dichloroethene	96	2.684	2.685	(0.506)	126474	50.0000	36.7	
17	Methyl Acetate	43	2.703	2.704	(0.510)	105821	50.0000	38.5	
18	Methyl tert-butyl ether	73	2.782	2.782	(0.525)	425711	50.0000	42.0	
19	Tertiary-butyl alcohol	59	2.875	2.876	(0.542)	92588	250.000	272	
20	Acetonitrile	41	3.018	3.018	(0.569)	243867	500.000	557	
21	Di-isopropyl ether	45	3.137	3.134	(0.592)	624493	50.0000	50.9	
22	Chloroprene	53	3.235	3.235	(0.610)	287778	50.0000	49.8	
23	1,1-Dichloroethane	63	3.264	3.261	(0.616)	355109	50.0000	51.1	

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2702.D
Report Date: 10-Aug-2021 11:01

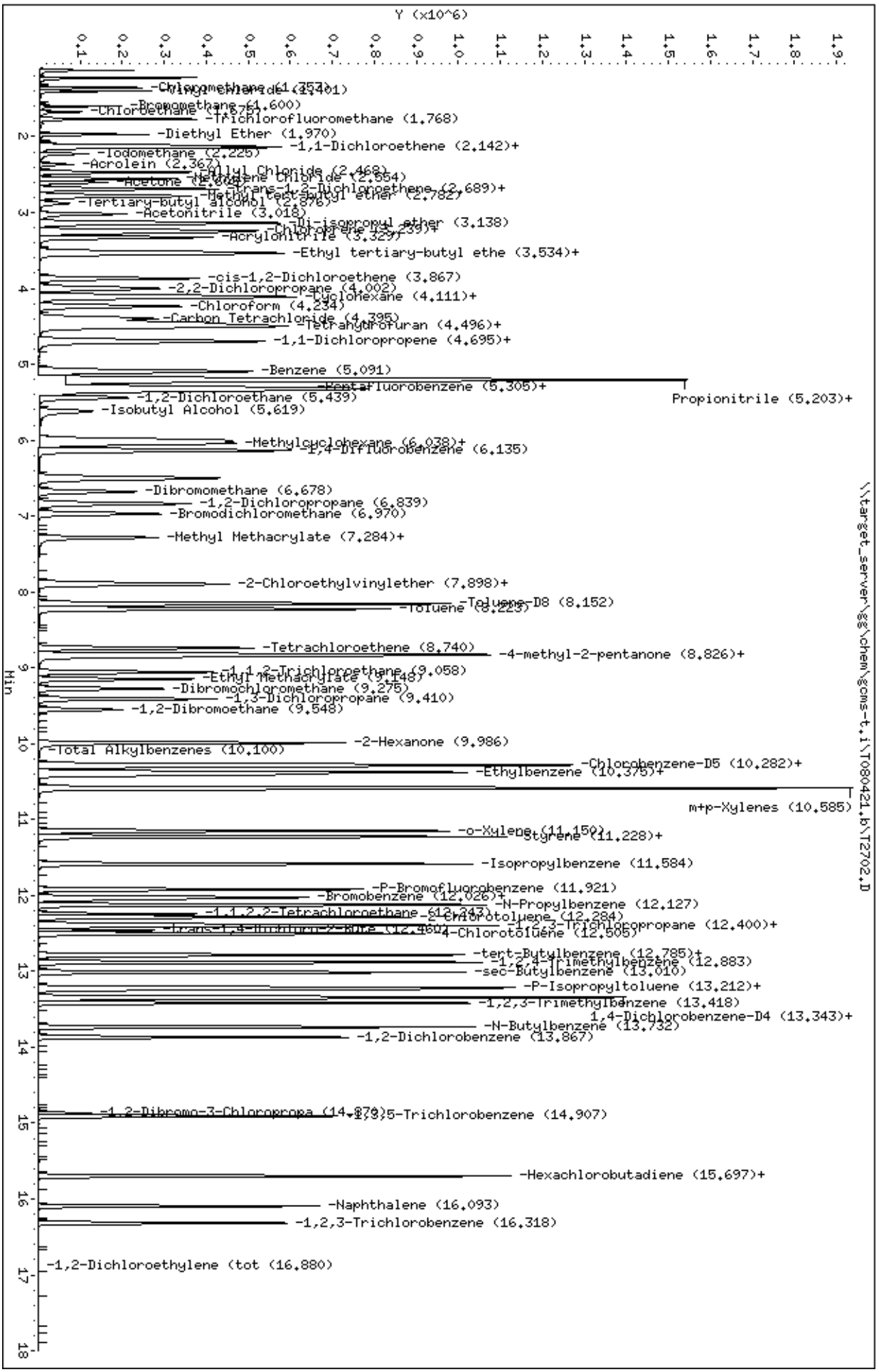
		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
	24	Acrylonitrile	52	3.328	3.325	(0.628)	287425	250.000	266	
	25	Ethyl tertiary-butyl ether	59	3.526	3.523	(0.665)	551418	50.0000	51.0	
	26	Vinyl Acetate	43	3.545	3.542	(0.578)	465181	50.0000	55.8	
	27	cis-1,2-Dichloroethene	96	3.871	3.868	(0.730)	203407	50.0000	50.6	
	28	2,2-Dichloropropane	77	3.998	3.999	(0.754)	271978	50.0000	48.1	
	29	Cyclohexane	56	4.103	4.099	(0.774)	298684	50.0000	51.2	
	30	Bromochloromethane	128	4.121	4.118	(0.777)	89455	50.0000	53.1	
	31	Chloroform	83	4.234	4.234	(0.798)	364506	50.0000	50.4	
	32	Carbon Tetrachloride	117	4.395	4.395	(0.716)	273524	50.0000	50.8	
	33	Tetrahydrofuran	42	4.451	4.451	(0.839)	326809	250.000	268	
$	34	Dibromofluoromethane	113	4.492	4.489	(0.847)	232520	50.0000	50.7	
	35	1,1,1-Trichloroethane	97	4.503	4.496	(0.849)	336524	50.0000	50.8	
	36	1,1-Dichloropropene	75	4.690	4.691	(0.765)	262147	50.0000	50.2	
	37	2-Butanone	43	4.705	4.698	(0.887)	417301	250.000	243	
	38	Benzene	78	5.094	5.091	(0.830)	736573	50.0000	50.8	
	39	Propionitrile	54	5.177	5.177	(0.976)	255455	500.000	551	
	40	Methacrylonitrile	41	5.207	5.200	(0.982)	1212913	500.000	541	
*	41	Pentafluorobenzene	168	5.304	5.301	(1.000)	422729	50.0000		
$	42	1,2-Dichloroethane-D4	65	5.326	5.323	(1.004)	274427	50.0000	49.9	
	43	Tertiary-amyl methyl ether	73	5.338	5.335	(1.006)	483429	50.0000	50.4	
	44	1,2-Dichloroethane	62	5.439	5.439	(0.887)	262774	50.0000	50.5	
	45	Isobutyl Alcohol	43	5.618	5.619	(1.059)	144035	1000.00	1100	
	46	Methylcyclohexane	83	6.004	5.997	(1.132)	297531	50.0000	48.6	
	47	Trichloroethene	95	6.041	6.042	(0.985)	186574	50.0000	50.3	
*	48	1,4-Difluorobenzene	114	6.135	6.132	(1.000)	706156	50.0000		
	49	Dibromomethane	93	6.677	6.682	(1.088)	122524	50.0000	52.0	
	50	1,2-Dichloropropane	63	6.838	6.832	(1.115)	181068	50.0000	51.9	
	51	Bromodichloromethane	83	6.969	6.966	(1.136)	261858	50.0000	52.8	
	52	Methyl Methacrylate	41	7.280	7.277	(1.187)	163703	50.0000	53.7	
	53	1,4-Dioxane	88	7.287	7.284	(1.188)	43554	1000.00	1130	
	54	2-Chloroethylvinylether	63	7.875	7.876	(1.284)	74525	50.0000	37.4	
	55	cis-1,3-dichloropropene	75	7.901	7.898	(1.288)	306274	50.0000	52.2	
$	56	Toluene-D8	98	8.152	8.153	(1.329)	797632	50.0000	49.8	
	57	Toluene	92	8.223	8.220	(1.340)	459773	50.0000	51.0	
	58	Tetrachloroethene	164	8.739	8.736	(0.851)	145845	50.0000	48.4	
	59	4-methyl-2-pentanone	43	8.822	8.822	(1.438)	863600	250.000	274	
	60	trans-1,3-Dichloropropene	75	8.848	8.849	(1.442)	281134	50.0000	53.5	
	61	1,1,2-Trichloroethane	83	9.057	9.054	(1.476)	136385	50.0000	51.4	
	62	Ethyl Methacrylate	69	9.147	9.148	(1.491)	224721	50.0000	55.5	
	63	Dibromochloromethane	129	9.275	9.275	(0.903)	191871	50.0000	52.8	
	64	1,3-Dichloropropane	76	9.413	9.410	(0.916)	300051	50.0000	52.5	
	65	1,2-Dibromoethane	107	9.551	9.548	(1.557)	170579	50.0000	52.6	
M	66	Total Alkylbenzenes	100				4823799	50.0000	363	
	67	2-Hexanone	43	9.986	9.986	(0.972)	578680	250.000	262	
*	68	Chlorobenzene-D5	117	10.274	10.274	(1.000)	612229	50.0000		
	69	Chlorobenzene	112	10.296	10.293	(1.002)	493459	50.0000	50.8	
	70	Ethylbenzene	91	10.375	10.372	(1.010)	838946	50.0000	50.9	
	71	1,1,1,2-Tetrachloroethane	131	10.405	10.409	(1.013)	172142	50.0000	52.1	
	72	m+p-Xylenes	91	10.584	10.585	(1.030)	1288854	100.000	103	
	73	o-Xylene	91	11.149	11.150	(1.085)	655861	50.0000	51.5	
	74	Styrene	104	11.228	11.229	(1.093)	515369	50.0000	52.8	
	75	Bromoform	173	11.221	11.221	(1.092)	115988	50.0000	48.9	
	76	Isopropylbenzene	105	11.584	11.584	(0.868)	794810	50.0000	51.2	
$	77	P-Bromofluorobenzene	95	11.917	11.921	(1.942)	292094	50.0000	50.3	

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2702.D
Report Date: 10-Aug-2021 11:01

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	78 Bromobenzene	156	12.025	12.022	(0.902)	180784	50.0000	50.4	
	79 cis-1,4-Dichloro-2-Butene	53	12.051	12.052	(0.903)	63890	50.0000	53.8	
	80 N-Propylbenzene	91	12.126	12.123	(0.909)	939408	50.0000	51.3	
	81 1,1,2,2-Tetrachloroethane	83	12.242	12.243	(0.918)	203744	50.0000	53.6	
	82 2-Chlorotoluene	91	12.283	12.284	(0.921)	557207	50.0000	51.1	
	83 1,2,3-Trichloropropane	75	12.373	12.378	(0.928)	172354	50.0000	52.5	
	84 1,3,5-Trimethylbenzene	105	12.403	12.400	(0.930)	633159	50.0000	52.4	
	85 trans-1,4-Dichloro-2-Butene	53	12.459	12.460	(0.934)	62938	50.0000	53.0	
	86 4-Chlorotoluene	91	12.504	12.505	(0.937)	590818	50.0000	51.9	
	87 tert-Butylbenzene	119	12.785	12.785	(0.958)	543727	50.0000	51.3	
	88 Pentachloroethane	165	12.785	12.819	(0.958)	1952	50.0000	(a)	
	89 1,2,4-Trimethylbenzene	105	12.882	12.879	(0.966)	641822	50.0000	52.2	
	90 sec-Butylbenzene	105	13.009	13.010	(0.975)	796336	50.0000	51.6	
	91 P-Isopropyltoluene	119	13.211	13.212	(0.990)	659540	50.0000	52.1	
	92 1,3-Dichlorobenzene	146	13.238	13.238	(0.992)	340733	50.0000	51.8	
*	93 1,4-Dichlorobenzene-D4	152	13.339	13.336	(1.000)	279627	50.0000		
	94 1,4-Dichlorobenzene	146	13.354	13.354	(1.001)	349991	50.0000	50.6	
	95 1,2,3-Trimethylbenzene	105	13.417	13.414	(1.006)	635066	50.0000	51.8	
	96 N-Butylbenzene	91	13.732	13.736	(1.029)	609807	50.0000	52.1	
	97 1,2-Dichlorobenzene	146	13.866	13.867	(1.040)	313955	50.0000	51.6	
	98 1,2-Dibromo-3-Chloropropane	157	14.869	14.874	(1.115)	33611	50.0000	47.4	
	99 1,3,5-Trichlorobenzene	180	14.907	14.907	(1.118)	230556	50.0000	51.9	
	100 Hexachlorobutadiene	225	15.696	15.693	(1.177)	93619	50.0000	49.6	
	101 1,2,4-Trichlorobenzene	180	15.700	15.701	(1.177)	201752	50.0000	53.0	
	102 Naphthalene	128	16.093	16.094	(1.206)	507541	50.0000	48.3	
M	103 1,2-Dichloroethylene (total)	96				329881	50.0000	87.3	
	104 1,2,3-Trichlorobenzene	180	16.317	16.318	(1.223)	177747	50.0000	51.8	
M	105 Xylenes (total)	91				1944715	150.000	154	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).


Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2702.D
Date : 04-AUG-2021 19:08
Client ID:
Sample Info: WG303684-12,S04723
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-t.i
Operator: HG
Column diameter: 0.18
Y (x10^6)
Min
\\target_server\gg\chem\gcms-t.i\T080421.b\T2702.D
-Chloromethane (1.354)
-Vinyl chloride (1.401)
-Bromomethane (1.600)
-Chloroethane (1.654)
-Trichlorofluoromethane (1.768)
-Diethyl Ether (1.970)
-1,1-Dichloroethene (2.142)+
-Iodomethane (2.225)
-Acrolein (2.362)
-Allyl Chloride (2.468)
-Methylene Chloride (2.554)
-Acetone (2.604)
-trans-1,2-Dichloroethene (2.689)+
-Methyl tert-butyl ether (2.782)
-Tertiary-butyl alcohol (2.876)
-Acetonitrile (3.018)
-Di-isopropyl ether (3.138)
-Chloroprene (3.239)+
-Acrylonitrile (3.329)
-Ethyl tertiary-butyl ethe (3.534)+
-cis-1,2-Dichloroethene (3.867)
-2,2-Dichloropropane (4.002)
-Cyclohexane (4.111)+
-Chloroform (4.234)
-Carbon Tetrachloride (4.395)
-Tetrahydrofuran (4.496)+
-1,1-Dichloropropene (4.695)+
-Benzene (5.091)
-Pentafluorobenzene (5.305)+
Propionitrile (5.203)+
-1,2-Dichloroethane (5.439)
-Isobutyl Alcohol (5.619)
-Methylcyclohexane (6.038)+
-1,4-Difluorobenzene (6.135)
-Dibromomethane (6.678)
-1,2-Dichloropropane (6.839)
-Bromodichloromethane (6.970)
-Methyl Methacrylate (7.284)+
-2-Chloroethylvinylether (7.898)+
-Toluene-D8 (8.152)
-Toluene (8.223)
-Tetrachloroethene (8.740)
-4-methyl-2-pentanone (8.826)+
-1,1,2-Trichloroethane (9.058)
-Ethyl Methacrylate (9.148)
-Dibromochloromethane (9.275)
-1,3-Dichloropropane (9.410)
-1,2-Dibromoethane (9.548)
-2-Hexanone (9.986)
-Total Alkylbenzenes (10.100)
-Chlorobenzene-D5 (10.282)+
-Ethylbenzene (10.375)+
m+p-Xylenes (10.585)
-o-Xylene (11.150)
Styrene (11.228)+
-Isopropylbenzene (11.584)
-P-Bromofluorobenzene (11.921)
-Bromobenzene (12.026)+
-N-Propylbenzene (12.127)
-1,1,2,2-Tetrachloroethane (12.243)
-2-Chlorotoluene (12.284)
-1,2,3-Trichloropropane (12.400)+
-trans-1,4-Dichloro-2-Bute (12.460)
-4-Chlorotoluene (12.505)
-tert-Butylbenzene (12.785)+
-1,2,4-Trimethylbenzene (12.883)
-sec-Butylbenzene (13.010)
-P-Isopropyltoluene (13.212)+
-1,2,3-Trimethylbenzene (13.418)
1,4-Dichlorobenzene-D4 (13.343)+
-N-Butylbenzene (13.732)
-1,2-Dichlorobenzene (13.867)
-1,2-Dibromo-3-Chloropropa (14.870)
-1,3,5-Trichlorobenzene (14.907)
-Hexachlorobutadiene (15.697)+
-Naphthalene (16.093)
-1,2,3-Trichlorobenzene (16.318)
-1,2-Dichloroethylene (tot (16.880)

Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site **SDG:** SO4723
Lab ID : WG303781-4 **Analytical Date:** 08/05/21 08:12
Lab File ID : T2708.D **Instrument ID:** GCMS-T
Initial Calibration Date(s): 08/04/21 08:24 08/04/21 12:24 **Column ID:**

	Compound	$\overline{RRF}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
2	Chloromethane	0.51570	0.48251	0.48251	0.100	-6.43573	20.00000	Averaged	
3	Vinyl chloride	0.38253	0.35983	0.35983	0.100	-5.93417	20.00000	Averaged	
4	Bromomethane	50.00000	48.91778	0.12533	0.100	-2.16445	20.00000	Linear	
5	Chloroethane	0.16037	0.15253	0.15253	0.100	-4.89440	20.00000	Averaged	
8	1,1-Dichloroethene	0.27234	0.27742	0.27742	0.100	1.86629	20.00000	Averaged	
10	Carbon Disulfide	0.69843	0.71062	0.71062	0.100	1.74636	20.00000	Averaged	
14	Methylene Chloride	50.00000	51.60838	0.30699	0.100	3.21676	20.00000	Linear	
15	Acetone	250	217	0.09408	0.100	-13.33537	20.00000	Quadratic	*
16	trans-1,2-Dichloroethene	50.00000	54.90725	0.44740	0.100	9.81450	20.00000	Linear	
23	1,1-Dichloroethane	0.82247	0.83966	0.83966	0.200	2.09023	20.00000	Averaged	
27	cis-1,2-Dichloroethene	0.47582	0.48261	0.48261	0.100	1.42620	20.00000	Averaged	
31	Chloroform	0.85510	0.85212	0.85212	0.200	-0.34862	20.00000	Averaged	
32	Carbon Tetrachloride	0.38090	0.39439	0.39439	0.100	3.54090	20.00000	Averaged	
35	1,1,1-Trichloroethane	0.78380	0.80133	0.80133	0.100	2.23672	20.00000	Averaged	
37	2-Butanone	0.20281	0.19767	0.19767	0.100	-2.53520	20.00000	Averaged	
38	Benzene	1.02627	1.04319	1.04319	0.500	1.64810	20.00000	Averaged	
44	1,2-Dichloroethane	0.36817	0.36651	0.36651	0.100	-0.45165	20.00000	Averaged	
47	Trichloroethene	0.26273	0.26791	0.26791	0.200	1.97188	20.00000	Averaged	
50	1,2-Dichloropropane	0.24721	0.25124	0.25124	0.100	1.63158	20.00000	Averaged	
51	Bromodichloromethane	0.35143	0.36100	0.36100	0.200	2.72242	20.00000	Averaged	
55	cis-1,3-dichloropropene	0.41512	0.43725	0.43725	0.200	5.33143	20.00000	Averaged	
57	Toluene	0.63787	0.64795	0.64795	0.400	1.58041	20.00000	Averaged	
58	Tetrachloroethene	0.24615	0.24650	0.24650	0.200	0.14104	20.00000	Averaged	
59	4-methyl-2-pentanone	0.22278	0.23746	0.23746	0.100	6.59272	20.00000	Averaged	
60	trans-1,3-Dichloropropene	0.37193	0.40270	0.40270	0.100	8.27312	20.00000	Averaged	
61	1,1,2-Trichloroethane	0.18771	0.19173	0.19173	0.100	2.14226	20.00000	Averaged	
63	Dibromochloromethane	0.29648	0.30754	0.30754	0.100	3.73194	20.00000	Averaged	
67	2-Hexanone	0.18032	0.18648	0.18648	0.100	3.41140	20.00000	Averaged	
69	Chlorobenzene	0.79291	0.80686	0.80686	0.500	1.75945	20.00000	Averaged	
70	Ethylbenzene	1.34585	1.38959	1.38959	0.100	3.24976	20.00000	Averaged	
72	m+p-Xylenes	1.02382	1.05402	1.05402	0.100	2.94984	20.00000	Averaged	
73	o-Xylene	1.04077	1.06533	1.06533	0.300	2.35975	20.00000	Averaged	
74	Styrene	0.79726	0.84203	0.84203	0.300	5.61534	20.00000	Averaged	
75	Bromoform	50.00000	47.70921	0.18466	0.100	-4.58157	20.00000	Linear	
81	1,1,2,2-Tetrachloroethane	0.67961	0.71364	0.71364	0.300	5.00734	20.00000	Averaged	
105	Xylenes (total)	++++	1.05779	1.05779	0.010	++++	20.00000	Averaged	*
34	Dibromofluoromethane	0.54234	0.55903	0.55903	0.010	3.07828	20.00000	Averaged	
42	1,2-Dichloroethane-D4	0.64992	0.64489	0.64489	0.010	-0.77342	20.00000	Averaged	
56	Toluene-D8	1.13400	1.13292	1.13292	0.010	-0.09477	20.00000	Averaged	
77	P-Bromofluorobenzene	0.41148	0.41514	0.41514	0.010	0.88882	20.00000	Averaged	

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Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site **SDG:** SO4723
Lab ID : WG303781-4 **Analytical Date:** 08/05/21 08:12
Lab File ID : T2708.D **Instrument ID:** GCMS-T
Initial Calibration Date(s): 08/04/21 08:24 08/04/21 12:24 **Column ID:**

Compound	RRF/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type

*** = Compound out of QC criteria**

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Data File: \\target_server\gg\chem\gcms-t.i\T080521.b\T2708.D
Report Date: 10-Aug-2021 11:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-t.i\T080521.b\T2708.D
Lab Smp Id: WG303781-4
Inj Date : 05-AUG-2021 08:12
Operator : HG   Inst ID: gcms-t.i
Smp Info : WG303781-4,SO4723
Misc Info : WG303781,WG303684-4,SO4723-8
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-t.i\T080521.b\T8A05(66)D.m
Meth Date : 06-Aug-2021 05:48 hgould   Quant Type: ISTD
Cal Date : 04-AUG-2021 12:24   Cal File: T2690.D
Als bottle: 2   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12
Processing Host: ORGANICS2

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

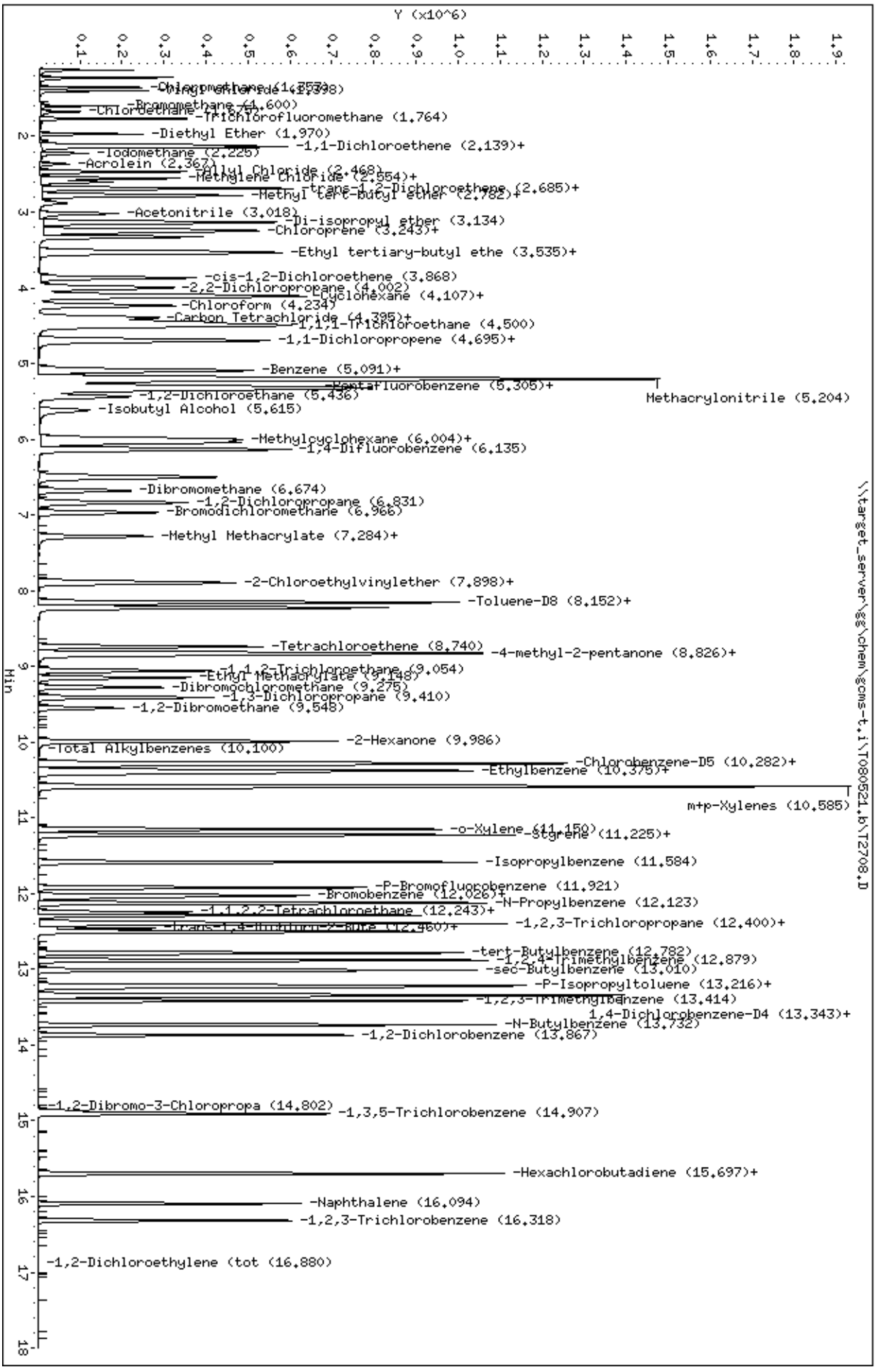
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.225	1.226	(0.231)	181815	50.0000	42.3	
2	Chloromethane	50	1.352	1.353	(0.255)	205619	50.0000	46.8	
3	Vinyl chloride	62	1.397	1.398	(0.263)	153339	50.0000	47.0	
4	Bromomethane	94	1.599	1.600	(0.302)	53411	50.0000	48.9	
5	Chloroethane	64	1.678	1.678	(0.316)	64998	50.0000	47.6	
6	Trichlorofluoromethane	101	1.764	1.768	(0.333)	202554	50.0000	49.4	
7	Diethyl Ether	59	1.970	1.970	(0.371)	96035	50.0000	47.4	
8	1,1-Dichloroethene	96	2.112	2.113	(0.398)	118222	50.0000	50.9	
9	Freon-113	151	2.138	2.138	(0.403)	78988	50.0000	46.0	
10	Carbon Disulfide	76	2.142	2.142	(0.404)	302829	50.0000	50.9	
11	Iodomethane	142	2.224	2.225	(0.419)	110329	50.0000	48.9	
12	Acrolein	56	2.366	2.367	(0.446)	48869	250.000	232	
13	Allyl Chloride	41	2.468	2.468	(0.465)	189336	50.0000	47.3	
14	Methylene Chloride	84	2.554	2.554	(0.481)	130824	50.0000	51.6	
15	Acetone	43	2.602	2.599	(0.491)	200463	250.000	217	
16	trans-1,2-Dichloroethene	96	2.685	2.685	(0.506)	190659	50.0000	54.9	
17	Methyl Acetate	43	2.700	2.704	(0.509)	143069	50.0000	51.7	
18	Methyl tert-butyl ether	73	2.782	2.782	(0.525)	537358	50.0000	52.7	
19	Tertiary-butyl alcohol	59	2.875	2.876	(0.542)	86678	250.000	253	
20	Acetonitrile	41	3.018	3.018	(0.569)	231110	500.000	524	
21	Di-isopropyl ether	45	3.134	3.134	(0.591)	630132	50.0000	51.0	
22	Chloroprene	53	3.235	3.235	(0.610)	287858	50.0000	49.4	
23	1,1-Dichloroethane	63	3.261	3.261	(0.615)	357817	50.0000	51.0	

Data File: \\target_server\gg\chem\gcms-t.i\T080521.b\T2708.D
Report Date: 10-Aug-2021 11:10

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
	24	Acrylonitrile	52	3.324	3.325	(0.627)	275458	250.000	253	
	25	Ethyl tertiary-butyl ether	59	3.523	3.523	(0.664)	545115	50.0000	50.1	
	26	Vinyl Acetate	43	3.545	3.542	(0.578)	464807	50.0000	55.6	
	27	cis-1,2-Dichloroethene	96	3.867	3.868	(0.729)	205661	50.0000	50.7	
	28	2,2-Dichloropropane	77	4.002	3.999	(0.754)	304284	50.0000	53.3	
	29	Cyclohexane	56	4.107	4.099	(0.774)	309377	50.0000	52.6	
	30	Bromochloromethane	128	4.122	4.118	(0.777)	91381	50.0000	53.8	
	31	Chloroform	83	4.234	4.234	(0.798)	363126	50.0000	49.8	
	32	Carbon Tetrachloride	117	4.395	4.395	(0.716)	279695	50.0000	51.8	
	33	Tetrahydrofuran	42	4.447	4.451	(0.838)	321675	250.000	262	
$	34	Dibromofluoromethane	113	4.492	4.489	(0.847)	238230	50.0000	51.5	
	35	1,1,1-Trichloroethane	97	4.500	4.496	(0.848)	341483	50.0000	51.1	
	36	1,1-Dichloropropene	75	4.690	4.691	(0.765)	269629	50.0000	51.4	
	37	2-Butanone	43	4.702	4.698	(0.886)	421179	250.000	244	
	38	Benzene	78	5.091	5.091	(0.830)	739819	50.0000	50.8	
	39	Propionitrile	54	5.177	5.177	(0.976)	247882	500.000	530	
	40	Methacrylonitrile	41	5.203	5.200	(0.981)	1160698	500.000	514	
*	41	Pentafluorobenzene	168	5.304	5.301	(1.000)	426146	50.0000		
$	42	1,2-Dichloroethane-D4	65	5.327	5.323	(1.004)	274817	50.0000	49.6	
	43	Tertiary-amyl methyl ether	73	5.342	5.335	(1.007)	479902	50.0000	49.6	
	44	1,2-Dichloroethane	62	5.435	5.439	(0.886)	259926	50.0000	49.8	
	45	Isobutyl Alcohol	43	5.615	5.619	(1.059)	134964	1000.00	1020	
	46	Methylcyclohexane	83	6.000	5.997	(1.131)	312270	50.0000	50.6	
	47	Trichloroethene	95	6.045	6.042	(0.985)	189997	50.0000	51.0	
*	48	1,4-Difluorobenzene	114	6.135	6.132	(1.000)	709191	50.0000		
	49	Dibromomethane	93	6.674	6.682	(1.088)	119508	50.0000	50.5	
	50	1,2-Dichloropropane	63	6.835	6.832	(1.114)	178178	50.0000	50.8	
	51	Bromodichloromethane	83	6.966	6.966	(1.135)	256016	50.0000	51.4	
	52	Methyl Methacrylate	41	7.280	7.277	(1.187)	160477	50.0000	52.4	
	53	1,4-Dioxane	88	7.291	7.284	(1.188)	40639	1000.00	1050	
	54	2-Chloroethylvinylether	63	7.875	7.876	(1.284)	96849	50.0000	48.4	
	55	cis-1,3-dichloropropene	75	7.901	7.898	(1.288)	310092	50.0000	52.7	
$	56	Toluene-D8	98	8.152	8.153	(1.329)	803460	50.0000	50.0	
	57	Toluene	92	8.223	8.220	(1.340)	459520	50.0000	50.8	
	58	Tetrachloroethene	164	8.740	8.736	(0.851)	151237	50.0000	50.1	
	59	4-methyl-2-pentanone	43	8.822	8.822	(1.438)	842032	250.000	266	
	60	trans-1,3-Dichloropropene	75	8.848	8.849	(1.442)	285588	50.0000	54.1	
	61	1,1,2-Trichloroethane	83	9.054	9.054	(1.476)	135976	50.0000	51.1	
	62	Ethyl Methacrylate	69	9.147	9.148	(1.491)	217577	50.0000	53.5	
	63	Dibromochloromethane	129	9.275	9.275	(0.903)	188690	50.0000	51.9	
	64	1,3-Dichloropropane	76	9.409	9.410	(0.916)	293192	50.0000	51.2	
	65	1,2-Dibromoethane	107	9.548	9.548	(1.556)	166257	50.0000	51.1	
M	66	Total Alkylbenzenes	100				4891497	50.0000	369	
	67	2-Hexanone	43	9.986	9.986	(0.972)	572058	250.000	258	
*	68	Chlorobenzene-D5	117	10.274	10.274	(1.000)	613547	50.0000		
	69	Chlorobenzene	112	10.296	10.293	(1.002)	495044	50.0000	50.9	
	70	Ethylbenzene	91	10.375	10.372	(1.010)	852576	50.0000	51.6	
	71	1,1,1,2-Tetrachloroethane	131	10.409	10.409	(1.013)	174801	50.0000	52.8	
	72	m+p-Xylenes	91	10.584	10.585	(1.030)	1293377	100.000	103	
	73	o-Xylene	91	11.150	11.150	(1.085)	653630	50.0000	51.2	
	74	Styrene	104	11.224	11.229	(1.093)	516627	50.0000	52.8	
	75	Bromoform	173	11.221	11.221	(1.092)	113298	50.0000	47.7	
	76	Isopropylbenzene	105	11.584	11.584	(0.869)	803022	50.0000	51.9	
$	77	P-Bromofluorobenzene	95	11.920	11.921	(1.943)	294414	50.0000	50.4	

Data File: \\target_server\gg\chem\gcms-t.i\T080521.b\T2708.D
Report Date: 10-Aug-2021 11:10

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	78 Bromobenzene	156	12.021	12.022	(0.902)	178549	50.0000	49.9	
	79 cis-1,4-Dichloro-2-Butene	53	12.051	12.052	(0.904)	63887	50.0000	53.9	
	80 N-Propylbenzene	91	12.123	12.123	(0.909)	957067	50.0000	52.5	
	81 1,1,2,2-Tetrachloroethane	83	12.242	12.243	(0.918)	198954	50.0000	52.5	
	82 2-Chlorotoluene	91	12.283	12.284	(0.921)	559173	50.0000	51.4	
	83 1,2,3-Trichloropropane	75	12.373	12.378	(0.928)	167979	50.0000	51.3	
	84 1,3,5-Trimethylbenzene	105	12.399	12.400	(0.930)	633899	50.0000	52.6	
	85 trans-1,4-Dichloro-2-Butene	53	12.459	12.460	(0.934)	64110	50.0000	54.1	
	86 4-Chlorotoluene	91	12.504	12.505	(0.938)	582866	50.0000	51.4	
	87 tert-Butylbenzene	119	12.785	12.785	(0.959)	549938	50.0000	52.1	
	89 1,2,4-Trimethylbenzene	105	12.878	12.879	(0.966)	643119	50.0000	52.5	
	90 sec-Butylbenzene	105	13.009	13.010	(0.976)	809663	50.0000	52.6	
	91 P-Isopropyltoluene	119	13.212	13.212	(0.991)	661193	50.0000	52.4	
	92 1,3-Dichlorobenzene	146	13.238	13.238	(0.993)	337461	50.0000	51.4	
*	93 1,4-Dichlorobenzene-D4	152	13.335	13.336	(1.000)	278788	50.0000		
	94 1,4-Dichlorobenzene	146	13.354	13.354	(1.001)	349452	50.0000	50.6	
	95 1,2,3-Trimethylbenzene	105	13.414	13.414	(1.006)	631152	50.0000	51.7	
	96 N-Butylbenzene	91	13.732	13.736	(1.030)	636618	50.0000	54.5	
	97 1,2-Dichlorobenzene	146	13.866	13.867	(1.040)	313895	50.0000	51.7	
	98 1,2-Dibromo-3-Chloropropane	157	14.869	14.874	(1.115)	32676	50.0000	46.2	
	99 1,3,5-Trichlorobenzene	180	14.907	14.907	(1.118)	227605	50.0000	51.4	
	100 Hexachlorobutadiene	225	15.696	15.693	(1.177)	97069	50.0000	51.6	
	101 1,2,4-Trichlorobenzene	180	15.700	15.701	(1.177)	199958	50.0000	52.7	
	102 Naphthalene	128	16.093	16.094	(1.207)	483658	50.0000	46.2	
M	103 1,2-Dichloroethylene (total)	96				396320	50.0000	106	
	104 1,2,3-Trichlorobenzene	180	16.318	16.318	(1.224)	178982	50.0000	52.3	
M	105 Xylenes (total)	91				1947007	150.000	154	


Data File: \\target_server\gg\chem\gcms-t.i\T080521.b\T2708.D
Date : 05-AUG-2021 08:12
Client ID:
Sample Info: WG303784-4,SD4723
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-t.i
Operator: HG
Column diameter: 0.18
Y (x10^6)
Min
\\target_server\gg\chem\gcms-t.i\T080521.b\T2708.D
-Chloromethane (1.353)
-Vinyl chloride (1.398)
-Bromomethane (1.600)
-Chloroethane
-Trichlorofluoromethane (1.764)
-Diethyl Ether (1.970)
-1,1-Dichloroethene (2.139)+
-Iodomethane (2.225)
-Acrolein (2.367)
-Allyl Chloride (2.468)
-Methylene Chloride (2.554)+
-trans-1,2-Dichloroethene (2.685)+
-Methyl tert-butyl ether (2.782)+
-Acetonitrile (3.018)
-Di-isopropyl ether (3.134)
-Chloroprene (3.243)+
-Ethyl tertiary-butyl ethe (3.535)+
-cis-1,2-Dichloroethene (3.868)
-2,2-Dichloropropane (4.002)
-Cyclohexane (4.107)+
-Chloroform (4.234)
-Carbon Tetrachloride (4.395)+
-1,1,1-Trichloroethane (4.500)
-1,1-Dichloropropene (4.695)+
-Benzene (5.091)+
-Perfluorobenzene (5.305)+
Methacrylonitrile (5.204)
-1,2-Dichloroethane (5.436)
-Isobutyl Alcohol (5.615)
-Methylcyclohexane (6.004)+
-1,4-Difluorobenzene (6.135)
-Dibromomethane (6.674)
-1,2-Dichloropropane (6.831)
-Bromodichloromethane (6.966)
-Methyl Methacrylate (7.284)+
-2-Chloroethylvinylether (7.898)+
-Toluene-D8 (8.152)+
-Tetrachloroethene (8.740)
-4-methyl-2-pentanone (8.826)+
-1,1,2-Trichloroethane (9.054)
-Ethyl Methacrylate (9.148)
-Dibromochloromethane (9.275)
-1,3-Dichloropropane (9.410)
-1,2-Dibromoethane (9.548)
-2-Hexanone (9.986)
-Total Alkylbenzenes (10.100)
-Chlorobenzene-D5 (10.282)+
-Ethylbenzene (10.375)+
m+p-Xylenes (10.585)
-o-Xylene (11.150)
-Styrene (11.225)+
-Isopropylbenzene (11.584)
-P-Bromofluorobenzene (11.921)
-Bromobenzene (12.026)+
-N-Propylbenzene (12.123)
-1,1,2,2-Tetrachloroethane (12.243)+
-trans-1,4-dichloro-2-Bute (12.460)+
-1,2,3-Trichloropropane (12.400)+
-tert-Butylbenzene (12.782)
-1,2,4-Trimethylbenzene (12.879)
-sec-Butylbenzene (13.010)
-P-Isopropyltoluene (13.216)+
-1,2,3-Trimethylbenzene (13.414)
1,4-Dichlorobenzene-D4 (13.343)+
-N-Butylbenzene (13.732)
-1,2-Dichlorobenzene (13.867)
-1,2-Dibromo-3-Chloropropa (14.802)
-1,3,5-Trichlorobenzene (14.907)
-Hexachlorobutadiene (15.697)+
-Naphthalene (16.094)
-1,2,3-Trichlorobenzene (16.318)
-1,2-Dichloroethylene (tot (16.880)

Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site **SDG:** SO4723
Lab ID : WG303781-5 **Analytical Date:** 08/05/21 18:46
Lab File ID : T2727.D **Instrument ID:** GCMS-T
Initial Calibration Date(s): 08/04/21 08:24 08/04/21 12:24 **Column ID:**

	Compound	$\overline{RRF}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
2	Chloromethane	0.51570	0.49479	0.49479	0.100	-4.05506	50.00000	Averaged	
3	Vinyl chloride	0.38253	0.36252	0.36252	0.100	-5.22914	50.00000	Averaged	
4	Bromomethane	50.00000	47.90344	0.12274	0.100	-4.19312	50.00000	Linear	
5	Chloroethane	0.16037	0.16149	0.16149	0.100	0.69798	50.00000	Averaged	
8	1,1-Dichloroethene	0.27234	0.27838	0.27838	0.100	2.21866	50.00000	Averaged	
10	Carbon Disulfide	0.69843	0.69353	0.69353	0.100	-0.70104	50.00000	Averaged	
14	Methylene Chloride	50.00000	54.10751	0.32186	0.100	8.21501	50.00000	Linear	
15	Acetone	250	208	0.09010	0.100	-16.90216	50.00000	Quadratic	*
16	trans-1,2-Dichloroethene	50.00000	37.86691	0.30855	0.100	-24.26617	50.00000	Linear	
23	1,1-Dichloroethane	0.82247	0.83849	0.83849	0.200	1.94775	50.00000	Averaged	
27	cis-1,2-Dichloroethene	0.47582	0.47576	0.47576	0.100	-0.01277	50.00000	Averaged	
31	Chloroform	0.85510	0.84648	0.84648	0.200	-1.00791	50.00000	Averaged	
32	Carbon Tetrachloride	0.38090	0.37738	0.37738	0.100	-0.92344	50.00000	Averaged	
35	1,1,1-Trichloroethane	0.78380	0.78475	0.78475	0.100	0.12106	50.00000	Averaged	
37	2-Butanone	0.20281	0.19274	0.19274	0.100	-4.96539	50.00000	Averaged	
38	Benzene	1.02627	1.05073	1.05073	0.500	2.38300	50.00000	Averaged	
44	1,2-Dichloroethane	0.36817	0.37141	0.37141	0.100	0.87820	50.00000	Averaged	
47	Trichloroethene	0.26273	0.28974	0.28974	0.200	10.28148	50.00000	Averaged	
50	1,2-Dichloropropane	0.24721	0.25683	0.25683	0.100	3.89063	50.00000	Averaged	
51	Bromodichloromethane	0.35143	0.36159	0.36159	0.200	2.89096	50.00000	Averaged	
55	cis-1,3-dichloropropene	0.41512	0.41111	0.41111	0.200	-0.96492	50.00000	Averaged	
57	Toluene	0.63787	0.63826	0.63826	0.400	0.06120	50.00000	Averaged	
58	Tetrachloroethene	0.24615	0.23657	0.23657	0.200	-3.89010	50.00000	Averaged	
59	4-methyl-2-pentanone	0.22278	0.24239	0.24239	0.100	8.80430	50.00000	Averaged	
60	trans-1,3-Dichloropropene	0.37193	0.37045	0.37045	0.100	-0.39580	50.00000	Averaged	
61	1,1,2-Trichloroethane	0.18771	0.19360	0.19360	0.100	3.13437	50.00000	Averaged	
63	Dibromochloromethane	0.29648	0.30471	0.30471	0.100	2.77884	50.00000	Averaged	
67	2-Hexanone	0.18032	0.18624	0.18624	0.100	3.28228	50.00000	Averaged	
69	Chlorobenzene	0.79291	0.79839	0.79839	0.500	0.69126	50.00000	Averaged	
70	Ethylbenzene	1.34585	1.36269	1.36269	0.100	1.25160	50.00000	Averaged	
72	m+p-Xylenes	1.02382	1.04520	1.04520	0.100	2.08848	50.00000	Averaged	
73	o-Xylene	1.04077	1.05154	1.05154	0.300	1.03466	50.00000	Averaged	
74	Styrene	0.79726	0.83074	0.83074	0.300	4.19908	50.00000	Averaged	
75	Bromoform	50.00000	45.86529	0.17752	0.100	-8.26942	50.00000	Linear	
81	1,1,2,2-Tetrachloroethane	0.67961	0.64529	0.64529	0.300	-5.04994	50.00000	Averaged	
105	Xylenes (total)	++++	1.04731	1.04731	0.010	++++	50.00000	Averaged	*
34	Dibromofluoromethane	0.54234	0.54567	0.54567	0.010	0.61510	50.00000	Averaged	
42	1,2-Dichloroethane-D4	0.64992	0.65260	0.65260	0.010	0.41351	50.00000	Averaged	
56	Toluene-D8	1.13400	1.14276	1.14276	0.010	0.77215	50.00000	Averaged	
77	P-Bromofluorobenzene	0.41148	0.41133	0.41133	0.010	-0.03686	50.00000	Averaged	

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Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site **SDG:** SO4723
Lab ID : WG303781-5 **Analytical Date:** 08/05/21 18:46
Lab File ID : T2727.D **Instrument ID:** GCMS-T
Initial Calibration Date(s): 08/04/21 08:24 08/04/21 12:24 **Column ID:**

Compound	$\overline{RRF}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type

*** = Compound out of QC criteria**

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Data File: \\target_server\gg\chem\gcms-t.i\T080521.b\T2727.D
Report Date: 10-Aug-2021 11:11

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-t.i\T080521.b\T2727.D
Lab Smp Id: WG303781-5
Inj Date : 05-AUG-2021 18:46
Operator : HG   Inst ID: gcms-t.i
Smp Info : WG303781-5,SO4723
Misc Info : WG303781,WG303684-4,SO4723-8
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-t.i\T080521.b\T8A05(66)D.m
Meth Date : 10-Aug-2021 11:11 croy   Quant Type: ISTD
Cal Date : 04-AUG-2021 12:24   Cal File: T2690.D
Als bottle: 21   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

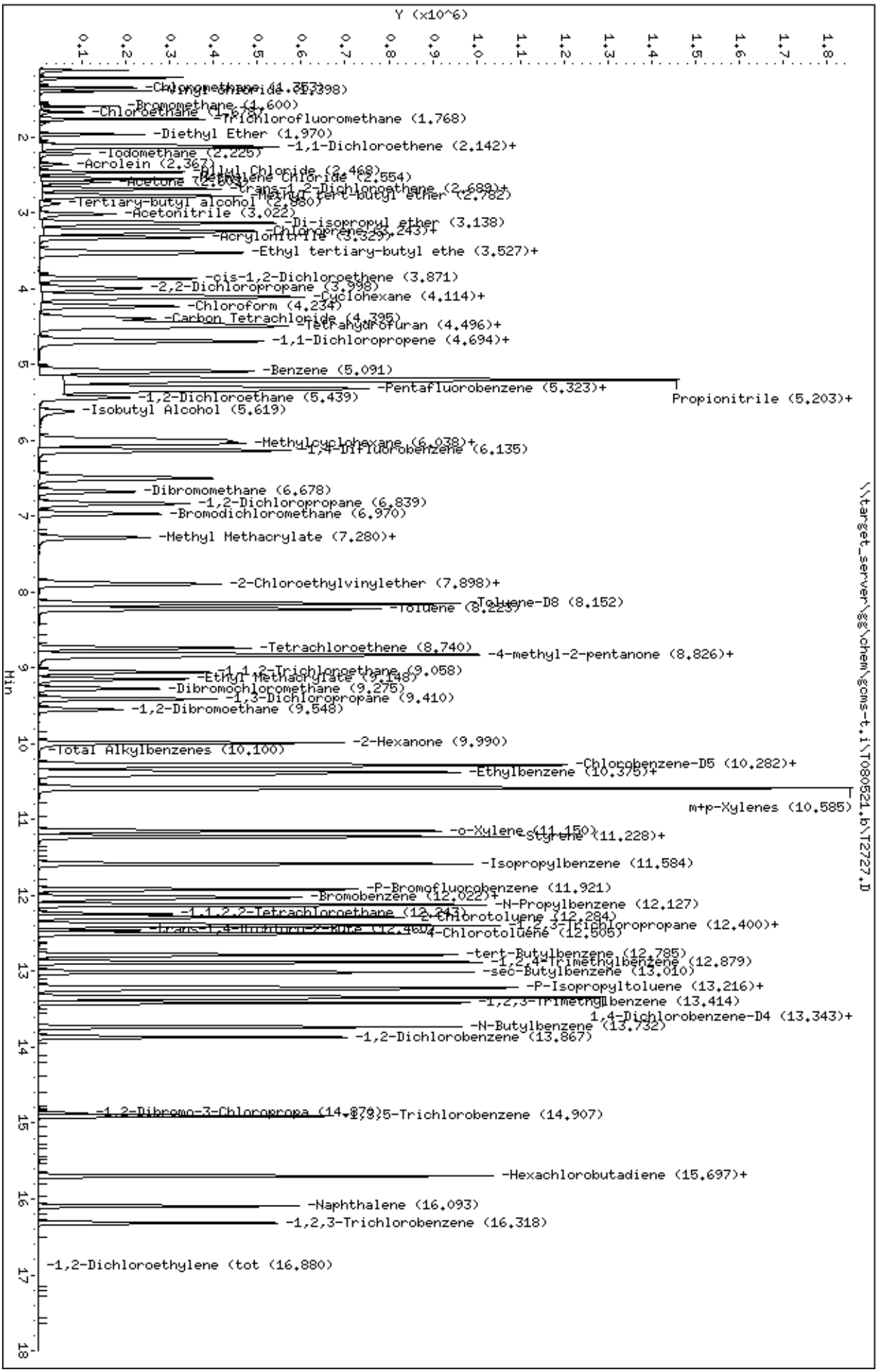
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.225	1.226	(0.231)	169819	50.0000	41.5	
2	Chloromethane	50	1.352	1.353	(0.255)	200823	50.0000	48.0	
3	Vinyl chloride	62	1.397	1.398	(0.264)	147141	50.0000	47.4	
4	Bromomethane	94	1.599	1.600	(0.302)	49816	50.0000	47.9	
5	Chloroethane	64	1.678	1.678	(0.317)	65547	50.0000	50.3	
6	Trichlorofluoromethane	101	1.768	1.768	(0.334)	210445	50.0000	53.9	
7	Diethyl Ether	59	1.970	1.970	(0.372)	96788	50.0000	50.1	
8	1,1-Dichloroethene	96	2.116	2.113	(0.399)	112989	50.0000	51.1	
9	Freon-113	151	2.138	2.138	(0.403)	75262	50.0000	46.0	
10	Carbon Disulfide	76	2.142	2.142	(0.404)	281489	50.0000	49.6	
11	Iodomethane	142	2.224	2.225	(0.420)	107868	50.0000	50.2	
12	Acrolein	56	2.366	2.367	(0.447)	45069	250.000	224	
13	Allyl Chloride	41	2.467	2.468	(0.466)	178014	50.0000	46.7	
14	Methylene Chloride	84	2.557	2.554	(0.483)	130636	50.0000	54.1	
15	Acetone	43	2.602	2.599	(0.491)	182847	250.000	208	
16	trans-1,2-Dichloroethene	96	2.688	2.685	(0.507)	125235	50.0000	37.9	
17	Methyl Acetate	43	2.703	2.704	(0.510)	97841	50.0000	37.1	
18	Methyl tert-butyl ether	73	2.782	2.782	(0.525)	481597	50.0000	49.6	
19	Tertiary-butyl alcohol	59	2.875	2.876	(0.543)	57430	250.000	176	
20	Acetonitrile	41	3.021	3.018	(0.570)	206625	500.000	491	
21	Di-isopropyl ether	45	3.137	3.134	(0.592)	593981	50.0000	50.4	
22	Chloroprene	53	3.235	3.235	(0.610)	272290	50.0000	49.1	
23	1,1-Dichloroethane	63	3.261	3.261	(0.615)	340324	50.0000	51.0	

Data File: \\target_server\gg\chem\gcms-t.i\T080521.b\T2727.D
Report Date: 10-Aug-2021 11:11

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
	24	Acrylonitrile	52	3.328	3.325	(0.628)	268003	250.000	259	
	25	Ethyl tertiary-butyl ether	59	3.523	3.523	(0.665)	491802	50.0000	47.4	
	26	Vinyl Acetate	43	3.545	3.542	(0.578)	228677	50.0000	28.8	
	27	cis-1,2-Dichloroethene	96	3.867	3.868	(0.730)	193101	50.0000	50.0	
	28	2,2-Dichloropropane	77	3.998	3.999	(0.754)	204768	50.0000	37.7	
	29	Cyclohexane	56	4.103	4.099	(0.774)	288986	50.0000	51.6	
	30	Bromochloromethane	128	4.118	4.118	(0.777)	86915	50.0000	53.8	
	31	Chloroform	83	4.234	4.234	(0.799)	343568	50.0000	49.5	
	32	Carbon Tetrachloride	117	4.395	4.395	(0.716)	254172	50.0000	49.5	
	33	Tetrahydrofuran	42	4.454	4.451	(0.840)	302565	250.000	258	
$	34	Dibromofluoromethane	113	4.488	4.489	(0.847)	221478	50.0000	50.3	
	35	1,1,1-Trichloroethane	97	4.503	4.496	(0.850)	318512	50.0000	50.1	
	36	1,1-Dichloropropene	75	4.690	4.691	(0.764)	251655	50.0000	50.5	
	37	2-Butanone	43	4.701	4.698	(0.887)	391146	250.000	238	
	38	Benzene	78	5.094	5.091	(0.830)	707682	50.0000	51.2	
	39	Propionitrile	54	5.177	5.177	(0.977)	221632	500.000	498	
	40	Methacrylonitrile	41	5.207	5.200	(0.982)	1149743	500.000	534	
*	41	Pentafluorobenzene	168	5.300	5.301	(1.000)	405879	50.0000		
$	42	1,2-Dichloroethane-D4	65	5.326	5.323	(1.005)	264878	50.0000	50.2	
	43	Tertiary-amyl methyl ether	73	5.338	5.335	(1.007)	420444	50.0000	45.6	
	44	1,2-Dichloroethane	62	5.439	5.439	(0.886)	250148	50.0000	50.4	
	45	Isobutyl Alcohol	43	5.615	5.619	(1.059)	91394	1000.00	727	
	46	Methylcyclohexane	83	6.000	5.997	(1.132)	281487	50.0000	47.9	
	47	Trichloroethene	95	6.045	6.042	(0.985)	195143	50.0000	55.1	
*	48	1,4-Difluorobenzene	114	6.139	6.132	(1.000)	673515	50.0000		
	49	Dibromomethane	93	6.681	6.682	(1.088)	114813	50.0000	51.1	
	50	1,2-Dichloropropane	63	6.838	6.832	(1.114)	172976	50.0000	51.9	
	51	Bromodichloromethane	83	6.969	6.966	(1.135)	243536	50.0000	51.4	
	52	Methyl Methacrylate	41	7.280	7.277	(1.186)	145883	50.0000	50.2	
	53	1,4-Dioxane	88	7.291	7.284	(1.188)	32404	1000.00	879	
	54	2-Chloroethylvinylether	63	7.875	7.876	(1.283)	64637	50.0000	34.0	
	55	cis-1,3-dichloropropene	75	7.901	7.898	(1.287)	276889	50.0000	49.5	
$	56	Toluene-D8	98	8.152	8.153	(1.328)	769663	50.0000	50.4	
	57	Toluene	92	8.223	8.220	(1.340)	429877	50.0000	50.0	
	58	Tetrachloroethene	164	8.736	8.736	(0.850)	138555	50.0000	48.0	
	59	4-methyl-2-pentanone	43	8.822	8.822	(1.437)	816265	250.000	272	
	60	trans-1,3-Dichloropropene	75	8.848	8.849	(1.441)	249506	50.0000	49.8	
	61	1,1,2-Trichloroethane	83	9.057	9.054	(1.475)	130390	50.0000	51.6	
	62	Ethyl Methacrylate	69	9.147	9.148	(1.490)	202447	50.0000	52.4	
	63	Dibromochloromethane	129	9.275	9.275	(0.903)	178463	50.0000	51.4	
	64	1,3-Dichloropropane	76	9.409	9.410	(0.916)	283652	50.0000	51.9	
	65	1,2-Dibromoethane	107	9.548	9.548	(1.555)	162761	50.0000	52.7	
M	66	Total Alkylbenzenes	100				4539192	50.0000	359	
	67	2-Hexanone	43	9.989	9.986	(0.972)	545388	250.000	258	
*	68	Chlorobenzene-D5	117	10.274	10.274	(1.000)	585674	50.0000		
	69	Chlorobenzene	112	10.296	10.293	(1.002)	467594	50.0000	50.3	
	70	Ethylbenzene	91	10.375	10.372	(1.010)	798094	50.0000	50.6	
	71	1,1,1,2-Tetrachloroethane	131	10.408	10.409	(1.013)	162422	50.0000	51.4	
	72	m+p-Xylenes	91	10.584	10.585	(1.030)	1224290	100.000	102	
	73	o-Xylene	91	11.149	11.150	(1.085)	615859	50.0000	50.5	
	74	Styrene	104	11.228	11.229	(1.093)	486544	50.0000	52.1	
	75	Bromoform	173	11.217	11.221	(1.092)	103971	50.0000	45.9	
	76	Isopropylbenzene	105	11.583	11.584	(0.869)	758007	50.0000	51.4	
$	77	P-Bromofluorobenzene	95	11.920	11.921	(1.942)	277038	50.0000	50.0	

Data File: \\target_server\gg\chem\gcms-t.i\T080521.b\T2727.D
Report Date: 10-Aug-2021 11:11

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	78 Bromobenzene	156	12.021	12.022	(0.901)	169456	50.0000	49.7	
	79 cis-1,4-Dichloro-2-Butene	53	12.048	12.052	(0.903)	55619	50.0000	49.2	
	80 N-Propylbenzene	91	12.126	12.123	(0.909)	901124	50.0000	51.8	
	81 1,1,2,2-Tetrachloroethane	83	12.246	12.243	(0.918)	171501	50.0000	47.5	
	82 2-Chlorotoluene	91	12.283	12.284	(0.921)	528824	50.0000	51.0	
	83 1,2,3-Trichloropropane	75	12.373	12.378	(0.928)	165618	50.0000	53.1	
	84 1,3,5-Trimethylbenzene	105	12.399	12.400	(0.930)	592322	50.0000	51.6	
	85 trans-1,4-Dichloro-2-Butene	53	12.463	12.460	(0.935)	55659	50.0000	49.3	
	86 4-Chlorotoluene	91	12.504	12.505	(0.938)	550550	50.0000	50.9	
	87 tert-Butylbenzene	119	12.781	12.785	(0.958)	510268	50.0000	50.7	
	89 1,2,4-Trimethylbenzene	105	12.878	12.879	(0.966)	601888	50.0000	51.5	
	90 sec-Butylbenzene	105	13.009	13.010	(0.976)	746889	50.0000	50.9	
	91 P-Isopropyltoluene	119	13.211	13.212	(0.991)	618473	50.0000	51.4	
	92 1,3-Dichlorobenzene	146	13.238	13.238	(0.993)	313759	50.0000	50.2	
*	93 1,4-Dichlorobenzene-D4	152	13.335	13.336	(1.000)	265774	50.0000		
	94 1,4-Dichlorobenzene	146	13.354	13.354	(1.001)	326455	50.0000	49.6	
	95 1,2,3-Trimethylbenzene	105	13.413	13.414	(1.006)	600469	50.0000	51.6	
	96 N-Butylbenzene	91	13.732	13.736	(1.030)	568228	50.0000	51.0	
	97 1,2-Dichlorobenzene	146	13.866	13.867	(1.040)	292307	50.0000	50.5	
	98 1,2-Dibromo-3-Chloropropane	157	14.873	14.874	(1.115)	31207	50.0000	46.3	
	99 1,3,5-Trichlorobenzene	180	14.907	14.907	(1.118)	210266	50.0000	49.8	
	100 Hexachlorobutadiene	225	15.692	15.693	(1.177)	85643	50.0000	47.8	
	101 1,2,4-Trichlorobenzene	180	15.700	15.701	(1.177)	182718	50.0000	50.5	
	102 Naphthalene	128	16.093	16.094	(1.207)	461917	50.0000	46.3	
M	103 1,2-Dichloroethylene (total)	96				318336	50.0000	87.9	
	104 1,2,3-Trichlorobenzene	180	16.317	16.318	(1.224)	164418	50.0000	50.4	
M	105 Xylenes (total)	91				1840149	150.000	153	


Data File: \\target_server\gg\chem\gcms-t.i\T080521.b\T2727.D
Date : 05-AUG-2021 18:46
Client ID:
Sample Info: WG303784-5,SD4723
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-t.i
Operator: HG
Column diameter: 0.18
\\target_server\gg\chem\gcms-t.i\T080521.b\T2727.D
Y (x10^6)
Min
-Chloromethane (1.353)
-Vinyl Chloride (1.398)
-Bromomethane (1.600)
-Chloroethane (1.674)
-Trichlorofluoromethane (1.768)
-Diethyl Ether (1.970)
-1,1-Dichloroethene (2.142)+
-Iodomethane (2.225)
-Acrolein (2.362)
-Allyl Chloride (2.468)
-Methylene Chloride (2.554)
-Acetone (2.610)
-trans-1,2-Dichloroethene (2.689)+
-Methyl tert-butyl ether (2.782)
-Tertiary-butyl alcohol (2.980)
-Acetonitrile (3.022)
-Di-isopropyl ether (3.138)
-Chloroprene (3.243)+
-Acrylonitrile (3.329)
-Ethyl tertiary-butyl ethe (3.527)+
-cis-1,2-Dichloroethene (3.871)
-2,2-Dichloropropane (3.998)
-Cyclohexane (4.114)+
-Chloroform (4.234)
-Carbon Tetrachloride (4.395)
-Tetrahydrofuran (4.496)+
-1,1-Dichloropropene (4.694)+
-Benzene (5.091)
-Pentafluorobenzene (5.323)+
-1,2-Dichloroethane (5.439)
Propionitrile (5.203)+
-Isobutyl Alcohol (5.619)
-Methylcyclohexane (6.038)+
-1,4-Difluorobenzene (6.135)
-Dibromomethane (6.678)
-1,2-Dichloropropane (6.839)
-Bromodichloromethane (6.970)
-Methyl Methacrylate (7.280)+
-2-Chloroethylvinylether (7.898)+
-Toluene-D8 (8.152)
-Toluene (8.223)
-Tetrachloroethene (8.740)
-4-methyl-2-pentanone (8.826)+
-1,1,2-Trichloroethane (9.058)
-Ethyl Methacrylate (9.148)
-Dibromochloromethane (9.275)
-1,3-Dichloropropane (9.410)
-1,2-Dibromoethane (9.548)
-2-Hexanone (9.990)
-Total Alkylbenzenes (10.100)
-Chlorobenzene-D5 (10.282)+
-Ethylbenzene (10.375)+
m+p-Xylenes (10.585)
-o-Xylene (11.150)
-Styrene (11.228)+
-Isopropylbenzene (11.584)
-P-Bromofluorobenzene (11.921)
-Bromobenzene (12.022)+
-N-Propylbenzene (12.127)
-1,1,2,2-Tetrachloroethane (12.243)
-2-Chlorotoluene (12.284)
-1,2,3-Trichloropropane (12.400)+
-trans-1,4-dichloro-2-bute (12.460)
-4-Chlorotoluene (12.505)
-tert-Butylbenzene (12.785)
-1,2,4-Trimethylbenzene (12.879)
-sec-Butylbenzene (13.010)
-P-Isopropyltoluene (13.216)+
-1,2,3-Trimethylbenzene (13.414)
1,4-Dichlorobenzene-D4 (13.343)+
-N-Butylbenzene (13.732)
-1,2-Dichlorobenzene (13.867)
-1,2-Dibromo-3-Chloropropa (14.879)
-1,2,5-Trichlorobenzene (14.907)
-Hexachlorobutadiene (15.697)+
-Naphthalene (16.093)
-1,2,3-Trichlorobenzene (16.318)
-1,2-Dichloroethylene (tot (16.880)

Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site **SDG:** SO4723
Lab ID : WG303527-4 **Analytical Date:** 08/02/21 07:14
Lab File ID : W9696.D **Instrument ID:** GCMS-W
Initial Calibration Date(s): 07/28/21 08:00 07/28/21 11:34 **Column ID:**

	Compound	$\overline{\text{RRF}}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
2	Chloromethane	50.00000	49.35587	0.59388	0.100	-1.28826	20.00000	Linear	
3	Vinyl chloride	0.48397	0.43053	0.43053	0.100	-11.04114	20.00000	Averaged	
4	Bromomethane	50.00000	45.37721	0.06744	0.100	-9.24558	20.00000	Linear	*
5	Chloroethane	50.00000	57.51568	0.12175	0.100	15.03135	20.00000	Quadratic	
8	1,1-Dichloroethene	0.33123	0.28214	0.28214	0.100	-14.81938	20.00000	Averaged	
10	Carbon Disulfide	50.00000	47.83111	0.66099	0.100	-4.33777	20.00000	Linear	
14	Methylene Chloride	50.00000	54.00966	0.34414	0.100	8.01932	20.00000	Linear	
15	Acetone	250	229	0.07758	0.100	-8.35814	20.00000	Linear	*
16	trans-1,2-Dichloroethene	50.00000	50.08801	0.32708	0.100	0.17602	20.00000	Linear	
23	1,1-Dichloroethane	0.90054	0.80523	0.80523	0.200	-10.58355	20.00000	Averaged	
27	cis-1,2-Dichloroethene	0.54520	0.48294	0.48294	0.100	-11.41934	20.00000	Averaged	
31	Chloroform	0.87735	0.78909	0.78909	0.200	-10.06013	20.00000	Averaged	
32	Carbon Tetrachloride	0.34313	0.30050	0.30050	0.100	-12.42499	20.00000	Averaged	
35	1,1,1-Trichloroethane	0.74662	0.62849	0.62849	0.100	-15.82220	20.00000	Averaged	
36	2-Butanone	0.16854	0.15666	0.15666	0.100	-7.04818	20.00000	Averaged	
38	Benzene	1.30799	1.15553	1.15553	0.500	-11.65647	20.00000	Averaged	
44	1,2-Dichloroethane	0.36480	0.33727	0.33727	0.100	-7.54865	20.00000	Averaged	
47	Trichloroethene	0.32122	0.26984	0.26984	0.200	-15.99285	20.00000	Averaged	
50	1,2-Dichloropropane	0.31521	0.29251	0.29251	0.100	-7.20390	20.00000	Averaged	
51	Bromodichloromethane	0.37473	0.35817	0.35817	0.200	-4.42014	20.00000	Averaged	
57	cis-1,3-dichloropropene	0.44433	0.45247	0.45247	0.200	1.83198	20.00000	Averaged	
59	Toluene	0.82932	0.71695	0.71695	0.400	-13.54966	20.00000	Averaged	
60	Tetrachloroethene	0.28952	0.22568	0.22568	0.200	-22.04995	20.00000	Averaged	*
61	4-methyl-2-pentanone	0.18397	0.18891	0.18891	0.100	2.68717	20.00000	Averaged	
62	trans-1,3-Dichloropropene	0.38168	0.39217	0.39217	0.100	2.74801	20.00000	Averaged	
63	1,1,2-Trichloroethane	0.22126	0.21226	0.21226	0.100	-4.06828	20.00000	Averaged	
64	Dibromochloromethane	0.28108	0.27633	0.27633	0.100	-1.68983	20.00000	Averaged	
67	2-Hexanone	250	212	0.12355	0.100	-15.14549	20.00000	Quadratic	
69	Chlorobenzene	0.91774	0.80606	0.80606	0.500	-12.16830	20.00000	Averaged	
70	Ethylbenzene	1.54280	1.37210	1.37210	0.100	-11.06410	20.00000	Averaged	
72	m+p-Xylenes	1.11408	1.03839	1.03839	0.100	-6.79378	20.00000	Averaged	
73	o-Xylene	1.12029	1.08777	1.08777	0.300	-2.90295	20.00000	Averaged	
74	Styrene	0.90431	0.90406	0.90406	0.300	-0.02765	20.00000	Averaged	
75	Bromoform	50.00000	42.72331	0.17710	0.100	-14.55338	20.00000	Linear	
81	1,1,2,2-Tetrachloroethane	0.58872	0.55562	0.55562	0.300	-5.62177	20.00000	Averaged	
105	Xylenes (total)	++++	1.05485	1.05485	0.010	++++	20.00000	Averaged	*
34	Dibromofluoromethane	0.44799	0.45792	0.45792	0.010	2.21614	20.00000	Averaged	
42	1,2-Dichloroethane-D4	0.50148	0.51466	0.51466	0.010	2.62812	20.00000	Averaged	
58	Toluene-D8	1.21424	1.21362	1.21362	0.010	-0.05176	20.00000	Averaged	
77	P-Bromofluorobenzene	0.49887	0.51103	0.51103	0.010	2.43848	20.00000	Averaged	

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Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site **SDG:** SO4723
Lab ID : WG303527-4 **Analytical Date:** 08/02/21 07:14
Lab File ID : W9696.D **Instrument ID:** GCMS-W
Initial Calibration Date(s): 07/28/21 08:00 07/28/21 11:34 **Column ID:**

Compound	$\overline{RRF}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type

*** = Compound out of QC criteria**

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Data File: \\target_server\gg\chem\gcms-w.i\W080221.b\W9696.D
Report Date: 10-Aug-2021 11:24

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W080221.b\W9696.D
Lab Smp Id: WG303527-4
Inj Date : 02-AUG-2021 07:14
Operator : CR/ES   Inst ID: gcms-w.i
Smp Info : WG303527-4,SO4723
Misc Info : WG303527,WG303228-4,SO4723-2
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-w.i\W080221.b\W8A05(03).m
Meth Date : 03-Aug-2021 06:45 hgould   Quant Type: ISTD
Cal Date : 28-JUL-2021 11:04   Cal File: W9625.D
Als bottle: 1   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

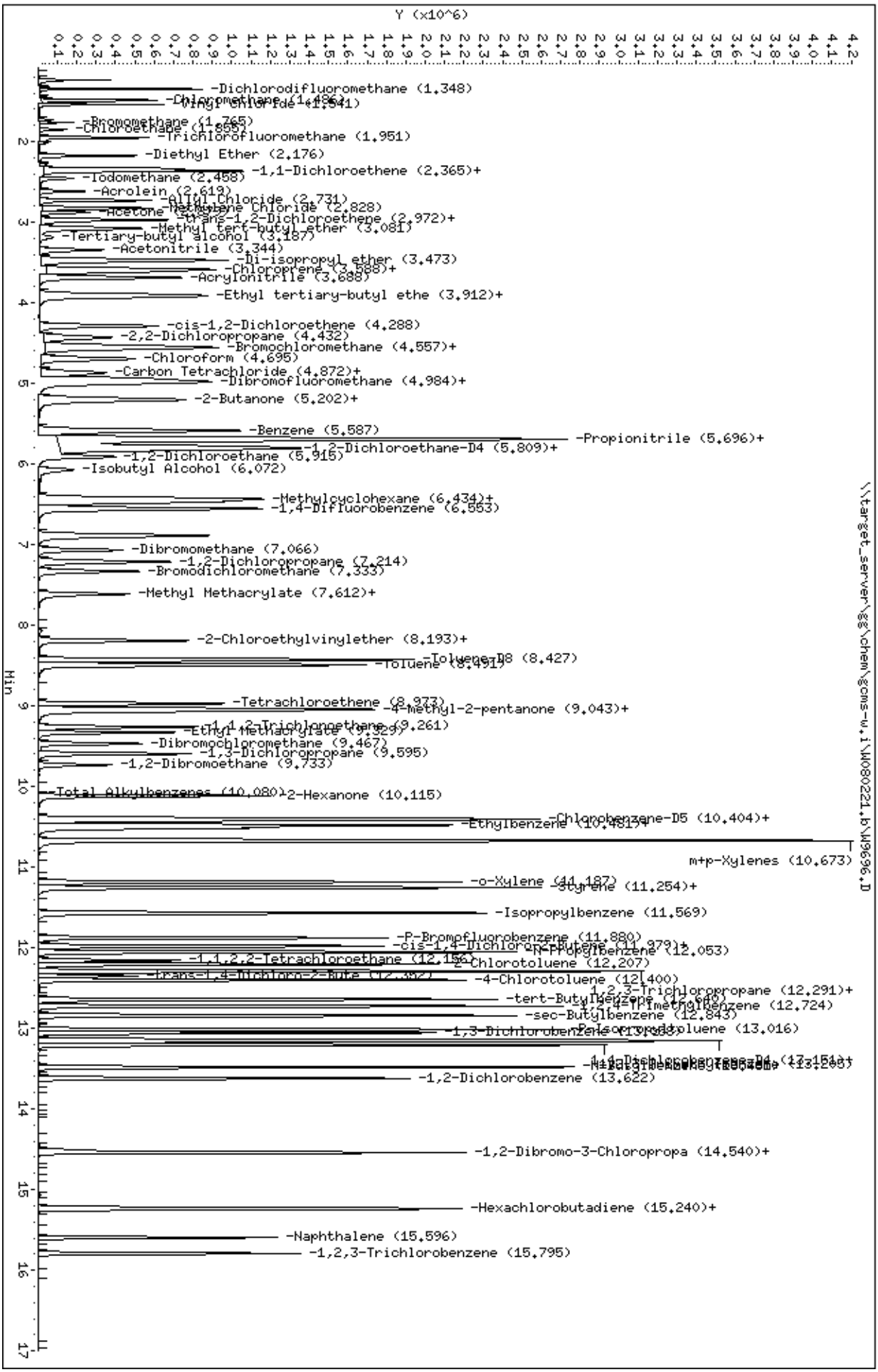
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.348	1.345	(0.233)	410258	50.0000	44.8	
2	Chloromethane	50	1.486	1.490	(0.257)	488940	50.0000	49.4	
3	Vinyl chloride	62	1.540	1.538	(0.266)	354456	50.0000	44.5	
4	Bromomethane	94	1.765	1.762	(0.305)	55519	50.0000	45.4	
5	Chloroethane	64	1.855	1.849	(0.321)	100234	50.0000	57.5	
6	Trichlorofluoromethane	101	1.951	1.952	(0.337)	390524	50.0000	48.2	
7	Diethyl Ether	59	2.176	2.176	(0.376)	229345	50.0000	54.2	
8	1,1-Dichloroethene	96	2.336	2.333	(0.404)	232286	50.0000	42.6	
9	Freon-113	151	2.362	2.359	(0.408)	227862	50.0000	49.9	
10	Carbon Disulfide	76	2.365	2.366	(0.409)	544186	50.0000	47.8	
11	Iodomethane	142	2.458	2.455	(0.425)	211864	50.0000	43.9	
12	Acrolein	56	2.618	2.619	(0.453)	197262	250.000	254	
13	Allyl Chloride	41	2.728	2.728	(0.472)	340722	50.0000	53.2	
14	Methylene Chloride	84	2.827	2.824	(0.489)	283325	50.0000	54.0	
15	Acetone	43	2.878	2.879	(0.498)	319339	250.000	229	
16	trans-1,2-Dichloroethene	96	2.971	2.969	(0.514)	269286	50.0000	50.1	
17	Methyl Acetate	43	2.991	2.991	(0.517)	158297	50.0000	52.8	
18	Methyl tert-butyl ether	73	3.081	3.078	(0.533)	697173	50.0000	50.0	
19	Tertiary-butyl alcohol	59	3.186	3.184	(0.551)	96488	250.000	238	
20	Acetonitrile	41	3.344	3.341	(0.578)	445894	500.000	498	
21	Di-isopropyl ether	45	3.472	3.473	(0.600)	1155313	50.0000	52.5	
22	Chloroprene	53	3.581	3.582	(0.619)	587369	50.0000	49.8	
23	1,1-Dichloroethane	63	3.610	3.614	(0.624)	662945	50.0000	44.7	

Data File: \\target_server\gg\chem\gcms-w.i\W080221.b\W9696.D
Report Date: 10-Aug-2021 11:24

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
	24 Acrylonitrile	52	3.690	3.688	(0.638)	583010	250.000	250	
	25 Ethyl tertiary-butyl ether	59	3.908	3.906	(0.676)	983975	50.0000	52.6	
	26 Vinyl Acetate	43	3.931	3.928	(0.600)	654411	50.0000	55.1	
	27 cis-1,2-Dichloroethene	96	4.287	4.288	(0.741)	397606	50.0000	44.3	
	28 2,2-Dichloropropane	77	4.431	4.432	(0.766)	413400	50.0000	45.6	
	29 Bromochloromethane	128	4.566	4.564	(0.790)	176858	50.0000	47.6	
	30 Cyclohexane	56	4.547	4.541	(0.786)	572978	50.0000	42.0	
	31 Chloroform	83	4.695	4.695	(0.812)	649651	50.0000	45.0	
	32 Carbon Tetrachloride	117	4.871	4.872	(0.743)	394078	50.0000	43.8	
	33 Tetrahydrofuran	42	4.942	4.939	(0.855)	503240	250.000	257	
$	34 Dibromofluoromethane	113	4.983	4.981	(0.862)	377005	50.0000	51.1	
	35 1,1,1-Trichloroethane	97	4.990	4.987	(0.863)	517431	50.0000	42.1	
	36 2-Butanone	43	5.214	5.212	(0.902)	644878	250.000	232	
	37 1,1-Dichloropropene	75	5.195	5.193	(0.792)	469397	50.0000	41.8	
	38 Benzene	78	5.587	5.587	(0.852)	1515386	50.0000	44.2	
	39 Propionitrile	54	5.670	5.671	(0.981)	508735	500.000	502	
	40 Methacrylonitrile	41	5.696	5.693	(0.985)	1833243	500.000	522	
*	41 Pentafluorobenzene	168	5.782	5.780	(1.000)	823295	50.0000		
$	42 1,2-Dichloroethane-D4	65	5.808	5.809	(1.004)	423716	50.0000	51.3	
	43 Tertiary-amyl methyl ether	73	5.821	5.822	(1.007)	804621	50.0000	51.3	
	44 1,2-Dichloroethane	62	5.914	5.908	(0.902)	442299	50.0000	46.2	
	45 Isobutyl Alcohol	43	6.071	6.075	(1.050)	177708	1000.00	828	
	46 Methylcyclohexane	83	6.437	6.431	(1.113)	778352	50.0000	51.2	
	47 Trichloroethene	95	6.472	6.473	(0.987)	353881	50.0000	42.0	
*	48 1,4-Difluorobenzene	114	6.556	6.556	(1.000)	1311426	50.0000		
	49 Dibromomethane	93	7.069	7.067	(1.078)	218797	50.0000	46.5	
	50 1,2-Dichloropropane	63	7.214	7.211	(1.100)	383601	50.0000	46.4	
	51 Bromodichloromethane	83	7.329	7.327	(1.118)	469712	50.0000	47.8	
	52 Methyl Methacrylate	41	7.612	7.612	(1.161)	244003	50.0000	45.9	
	53 Ethyl Methacrylate	69	9.328	9.332	(1.423)	464460	50.0000	45.8	
	54 1,4-Dioxane	88	7.637	7.635	(1.165)	70671	1000.00	900	
M	55 Total Alkylbenzenes	100				11316424	50.0000	322	
	56 2-Chloroethylvinylether	63	8.163	8.157	(1.245)	14897	50.0000	42.5	
	57 cis-1,3-dichloropropene	75	8.192	8.189	(1.250)	593379	50.0000	50.9	
$	58 Toluene-D8	98	8.427	8.427	(1.285)	1591567	50.0000	50.0	
	59 Toluene	92	8.491	8.494	(1.295)	940231	50.0000	43.2	
	60 Tetrachloroethene	164	8.972	8.973	(0.863)	289881	50.0000	39.0	
	61 4-methyl-2-pentanone	43	9.039	9.040	(1.379)	1238711	250.000	257	
	62 trans-1,3-Dichloropropene	75	9.068	9.069	(1.383)	514296	50.0000	51.4	
	63 1,1,2-Trichloroethane	83	9.261	9.265	(1.413)	278363	50.0000	48.0	
	64 Dibromochloromethane	129	9.469	9.467	(0.911)	354938	50.0000	49.2	
	65 1,3-Dichloropropane	76	9.595	9.595	(0.923)	612675	50.0000	48.5	
	66 1,2-Dibromoethane	107	9.733	9.733	(1.485)	315241	50.0000	47.4	
	67 2-Hexanone	43	10.114	10.115	(0.973)	793495	250.000	212	
*	68 Chlorobenzene-D5	117	10.397	10.397	(1.000)	1284465	50.0000		
	69 Chlorobenzene	112	10.416	10.417	(1.002)	1035361	50.0000	43.9	
	70 Ethylbenzene	91	10.480	10.481	(1.008)	1762417	50.0000	44.5	
	71 1,1,1,2-Tetrachloroethane	131	10.516	10.519	(1.011)	341127	50.0000	46.5	
	72 m+p-Xylenes	91	10.673	10.673	(1.027)	2667553	100.000	93.2	
	73 o-Xylene	91	11.186	11.184	(1.076)	1397200	50.0000	48.5	
	74 Styrene	104	11.254	11.254	(1.082)	1161233	50.0000	50.0	
	75 Bromoform	173	11.257	11.257	(1.083)	227476	50.0000	42.7	
	76 Isopropylbenzene	105	11.568	11.569	(0.880)	1701863	50.0000	45.7	
$	77 P-Bromofluorobenzene	95	11.879	11.880	(1.812)	670180	50.0000	51.2	

Data File: \\target_server\gg\chem\gcms-w.i\W080221.b\W9696.D
Report Date: 10-Aug-2021 11:24

			QUANT SIG					AMOUNTS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	78	cis-1,4-Dichloro-2-Butene	53	11.985	11.989	(0.912)	105215	50.0000	50.8	
	79	Bromobenzene	156	11.979	11.979	(0.911)	437605	50.0000	44.1	
	80	N-Propylbenzene	91	12.053	12.053	(0.917)	2096157	50.0000	44.8	
	81	1,1,2,2-Tetrachloroethane	83	12.155	12.159	(0.925)	409181	50.0000	47.2	
	82	2-Chlorotoluene	91	12.207	12.207	(0.929)	1271642	50.0000	45.0	
	83	1,2,3-Trichloropropane	75	12.284	12.287	(0.935)	345015	50.0000	46.9	
	84	1,3,5-Trimethylbenzene	105	12.293	12.294	(0.935)	1465574	50.0000	46.5	
	85	trans-1,4-Dichloro-2-Butene	53	12.351	12.352	(0.940)	106581	50.0000	51.4	
	86	4-Chlorotoluene	91	12.399	12.400	(0.943)	1349136	50.0000	46.0	
	87	tert-Butylbenzene	119	12.640	12.640	(0.962)	1250490	50.0000	44.7	
	89	1,2,4-Trimethylbenzene	105	12.727	12.727	(0.968)	1526937	50.0000	47.6	
	90	sec-Butylbenzene	105	12.842	12.843	(0.977)	1861764	50.0000	44.3	
	91	P-Isopropyltoluene	119	13.015	13.016	(0.990)	1590327	50.0000	46.5	
	92	1,3-Dichlorobenzene	146	13.057	13.058	(0.993)	875066	50.0000	44.9	
*	93	1,4-Dichlorobenzene-D4	152	13.144	13.144	(1.000)	736440	50.0000		
	94	1,4-Dichlorobenzene	146	13.160	13.160	(1.001)	900272	50.0000	44.1	
	95	1,2,3-Trimethylbenzene	105	13.205	13.205	(1.005)	1697066	50.0000	49.1	
	96	N-Butylbenzene	91	13.481	13.481	(1.026)	1525175	50.0000	47.2	
M	97	1,2-Dichloroethylene (total)	96				666892	50.0000	94.4	
	98	1,2-Dichlorobenzene	146	13.622	13.622	(1.036)	820047	50.0000	46.1	
	99	1,2-Dibromo-3-Chloropropane	157	14.511	14.511	(1.104)	61789	50.0000	38.8	
	100	1,3,5-Trichlorobenzene	180	14.540	14.540	(1.106)	692222	50.0000	48.6	
	101	Hexachlorobutadiene	225	15.226	15.227	(1.158)	276925	50.0000	39.3	
	102	1,2,4-Trichlorobenzene	180	15.242	15.243	(1.160)	513231	50.0000	42.2	
	103	Naphthalene	128	15.595	15.596	(1.187)	870815	50.0000	41.0	
	104	1,2,3-Trichlorobenzene	180	15.794	15.795	(1.202)	410814	50.0000	41.1	
M	105	Xylenes (total)	106				4064753	150.000	142	


Data File: \\target_server\gg\chem\gcms-w.i\W080221.b\W9696.D
Date : 02-AUG-2021 07:14
Client ID:
Sample Info: WG303527-4,SD4723
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: CR/ES
Column diameter: 0.18
Y (x10^6)
Min
-Dichlorodifluoromethane (1.348)
-Chloromethane (1.486)
-Vinyl Chloride (1.541)
-Bromomethane (1.765)
-Chloroethane (1.855)
-Trichlorofluoromethane (1.951)
-Diethyl Ether (2.176)
-1,1-Dichloroethene (2.365)+
-Iodomethane (2.458)
-Acrolein (2.619)
-Allyl Chloride (2.731)
-Methylene Chloride (2.828)
-Acetone
-trans-1,2-Dichloroethene (2.972)+
-Methyl tert-butyl ether (3.081)
-Tertiary-butyl alcohol (3.187)
-Acetonitrile (3.344)
-Di-isopropyl ether (3.473)
-Chloroprene (3.588)+
-Acrylonitrile (3.688)
-Ethyl tertiary-butyl ethe (3.912)+
-cis-1,2-Dichloroethene (4.288)
-2,2-Dichloropropane (4.432)
-Bromochloromethane (4.557)+
-Chloroform (4.695)
-Carbon Tetrachloride (4.872)+
-Dibromofluoromethane (4.984)+
-2-Butanone (5.202)+
-Benzene (5.587)
-Propionitrile (5.696)+
-1,2-Dichloroethane-D4 (5.809)+
-1,2-Dichloroethane (5.915)
-Isobutyl Alcohol (6.072)
-Methylcyclohexane (6.434)+
-1,4-Difluorobenzene (6.553)
-Dibromomethane (7.066)
-1,2-Dichloropropane (7.214)
-Bromodichloromethane (7.333)
-Methyl Methacrylate (7.612)+
-2-Chloroethylvinylether (8.193)+
-Toluene-D8 (8.427)
-Toluene (8.491)
-Tetrachloroethene (8.977)
-4-Methyl-2-pentanone (9.043)+
-1,1,2-Trichloroethane (9.261)
-Ethyl Methacrylate (9.329)
-Dibromochloromethane (9.467)
-1,3-Dichloropropane (9.595)
-1,2-Dibromoethane (9.733)
-Total Alkylbenzenes (10.080)
2-Hexanone (10.115)
-Chlorobenzene-D5 (10.404)+
-Ethylbenzene (10.481)+
m+p-Xylenes (10.673)
-o-Xylene (11.187)
-Styrene (11.254)+
-Isopropylbenzene (11.569)
-P-Bromofluorobenzene (11.880)
-cis-1,4-Dichloro-2-Butene (11.979)+
-n-Propylbenzene (12.053)
-1,1,2,2-Tetrachloroethane (12.156)
2-Chlorotoluene (12.207)
-trans-1,4-Dichloro-2-Bute (12.402)
-4-Chlorotoluene (12.400)
1,2,3-Trichloropropane (12.291)+
-tert-Butylbenzene (12.606)
1,2,4-Trimethylbenzene (12.724)
-sec-Butylbenzene (12.843)
-1,3-Dichlorobenzene (13.032)
-p-Isopropyltoluene (13.016)
-1,4-Dichlorobenzene-D4 (13.154)+
-n-Butylbenzene (13.288)
-1,2-Dichlorobenzene (13.622)
-1,2-Dibromo-3-Chloropropa (14.540)+
-Hexachlorobutadiene (15.240)+
-Naphthalene (15.596)
-1,2,3-Trichlorobenzene (15.795)
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Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site **SDG:** SO4723
Lab ID : WG303527-5 **Analytical Date:** 08/02/21 17:17
Lab File ID : W9715.D **Instrument ID:** GCMS-W
Initial Calibration Date(s): 07/28/21 08:00 07/28/21 11:34 **Column ID:**

	Compound	$\overline{\text{RRF}}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
2	Chloromethane	50.00000	52.21987	0.62834	0.100	4.43975	50.00000	Linear	
3	Vinyl chloride	0.48397	0.46450	0.46450	0.100	-4.02274	50.00000	Averaged	
4	Bromomethane	50.00000	57.19632	0.08500	0.100	14.39263	50.00000	Linear	*
5	Chloroethane	50.00000	55.33256	0.11923	0.100	10.66511	50.00000	Quadratic	
8	1,1-Dichloroethene	0.33123	0.31449	0.31449	0.100	-5.05240	50.00000	Averaged	
10	Carbon Disulfide	50.00000	52.73394	0.72874	0.100	5.46788	50.00000	Linear	
14	Methylene Chloride	50.00000	56.25808	0.35846	0.100	12.51616	50.00000	Linear	
15	Acetone	250	224	0.07593	0.100	-10.30665	50.00000	Linear	*
16	trans-1,2-Dichloroethene	50.00000	54.16631	0.35372	0.100	8.33262	50.00000	Linear	
23	1,1-Dichloroethane	0.90054	0.88900	0.88900	0.200	-1.28143	50.00000	Averaged	
27	cis-1,2-Dichloroethene	0.54520	0.52275	0.52275	0.100	-4.11864	50.00000	Averaged	
31	Chloroform	0.87735	0.85334	0.85334	0.200	-2.73611	50.00000	Averaged	
32	Carbon Tetrachloride	0.34313	0.34395	0.34395	0.100	0.23876	50.00000	Averaged	
35	1,1,1-Trichloroethane	0.74662	0.72850	0.72850	0.100	-2.42654	50.00000	Averaged	
36	2-Butanone	0.16854	0.16844	0.16844	0.100	-0.05830	50.00000	Averaged	
38	Benzene	1.30799	1.24170	1.24170	0.500	-5.06849	50.00000	Averaged	
44	1,2-Dichloroethane	0.36480	0.34619	0.34619	0.100	-5.10152	50.00000	Averaged	
47	Trichloroethene	0.32122	0.28975	0.28975	0.200	-9.79672	50.00000	Averaged	
50	1,2-Dichloropropane	0.31521	0.30991	0.30991	0.100	-1.68371	50.00000	Averaged	
51	Bromodichloromethane	0.37473	0.37127	0.37127	0.200	-0.92422	50.00000	Averaged	
57	cis-1,3-dichloropropene	0.44433	0.45991	0.45991	0.200	3.50668	50.00000	Averaged	
59	Toluene	0.82932	0.77123	0.77123	0.400	-7.00516	50.00000	Averaged	
60	Tetrachloroethene	0.28952	0.24652	0.24652	0.200	-14.85142	50.00000	Averaged	
61	4-methyl-2-pentanone	0.18397	0.20027	0.20027	0.100	8.86179	50.00000	Averaged	
62	trans-1,3-Dichloropropene	0.38168	0.39551	0.39551	0.100	3.62503	50.00000	Averaged	
63	1,1,2-Trichloroethane	0.22126	0.21775	0.21775	0.100	-1.58772	50.00000	Averaged	
64	Dibromochloromethane	0.28108	0.27768	0.27768	0.100	-1.20997	50.00000	Averaged	
67	2-Hexanone	250	225	0.13104	0.100	-9.80505	50.00000	Quadratic	
69	Chlorobenzene	0.91774	0.83861	0.83861	0.500	-8.62241	50.00000	Averaged	
70	Ethylbenzene	1.54280	1.45274	1.45274	0.100	-5.83706	50.00000	Averaged	
72	m+p-Xylenes	1.11408	1.10139	1.10139	0.100	-1.13861	50.00000	Averaged	
73	o-Xylene	1.12029	1.14284	1.14284	0.300	2.01336	50.00000	Averaged	
74	Styrene	0.90431	0.93191	0.93191	0.300	3.05259	50.00000	Averaged	
75	Bromoform	50.00000	42.85707	0.17765	0.100	-14.28587	50.00000	Linear	
81	1,1,2,2-Tetrachloroethane	0.58872	0.56118	0.56118	0.300	-4.67730	50.00000	Averaged	
105	Xylenes (total)	++++	1.11521	1.11521	0.010	++++	50.00000	Averaged	*
34	Dibromofluoromethane	0.44799	0.47811	0.47811	0.010	6.72224	50.00000	Averaged	
42	1,2-Dichloroethane-D4	0.50148	0.53467	0.53467	0.010	6.61885	50.00000	Averaged	
58	Toluene-D8	1.21424	1.23218	1.23218	0.010	1.47750	50.00000	Averaged	
77	P-Bromofluorobenzene	0.49887	0.52263	0.52263	0.010	4.76332	50.00000	Averaged	

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Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site **SDG:** SO4723
Lab ID : WG303527-5 **Analytical Date:** 08/02/21 17:17
Lab File ID : W9715.D **Instrument ID:** GCMS-W
Initial Calibration Date(s): 07/28/21 08:00 07/28/21 11:34 **Column ID:**

Compound	$\overline{\text{RRF}}$/Amount	RF50	CCAL RRF50	Min	%D/ %Drift	Max %D/ %Drift	Curve Type

*** = Compound out of QC criteria**

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Data File: \\target_server\gg\chem\gcms-w.i\W080221.b\W9715.D
Report Date: 10-Aug-2021 11:25

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W080221.b\W9715.D
Lab Smp Id: WG303527-5
Inj Date : 02-AUG-2021 17:17
Operator : CR/ES Inst ID: gcms-w.i
Smp Info : WG303527-5,SO4723
Misc Info : WG303527,WG303228-4,SO4723-2
Comment : SW846 5030
Method : \\target_server\gg\chem\gcms-w.i\W080221.b\W8A05(03).m
Meth Date : 10-Aug-2021 11:24 croy Quant Type: ISTD
Cal Date : 28-JUL-2021 11:04 Cal File: W9625.D
Als bottle: 20 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.348	1.345	(0.233)	416778	50.0000	47.7	
2	Chloromethane	50	1.489	1.490	(0.258)	493112	50.0000	52.2	
3	Vinyl chloride	62	1.540	1.538	(0.266)	364531	50.0000	48.0	
4	Bromomethane	94	1.762	1.762	(0.305)	66706	50.0000	57.2	
5	Chloroethane	64	1.851	1.849	(0.320)	93571	50.0000	55.3	
6	Trichlorofluoromethane	101	1.951	1.952	(0.337)	389655	50.0000	50.5	
7	Diethyl Ether	59	2.176	2.176	(0.376)	212819	50.0000	52.8	
8	1,1-Dichloroethene	96	2.336	2.333	(0.404)	246808	50.0000	47.5	
9	Freon-113	151	2.362	2.359	(0.408)	205551	50.0000	47.2	
10	Carbon Disulfide	76	2.365	2.366	(0.409)	571900	50.0000	52.7	
11	Iodomethane	142	2.458	2.455	(0.425)	242001	50.0000	52.6	
12	Acrolein	56	2.618	2.619	(0.453)	180188	250.000	244	
13	Allyl Chloride	41	2.731	2.728	(0.472)	327046	50.0000	53.6	
14	Methylene Chloride	84	2.827	2.824	(0.489)	281314	50.0000	56.2	
15	Acetone	43	2.881	2.879	(0.498)	297928	250.000	224	
16	trans-1,2-Dichloroethene	96	2.971	2.969	(0.514)	277589	50.0000	54.2	
17	Methyl Acetate	43	2.991	2.991	(0.517)	153891	50.0000	53.8	
18	Methyl tert-butyl ether	73	3.080	3.078	(0.533)	744414	50.0000	56.0	
19	Tertiary-butyl alcohol	59	3.190	3.184	(0.552)	109033	250.000	282	
20	Acetonitrile	41	3.344	3.341	(0.578)	449903	500.000	527	
21	Di-isopropyl ether	45	3.475	3.473	(0.601)	1121734	50.0000	53.5	
22	Chloroprene	53	3.584	3.582	(0.620)	561246	50.0000	49.9	
23	1,1-Dichloroethane	63	3.613	3.614	(0.625)	697673	50.0000	49.4	

Data File: \\target_server\gg\chem\gcms-w.i\W080221.b\W9715.D
Report Date: 10-Aug-2021 11:25

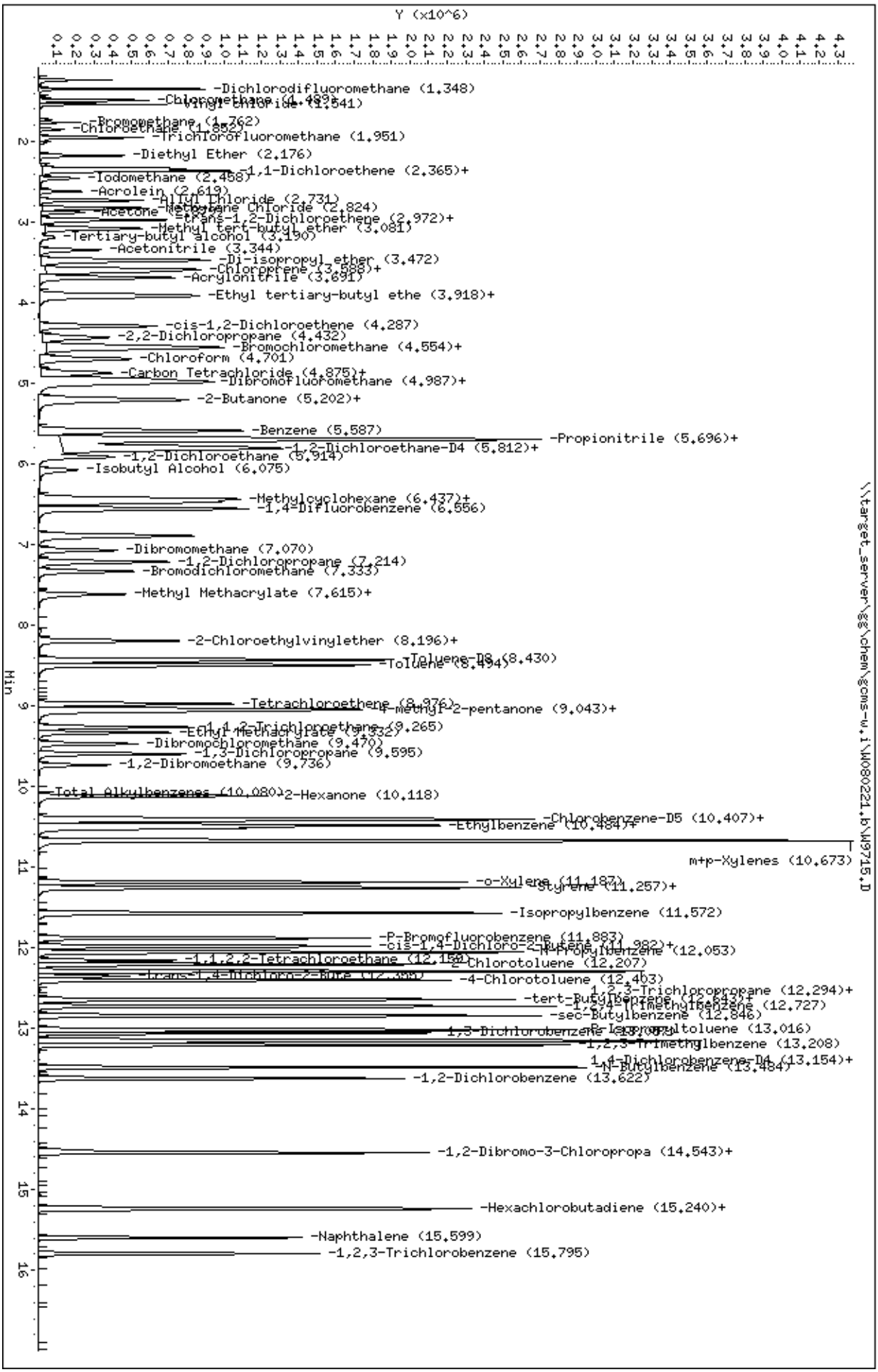
		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/l)	AMOUNTS ON-COL (ug/l)	REVIEW CODE
	24	Acrylonitrile	52	3.690	3.688	(0.638)	573573	250.000	258	
	25	Ethyl tertiary-butyl ether	59	3.908	3.906	(0.676)	966791	50.0000	54.2	
	26	Vinyl Acetate	43	3.931	3.928	(0.599)	646962	50.0000	55.5	
	27	cis-1,2-Dichloroethene	96	4.290	4.288	(0.742)	410243	50.0000	47.9	
	28	2,2-Dichloropropane	77	4.435	4.432	(0.767)	409362	50.0000	47.3	
	29	Bromochloromethane	128	4.569	4.564	(0.790)	172931	50.0000	48.8	
	30	Cyclohexane	56	4.544	4.541	(0.786)	665246	50.0000	51.2	
	31	Chloroform	83	4.698	4.695	(0.812)	669688	50.0000	48.6	
	32	Carbon Tetrachloride	117	4.874	4.872	(0.743)	442343	50.0000	50.1	
	33	Tetrahydrofuran	42	4.942	4.939	(0.855)	517104	250.000	277	
$	34	Dibromofluoromethane	113	4.987	4.981	(0.862)	375211	50.0000	53.4	
	35	1,1,1-Trichloroethane	97	4.990	4.987	(0.863)	571715	50.0000	48.8	
	36	2-Butanone	43	5.218	5.212	(0.902)	660936	250.000	250	
	37	1,1-Dichloropropene	75	5.198	5.193	(0.793)	521397	50.0000	47.3	
	38	Benzene	78	5.587	5.587	(0.852)	1596910	50.0000	47.5	
	39	Propionitrile	54	5.673	5.671	(0.981)	512932	500.000	531	
	40	Methacrylonitrile	41	5.696	5.693	(0.985)	1809230	500.000	541	
*	41	Pentafluorobenzene	168	5.782	5.780	(1.000)	784781	50.0000		
$	42	1,2-Dichloroethane-D4	65	5.811	5.809	(1.005)	419600	50.0000	53.3	
	43	Tertiary-amyl methyl ether	73	5.818	5.822	(1.006)	782884	50.0000	52.4	
	44	1,2-Dichloroethane	62	5.914	5.908	(0.902)	445229	50.0000	47.4	
	45	Isobutyl Alcohol	43	6.074	6.075	(1.050)	206088	1000.00	1010	
	46	Methylcyclohexane	83	6.437	6.431	(1.113)	725363	50.0000	50.1	
	47	Trichloroethene	95	6.479	6.473	(0.988)	372636	50.0000	45.1	
*	48	1,4-Difluorobenzene	114	6.559	6.556	(1.000)	1286072	50.0000		
	49	Dibromomethane	93	7.072	7.067	(1.078)	219778	50.0000	47.6	
	50	1,2-Dichloropropane	63	7.214	7.211	(1.100)	398563	50.0000	49.2	
	51	Bromodichloromethane	83	7.332	7.327	(1.118)	477479	50.0000	49.5	
	52	Methyl Methacrylate	41	7.615	7.612	(1.161)	248082	50.0000	47.6	
	53	Ethyl Methacrylate	69	9.331	9.332	(1.423)	462469	50.0000	46.5	
	54	1,4-Dioxane	88	7.634	7.635	(1.164)	82685	1000.00	1070	
M	55	Total Alkylbenzenes	100				12034858	50.0000	341	
	56	2-Chloroethylvinylether	63	8.163	8.157	(1.245)	17801	50.0000	51.7	
	57	cis-1,3-dichloropropene	75	8.195	8.189	(1.249)	591477	50.0000	51.8	
$	58	Toluene-D8	98	8.430	8.427	(1.285)	1584678	50.0000	50.7	
	59	Toluene	92	8.494	8.494	(1.295)	991855	50.0000	46.5	
	60	Tetrachloroethene	164	8.975	8.973	(0.863)	314676	50.0000	42.6	
	61	4-methyl-2-pentanone	43	9.039	9.040	(1.378)	1287807	250.000	272	
	62	trans-1,3-Dichloropropene	75	9.068	9.069	(1.383)	508658	50.0000	51.8	
	63	1,1,2-Trichloroethane	83	9.264	9.265	(1.412)	280040	50.0000	49.2	
	64	Dibromochloromethane	129	9.469	9.467	(0.911)	354446	50.0000	49.4	
	65	1,3-Dichloropropane	76	9.598	9.595	(0.923)	616130	50.0000	49.0	
	66	1,2-Dibromoethane	107	9.733	9.733	(1.484)	319222	50.0000	48.9	
	67	2-Hexanone	43	10.114	10.115	(0.973)	836363	250.000	225	
*	68	Chlorobenzene-D5	117	10.400	10.397	(1.000)	1276454	50.0000		
	69	Chlorobenzene	112	10.419	10.417	(1.002)	1070442	50.0000	45.7	
	70	Ethylbenzene	91	10.483	10.481	(1.008)	1854362	50.0000	47.1	
	71	1,1,1,2-Tetrachloroethane	131	10.515	10.519	(1.011)	347967	50.0000	47.7	
	72	m+p-Xylenes	91	10.673	10.673	(1.026)	2811757	100.000	98.9	
	73	o-Xylene	91	11.186	11.184	(1.076)	1458789	50.0000	51.0	
	74	Styrene	104	11.257	11.254	(1.082)	1189546	50.0000	51.5	
	75	Bromoform	173	11.260	11.257	(1.083)	226765	50.0000	42.8	
	76	Isopropylbenzene	105	11.571	11.569	(0.880)	1817959	50.0000	48.7	
$	77	P-Bromofluorobenzene	95	11.882	11.880	(1.812)	672139	50.0000	52.4	

Data File: \\target_server\gg\chem\gcms-w.i\W080221.b\W9715.D
Report Date: 10-Aug-2021 11:25

			QUANT SIG					AMOUNTS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/l)	ON-COL (ug/l)	REVIEW CODE
	78	cis-1,4-Dichloro-2-Butene	53	11.988	11.989	(0.912)	100999	50.0000	48.6	
	79	Bromobenzene	156	11.979	11.979	(0.911)	442129	50.0000	44.5	
	80	N-Propylbenzene	91	12.053	12.053	(0.917)	2221352	50.0000	47.4	
	81	1,1,2,2-Tetrachloroethane	83	12.158	12.159	(0.925)	414493	50.0000	47.7	
	82	2-Chlorotoluene	91	12.207	12.207	(0.928)	1328138	50.0000	46.9	
	83	1,2,3-Trichloropropane	75	12.284	12.287	(0.934)	351263	50.0000	47.6	
	84	1,3,5-Trimethylbenzene	105	12.293	12.294	(0.935)	1540394	50.0000	48.8	
	85	trans-1,4-Dichloro-2-Butene	53	12.354	12.352	(0.940)	101993	50.0000	49.0	
	86	4-Chlorotoluene	91	12.402	12.400	(0.943)	1388921	50.0000	47.2	
	87	tert-Butylbenzene	119	12.643	12.640	(0.962)	1348935	50.0000	48.0	
	88	Pentachloroethane	165	12.653	12.653	(0.962)	3713	50.0000	(a)	
	89	1,2,4-Trimethylbenzene	105	12.726	12.727	(0.968)	1582481	50.0000	49.2	
	90	sec-Butylbenzene	105	12.845	12.843	(0.977)	2012111	50.0000	47.7	
	91	P-Isopropyltoluene	119	13.015	13.016	(0.990)	1699678	50.0000	49.6	
	92	1,3-Dichlorobenzene	146	13.057	13.058	(0.993)	885709	50.0000	45.3	
*	93	1,4-Dichlorobenzene-D4	152	13.147	13.144	(1.000)	738609	50.0000		
	94	1,4-Dichlorobenzene	146	13.163	13.160	(1.001)	916950	50.0000	44.8	
	95	1,2,3-Trimethylbenzene	105	13.208	13.205	(1.005)	1646103	50.0000	47.5	
	96	N-Butylbenzene	91	13.484	13.481	(1.026)	1629907	50.0000	50.2	
M	97	1,2-Dichloroethylene (total)	96				687832	50.0000	102	
	98	1,2-Dichlorobenzene	146	13.622	13.622	(1.036)	829808	50.0000	46.6	
	99	1,2-Dibromo-3-Chloropropane	157	14.511	14.511	(1.104)	65925	50.0000	41.3	
	100	1,3,5-Trichlorobenzene	180	14.543	14.540	(1.106)	652487	50.0000	45.6	
	101	Hexachlorobutadiene	225	15.226	15.227	(1.158)	298700	50.0000	42.2	
	102	1,2,4-Trichlorobenzene	180	15.245	15.243	(1.160)	528236	50.0000	43.3	
	103	Naphthalene	128	15.598	15.596	(1.186)	988386	50.0000	46.5	
	104	1,2,3-Trichlorobenzene	180	15.794	15.795	(1.201)	438411	50.0000	43.7	
M	105	Xylenes (total)	106				4270546	150.000	150	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).


Data File: \\target_server\gg\chem\gcms-w.i\W080221.b\W9715.D
Date : 02-AUG-2021 17:17
Client ID:
Sample Info: WG303527-5,SD4723
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: CR/ES
Column diameter: 0.18
Y (x10^6)
Min
\\target_server\gg\chem\gcms-w.i\W080221.b\W9715.D
-Dichlorodifluoromethane (1.348)
-Chloromethane (1.489)
Vinyl chloride (1.541)
-Bromomethane (1.762)
-Chloroethane (1.852)
-Trichlorofluoromethane (1.951)
-Diethyl Ether (2.176)
-1,1-Dichloroethene (2.365)+
-Iodomethane (2.458)
-Acrolein (2.619)
-Allyl Chloride (2.731)
-Methylene Chloride (2.824)
-Acetone (2.880)
-trans-1,2-Dichloroethene (2.972)+
-Methyl tert-butyl ether (3.081)
-Tertiary-butyl alcohol (3.190)
-Acetonitrile (3.344)
-Di-isopropyl ether (3.472)
-Chloroprene (3.598)+
-Acrylonitrile (3.691)
-Ethyl tertiary-butyl ethe (3.918)+
-cis-1,2-Dichloroethene (4.287)
-2,2-Dichloropropane (4.432)
-Bromochloromethane (4.554)+
-Chloroform (4.701)
-Carbon Tetrachloride (4.875)+
-Dibromofluoromethane (4.987)+
-2-Butanone (5.202)+
-Benzene (5.587)
-Propionitrile (5.696)+
-1,2-Dichloroethane-D4 (5.812)+
-1,2-Dichloroethane (5.914)
-Isobutyl Alcohol (6.075)
-Methylcyclohexane (6.437)+
-1,4-Difluorobenzene (6.556)
-Dibromomethane (7.070)
-1,2-Dichloropropane (7.214)
-Bromodichloromethane (7.333)
-Methyl Methacrylate (7.615)+
-2-Chloroethylvinylether (8.196)+
-Toluene-D8 (8.430)
-Toluene (8.494)
-Tetrachloroethene (8.976)
-4-methyl-2-pentanone (9.043)+
-1,1,2-Trichloroethane (9.265)
-Ethyl Methacrylate (9.332)
-Dibromochloromethane (9.470)
-1,3-Dichloropropane (9.595)
-1,2-Dibromoethane (9.736)
-Total Alkylbenzenes (10.080)+
-2-Hexanone (10.118)
-Chlorobenzene-D5 (10.407)+
-Ethylbenzene (10.484)+
m+p-Xylenes (10.673)
-o-Xylene (11.187)
-Styrene (11.257)+
-Isopropylbenzene (11.572)
-P-Bromofluorobenzene (11.883)
-cis-1,4-Dichloro-2-Butene (11.982)+
-n-Propylbenzene (12.053)
-1,1,2,2-Tetrachloroethane (12.150)
-2-Chlorotoluene (12.207)
-trans-1,4-Dichloro-2-Bute (12.388)
-4-Chlorotoluene (12.403)
-1,2,3-Trichloropropane (12.294)+
-tert-Butylbenzene (12.642)+
-1,3,5-Trimethylbenzene (12.727)
-sec-Butylbenzene (12.846)
-p-Isopropyltoluene (13.016)
-1,3-Dichlorobenzene (13.078)
-1,2,3-Trimethylbenzene (13.208)
-1,4-Dichlorobenzene-D4 (13.154)+
-n-Butylbenzene (13.484)
-1,2-Dichlorobenzene (13.622)
-1,2-Dibromo-3-Chloropropa (14.543)+
-Hexachlorobutadiene (15.240)+
-Naphthalene (15.599)
-1,2,3-Trichlorobenzene (15.795)

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\TB535a.D

Date : 04-AUG-2021 07:30

Client ID:

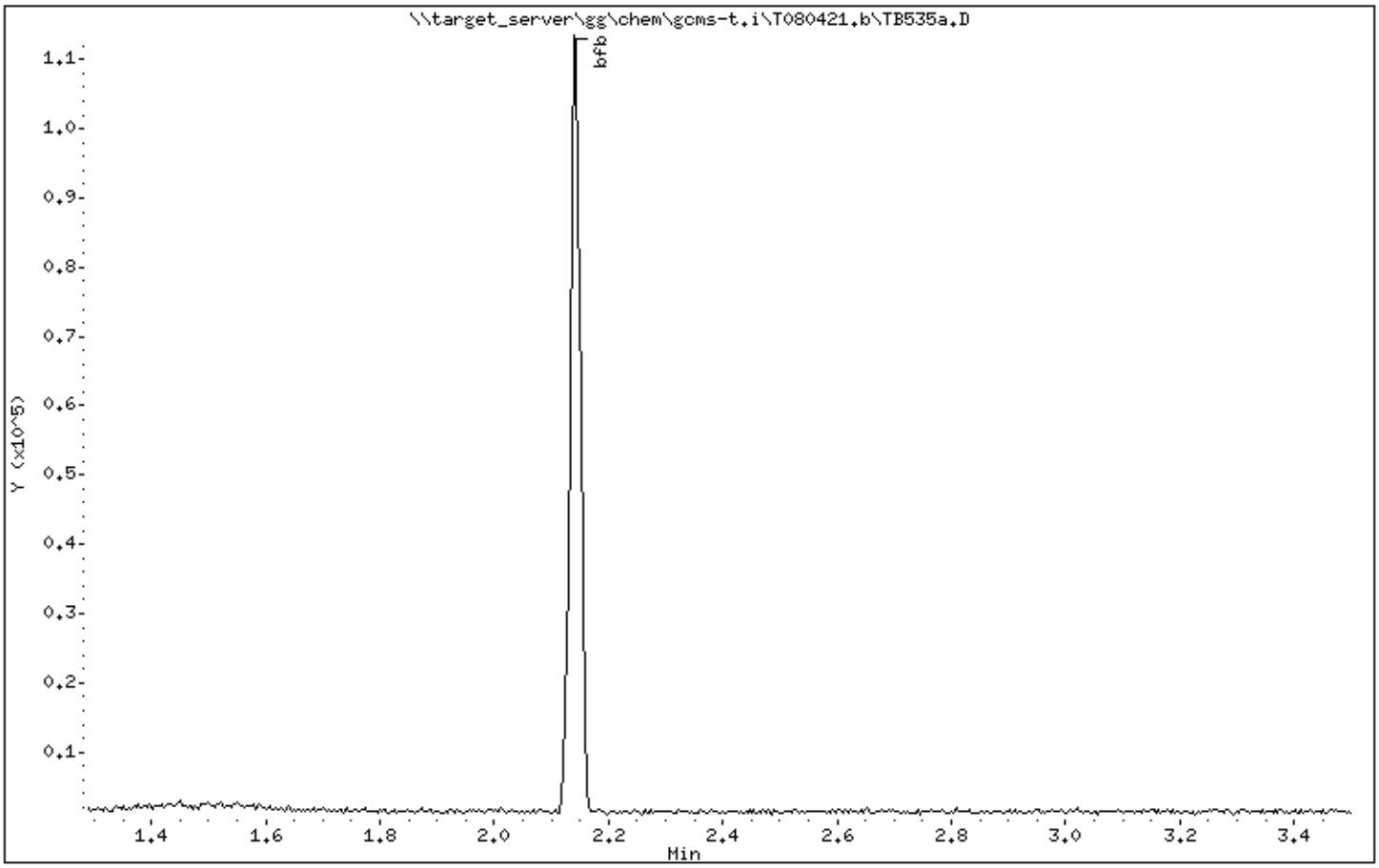
Instrument: gcms-t.i

Sample Info: WG303684-11,SO4723

Operator: HG

Column phase: RTX-VMS

Column diameter: 0.18



Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\TB535a.D

Date : 04-AUG-2021 07:30

Client ID:

Instrument: gcms-t.i

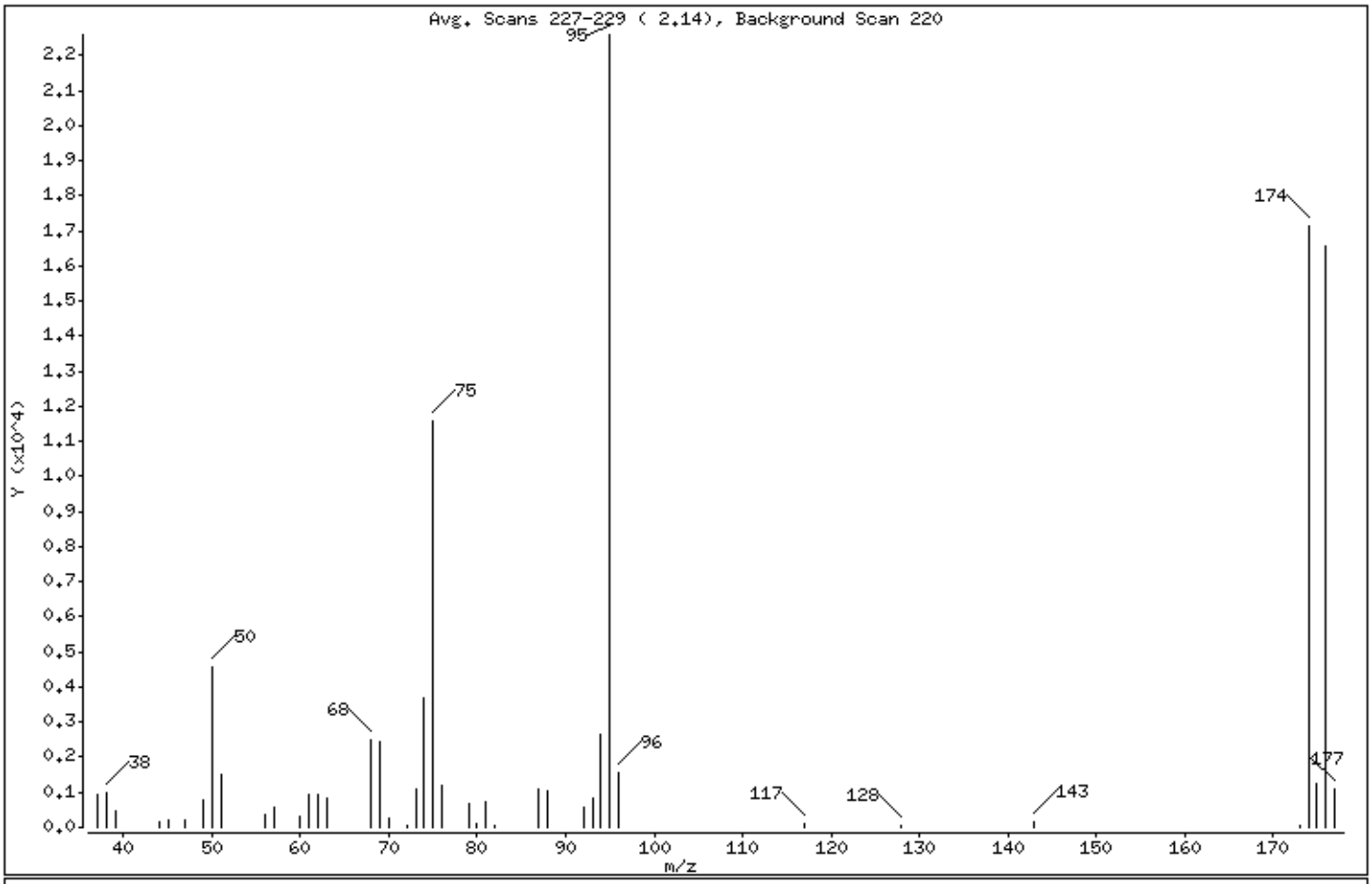
Sample Info: WG303684-11,S04723

Operator: HG

Column phase: RTX-VMS

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	20.26
75	30.00 - 60.00% of mass 95	51.36
96	5.00 - 9.00% of mass 95	6.82
173	Less than 2.00% of mass 174	0.31 (0.41)
174	Greater than 50.00% of mass 95	75.78
175	5.00 - 9.00% of mass 174	5.56 (7.34)
176	95.00 - 101.00% of mass 174	73.41 (96.87)
177	5.00 - 9.00% of mass 176	4.81 (6.55)

Date : 04-AUG-2021 07:30

Client ID:

Instrument: gcms-t.i

Sample Info: WG303684-11,S04723

Operator: HG

Column phase: RTX-VMS

Column diameter: 0.18

Data File: TB535a.D
Spectrum: Avg. Scans 227-229 (2.14), Background Scan 220
Location of Maximum: 95.00
Number of points: 42

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	960	60.00	299	76.00	1213	96.00	1540
38.00	1003	61.00	956	79.00	665	117.00	98
39.00	485	62.00	914	80.00	108	128.00	68
44.00	145	63.00	845	81.00	741	143.00	148
45.00	211	68.00	2487	82.00	68	173.00	71
47.00	224	69.00	2438	87.00	1095	174.00	17120
49.00	799	70.00	283	88.00	1027	175.00	1256
50.00	4577	72.00	70	92.00	572	176.00	16584
51.00	1495	73.00	1098	93.00	838	177.00	1087
56.00	358	74.00	3697	94.00	2670		
57.00	577	75.00	11603	95.00	22592		

Data File: \\target_server\gg\chem\gcms-t.i\T080521.b\TB536a.D

Date : 05-AUG-2021 07:11

Client ID:

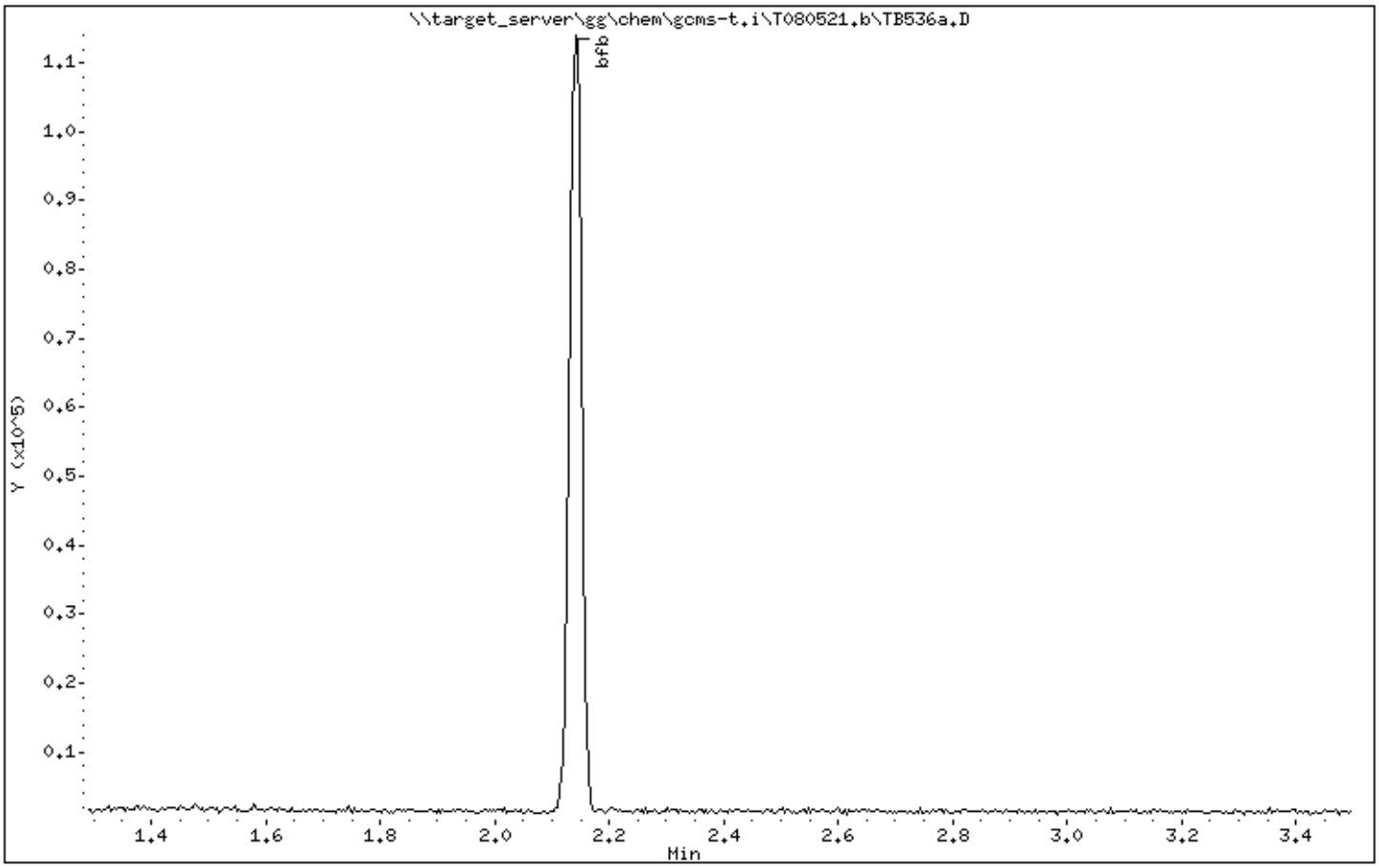
Instrument: gcms-t.i

Sample Info: WG303781-3,SO4723

Operator: HG

Column phase: RTX-VMS

Column diameter: 0.18



Data File: \\target_server\gg\chem\gcms-t.i\T080521.b\TB536a.D

Date : 05-AUG-2021 07:11

Client ID:

Instrument: gcms-t.i

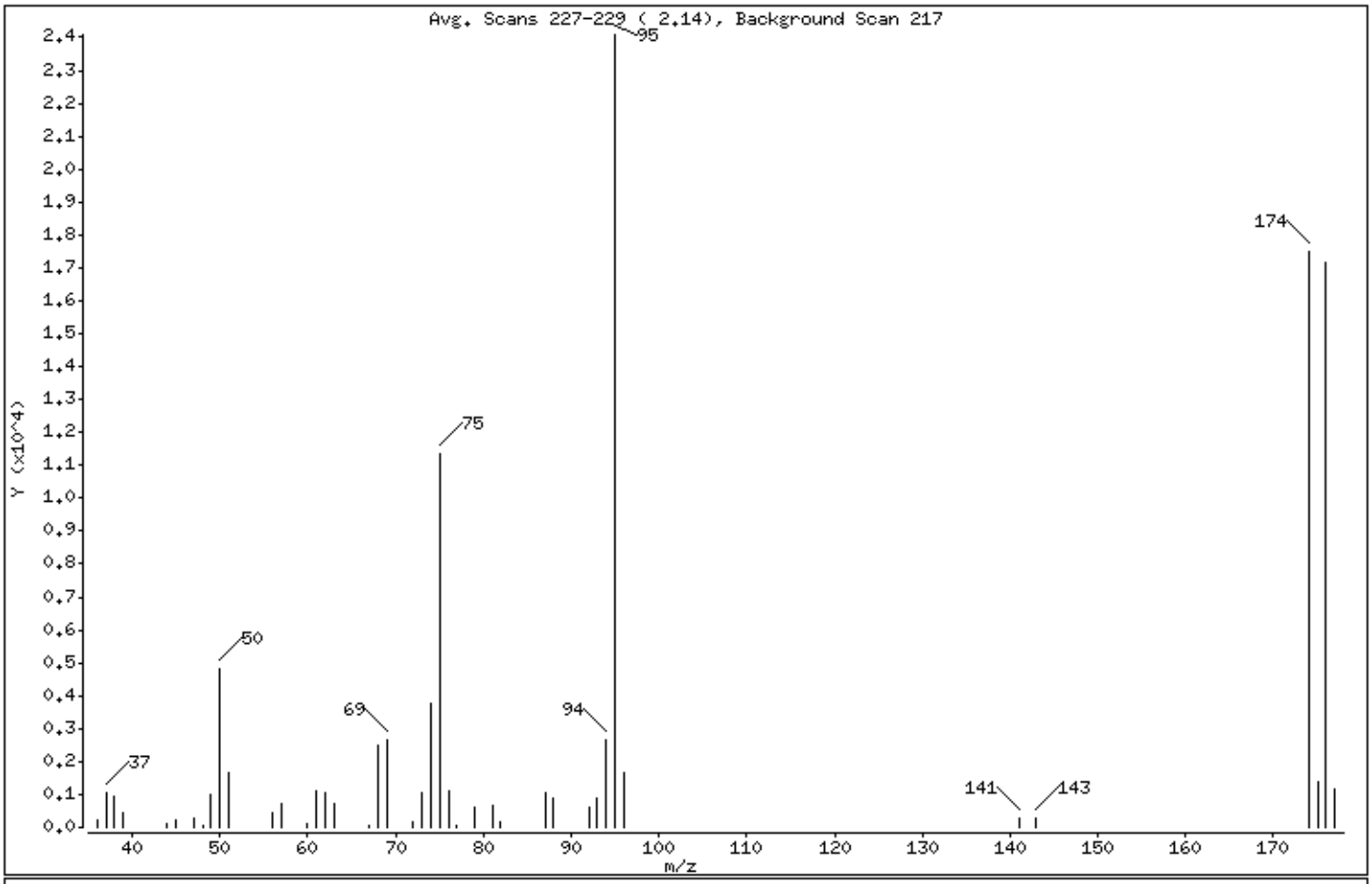
Sample Info: WG303781-3,SO4723

Operator: HG

Column phase: RTX-VMS

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	19.90
75	30.00 - 60.00% of mass 95	47.05
96	5.00 - 9.00% of mass 95	6.95
173	Less than 2.00% of mass 174	0.00 (0.00)
174	Greater than 50.00% of mass 95	72.56
175	5.00 - 9.00% of mass 174	5.71 (7.87)
176	95.00 - 101.00% of mass 174	71.16 (98.08)
177	5.00 - 9.00% of mass 176	4.87 (6.85)

Date : 05-AUG-2021 07:11

Client ID:

Instrument: gcms-t.i

Sample Info: WG303781-3,SO4723

Operator: HG

Column phase: RTX-VMS

Column diameter: 0.18

Data File: TB536a.D
Spectrum: Avg. Scans 227-229 (2.14), Background Scan 217
Location of Maximum: 95.00
Number of points: 42

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	217	56.00	428	74.00	3762	94.00	2684
37.00	1079	57.00	693	75.00	11329	95.00	24080
38.00	949	60.00	115	76.00	1103	96.00	1674
39.00	445	61.00	1114	77.00	83	141.00	265
44.00	132	62.00	1072	79.00	608	143.00	257
45.00	248	63.00	711	81.00	681	174.00	17472
47.00	288	67.00	79	82.00	161	175.00	1375
48.00	71	68.00	2498	87.00	1073	176.00	17136
49.00	988	69.00	2631	88.00	876	177.00	1173
50.00	4793	72.00	174	92.00	600		
51.00	1679	73.00	1028	93.00	887		

Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\WB615a.D

Date : 28-JUL-2021 07:38

Client ID:

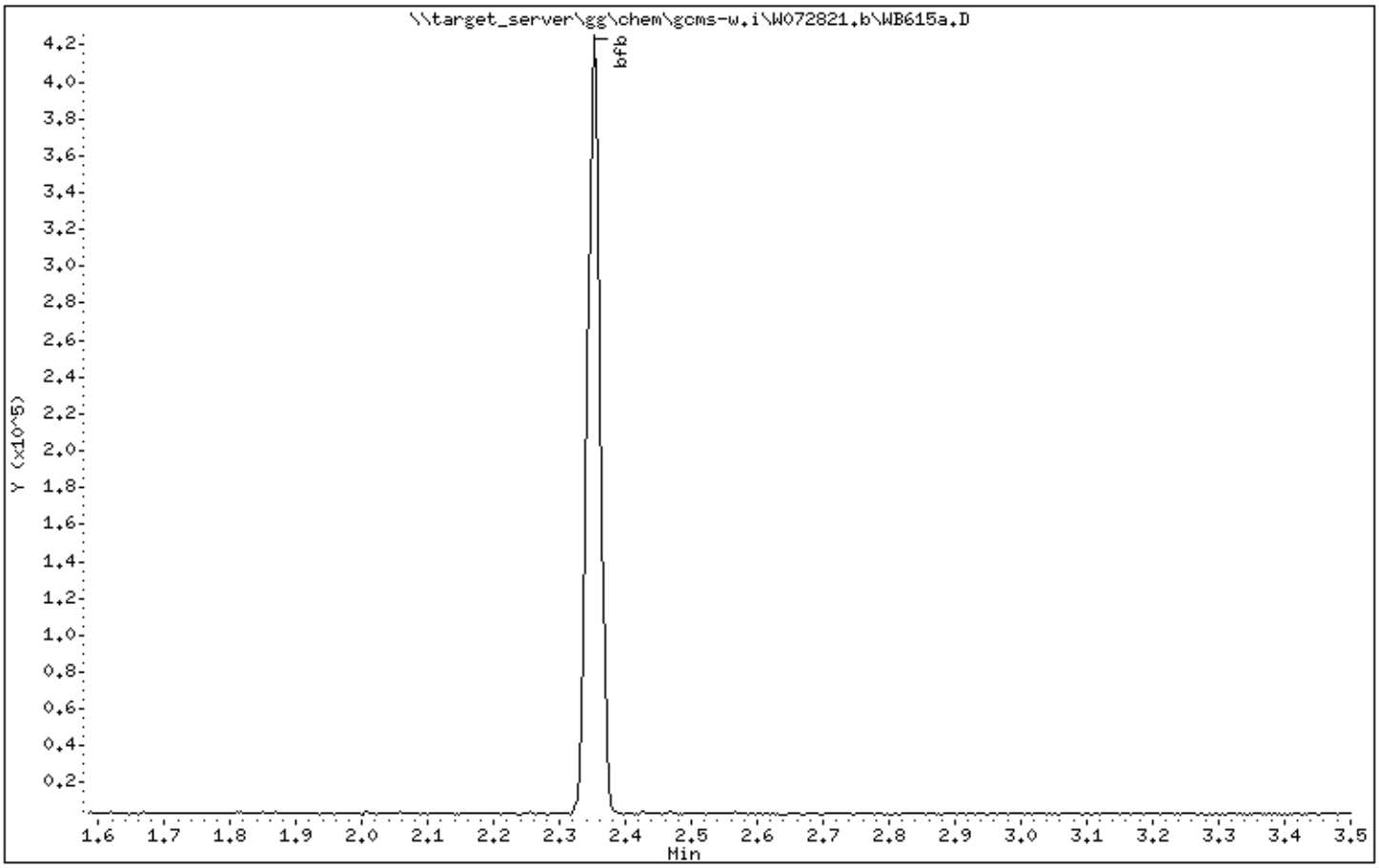
Instrument: gcms-w.i

Sample Info: WG303228-12,SO4723

Operator: CR

Column phase: RTX-VMS

Column diameter: 0.18



Data File: \\target_server\gg\chem\gcms-w.i\W072821.b\WB615a.D

Date : 28-JUL-2021 07:38

Client ID:

Instrument: gcms-w.i

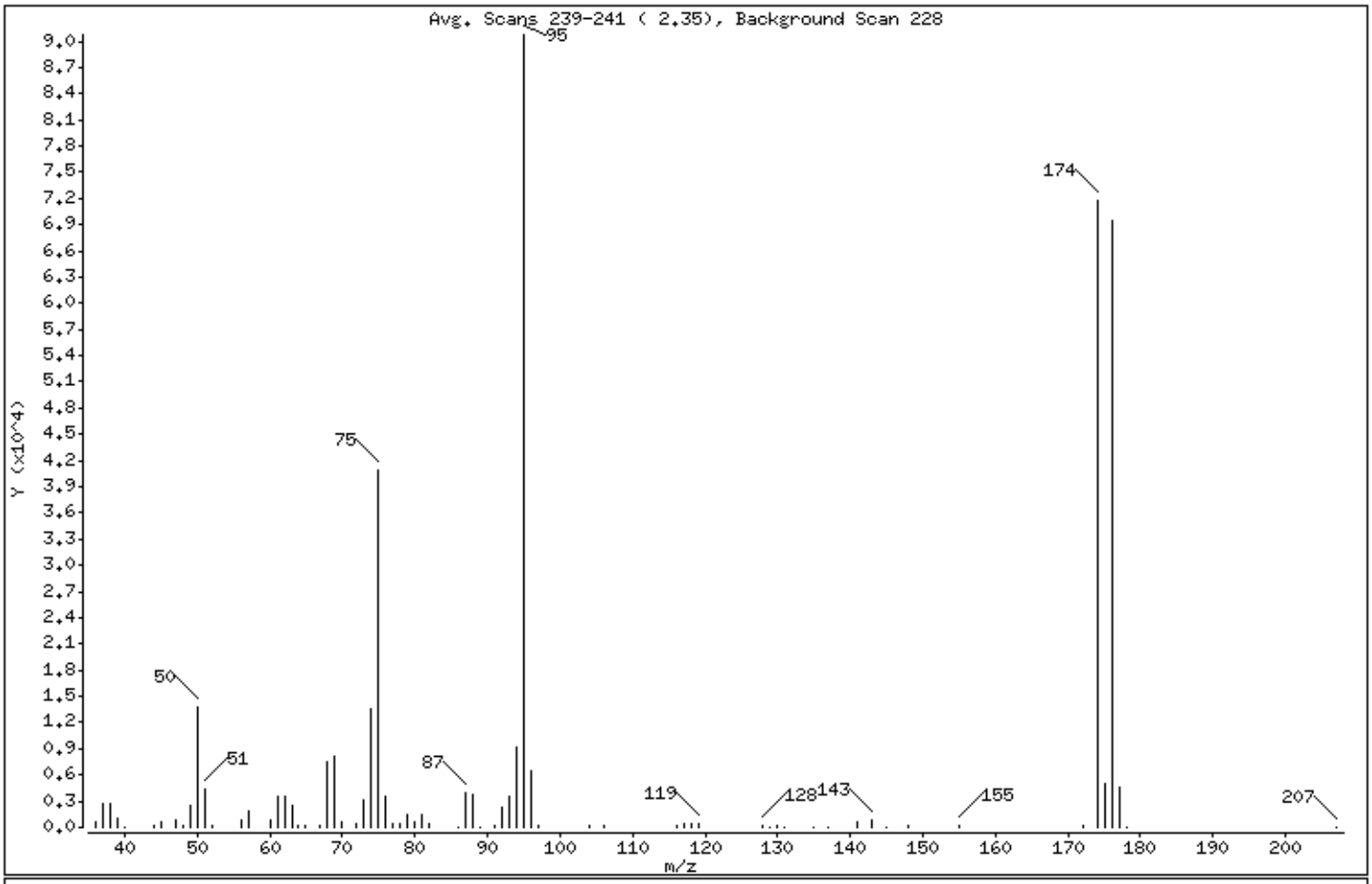
Sample Info: WG303228-12,S04723

Operator: CR

Column phase: RTX-VMS

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.20
75	30.00 - 60.00% of mass 95	45.08
96	5.00 - 9.00% of mass 95	7.10
173	Less than 2.00% of mass 174	0.00 (0.00)
174	Greater than 50.00% of mass 95	79.00
175	5.00 - 9.00% of mass 174	5.54 (7.01)
176	95.00 - 101.00% of mass 174	76.46 (96.79)
177	5.00 - 9.00% of mass 176	5.10 (6.68)

Date : 28-JUL-2021 07:38

Client ID: Instrument: gcms-w.i

Sample Info: WG303228-12,S04723

Operator: CR

Column phase: RTX-VMS Column diameter: 0.18

Data File: WB615a.D
Spectrum: Avg. Scans 239-241 (2.35), Background Scan 228
Location of Maximum: 95.00
Number of points: 71

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	547	63.00	2409	86.00	73	129.00	75
37.00	2681	64.00	172	87.00	3941	130.00	275
38.00	2693	65.00	149	88.00	3839	131.00	69
39.00	957	67.00	163	89.00	75	135.00	83
40.00	39	68.00	7533	91.00	182	137.00	80
44.00	166	69.00	8055	92.00	2192	141.00	719
45.00	582	70.00	594	93.00	3527	143.00	749
47.00	900	72.00	380	94.00	9230	145.00	76
48.00	308	73.00	3207	95.00	90736	148.00	260
49.00	2530	74.00	13482	96.00	6438	155.00	159
50.00	13788	75.00	40904	97.00	221	172.00	308
51.00	4478	76.00	3506	104.00	305	174.00	71680
52.00	168	77.00	489	106.00	291	175.00	5028
56.00	919	78.00	366	116.00	168	176.00	69376
57.00	1847	79.00	1364	117.00	396	177.00	4631
60.00	745	80.00	544	118.00	347	178.00	84
61.00	3476	81.00	1494	119.00	497	207.00	66
62.00	3649	82.00	339	128.00	300		

Data File: \\target_server\gg\chem\gcms-w.i\W080221.b\WB618a.D

Date : 02-AUG-2021 06:47

Client ID:

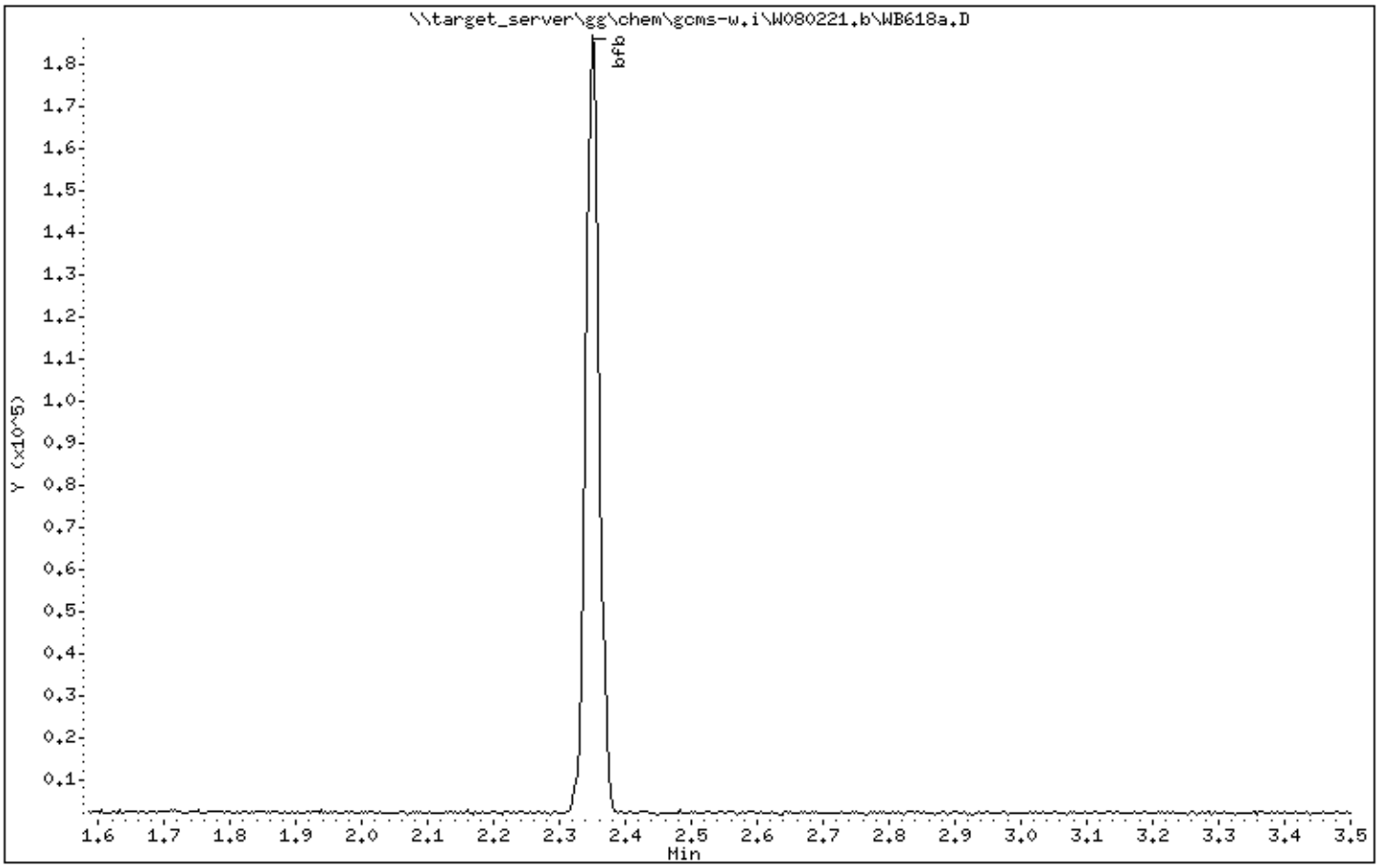
Instrument: gcms-w.i

Sample Info: WG303527-3,SO4723

Operator: CR/ES

Column phase: RTX-VMS

Column diameter: 0.18



Data File: \\target_server\gg\chem\gcms-w.i\W080221.b\WB618a.D

Date : 02-AUG-2021 06:47

Client ID:

Instrument: gcms-w.i

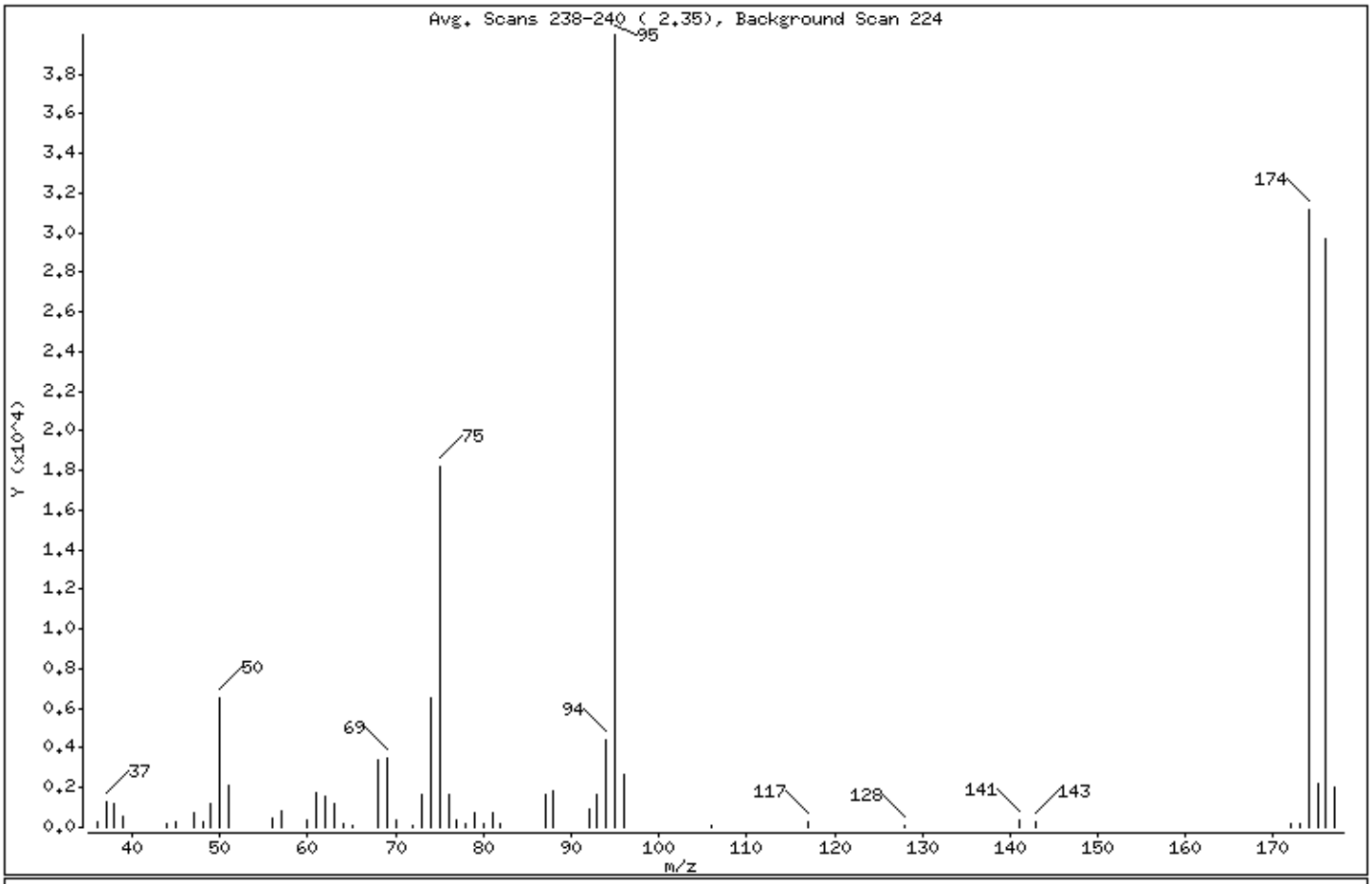
Sample Info: WG303527-3,SO4723

Operator: CR/ES

Column phase: RTX-VMS

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.33
75	30.00 - 60.00% of mass 95	45.62
96	5.00 - 9.00% of mass 95	6.57
173	Less than 2.00% of mass 174	0.44 (0.56)
174	Greater than 50.00% of mass 95	77.95
175	5.00 - 9.00% of mass 174	5.48 (7.03)
176	95.00 - 101.00% of mass 174	74.15 (95.12)
177	5.00 - 9.00% of mass 176	5.10 (6.88)

Date : 02-AUG-2021 06:47

Client ID: Instrument: gcms-w.i

Sample Info: WG303527-3,SO4723

Operator: CR/ES

Column phase: RTX-VMS Column diameter: 0.18

Data File: WB618a.D
Spectrum: Avg. Scans 238-240 (2.35), Background Scan 224
Location of Maximum: 95.00
Number of points: 51

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	299	60.00	326	76.00	1694	96.00	2628
37.00	1285	61.00	1733	77.00	369	106.00	70
38.00	1232	62.00	1559	78.00	202	117.00	258
39.00	575	63.00	1199	79.00	712	128.00	68
44.00	148	64.00	166	80.00	199	141.00	349
45.00	267	65.00	78	81.00	743	143.00	317
47.00	768	68.00	3415	82.00	228	172.00	145
48.00	275	69.00	3536	87.00	1678	173.00	174
49.00	1217	70.00	343	88.00	1843	174.00	31168
50.00	6528	72.00	93	92.00	942	175.00	2192
51.00	2114	73.00	1670	93.00	1700	176.00	29648
56.00	438	74.00	6521	94.00	4431	177.00	2040
57.00	840	75.00	18240	95.00	39984		

Raw QC Data Section

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Lab ID: WG303684-10
Client ID: Method Blank
SDG: SO4723
Lab File ID: T2693.D

Extract Date: 04-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303684
% Solids: NA

Analysis Date: 04-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Xylenes (Total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50

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Report of Analytical Results

Lab ID: WG303684-10
Client ID: Method Blank
SDG: SO4723
Lab File ID: T2693.D

Extract Date: 04-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303684
% Solids: NA

Analysis Date: 04-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
P-Bromofluorobenzene		101.	%					
Toluene-d8		101.	%					
1,2-Dichloroethane-d4		100.	%					
Dibromofluoromethane		97.8	%					

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Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2693.D
Report Date: 10-Aug-2021 11:00

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-t.i\T080421.b\T2693.D
Lab Smp Id: WG303684-10 Client Smp ID: WG303684-Blank
Inj Date : 04-AUG-2021 14:13
Operator : HG Inst ID: gcms-t.i
Smp Info : WG303684-10,SO4723
Misc Info : WG303684,WG303684-4,SO4723-1
Comment : SW846 5030,AQ
Method : \\target_server\gg\chem\gcms-t.i\T080421.b\T8A05(66)D.m
Meth Date : 10-Aug-2021 10:55 croy Quant Type: ISTD
Cal Date : 04-AUG-2021 12:24 Cal File: T2690.D
Als bottle: 12 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

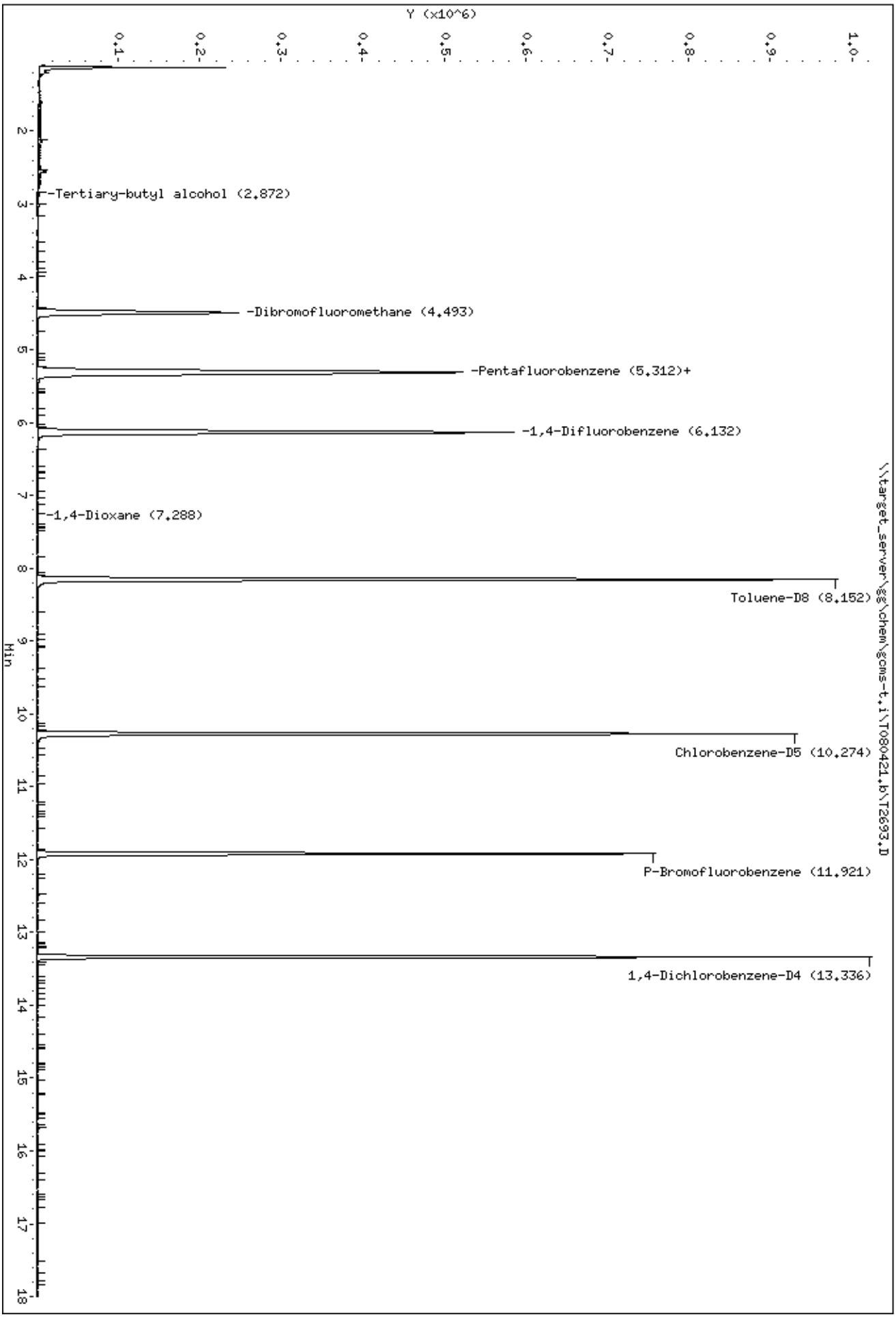
Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

CR
2:40 pm, Aug 10, 2021

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)	REVIEW CODE
	19 Tertiary-butyl alcohol	59	2.872	2.876	(0.542)	2007	6.01571	6.0(M)	M9
$	34 Dibromofluoromethane	113	4.488	4.489	(0.847)	219983	48.8758	48.9	
*	41 Pentafluorobenzene	168	5.300	5.301	(1.000)	414949	50.0000		
$	42 1,2-Dichloroethane-D4	65	5.327	5.323	(1.005)	269583	49.9817	50.0	
*	48 1,4-Difluorobenzene	114	6.131	6.132	(1.000)	689256	50.0000		
	53 1,4-Dioxane	88	7.310	7.284	(1.192)	1226	32.5049	32.5	
$	56 Toluene-D8	98	8.152	8.153	(1.330)	792183	50.6760	50.7	
*	68 Chlorobenzene-D5	117	10.274	10.274	(1.000)	603494	50.0000		
$	77 P-Bromofluorobenzene	95	11.920	11.921	(1.944)	286064	50.4313	50.4	
*	93 1,4-Dichlorobenzene-D4	152	13.335	13.336	(1.000)	270677	50.0000		

QC Flag Legend

M - Compound response manually integrated.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0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
Min
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
-Tertiary-butyl alcohol (2.872)
-Dibromofluoromethane (4.493)
-Pentafluorobenzene (5.312)+
-1,4-Difluorobenzene (6.132)
-1,4-Dioxane (7.288)
Toluene-D8 (8.152)
Chlorobenzene-D5 (10.274)
P-Bromofluorobenzene (11.921)
1,4-Dichlorobenzene-D4 (13.336)
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Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2693.D
Date : 04-AUG-2021 14:13
Client ID: WG303684-Blank
Sample Info: WG303684-10,S04723
Instrument: gcms-t.i

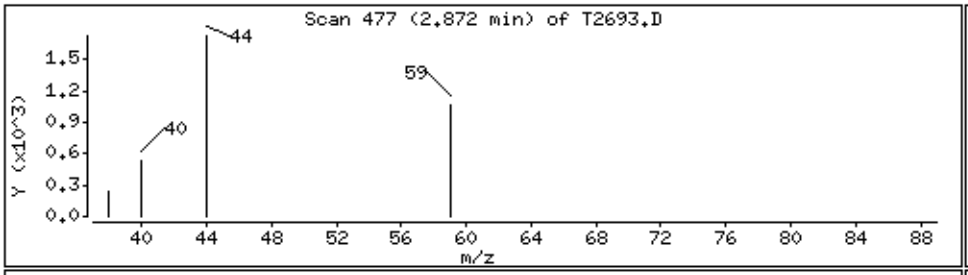
Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2693.D

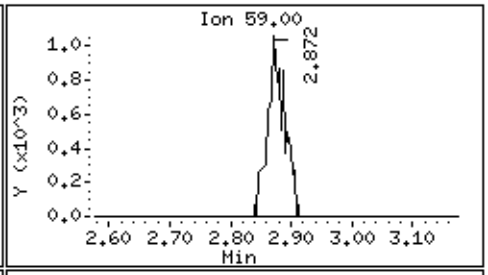
Date : 04-AUG-2021 14:13

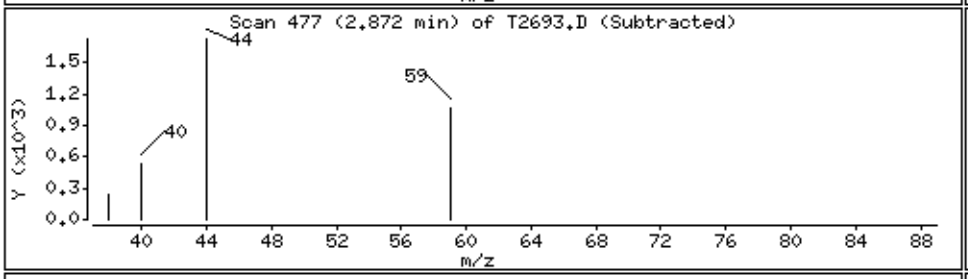
Client ID: WG303684-Blank Instrument: gcms-t.i

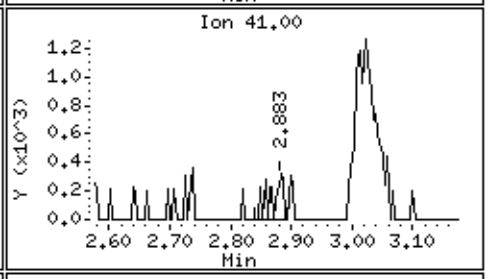
Sample Info: WG303684-10,SO4723

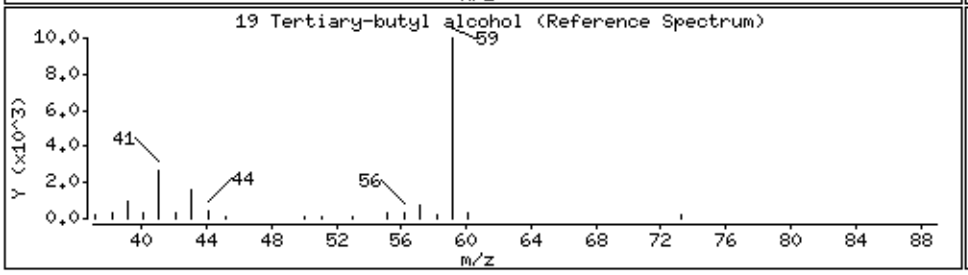
19 Tertiary-butyl alcohol Concentration: 6.0 ug/l

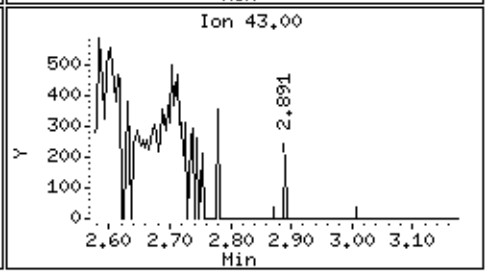




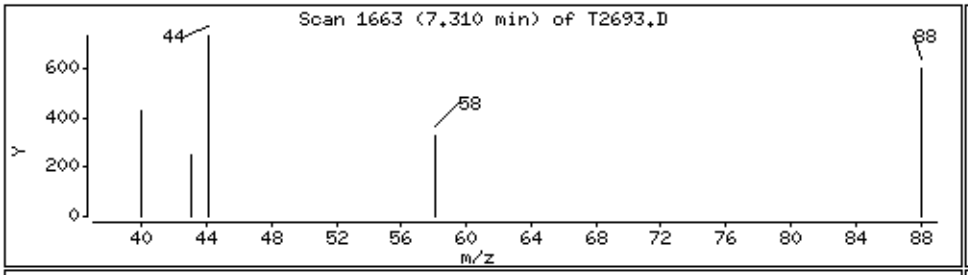


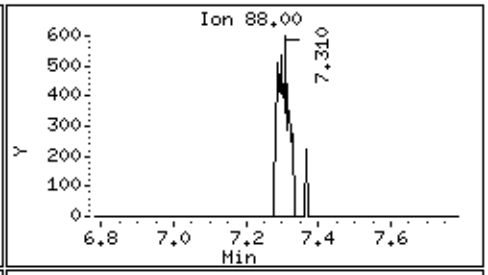


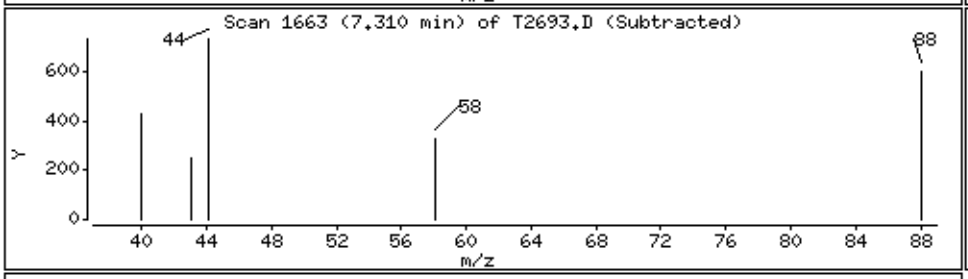


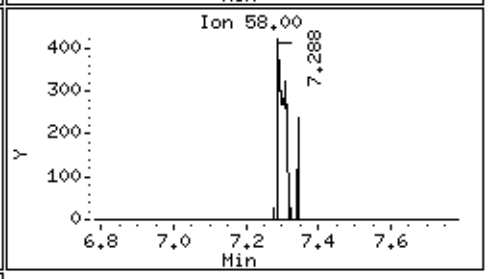


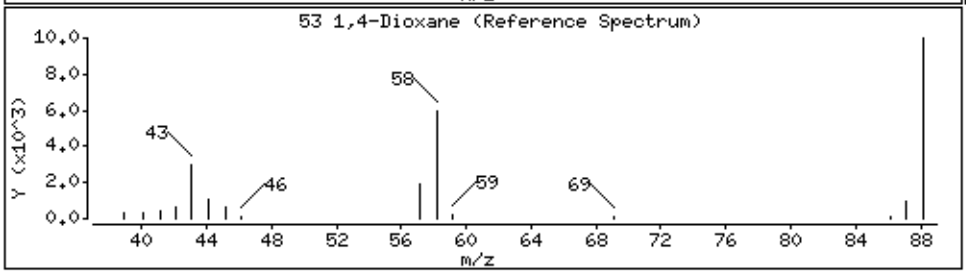
53 1,4-Dioxane Concentration: 32.5 ug/l











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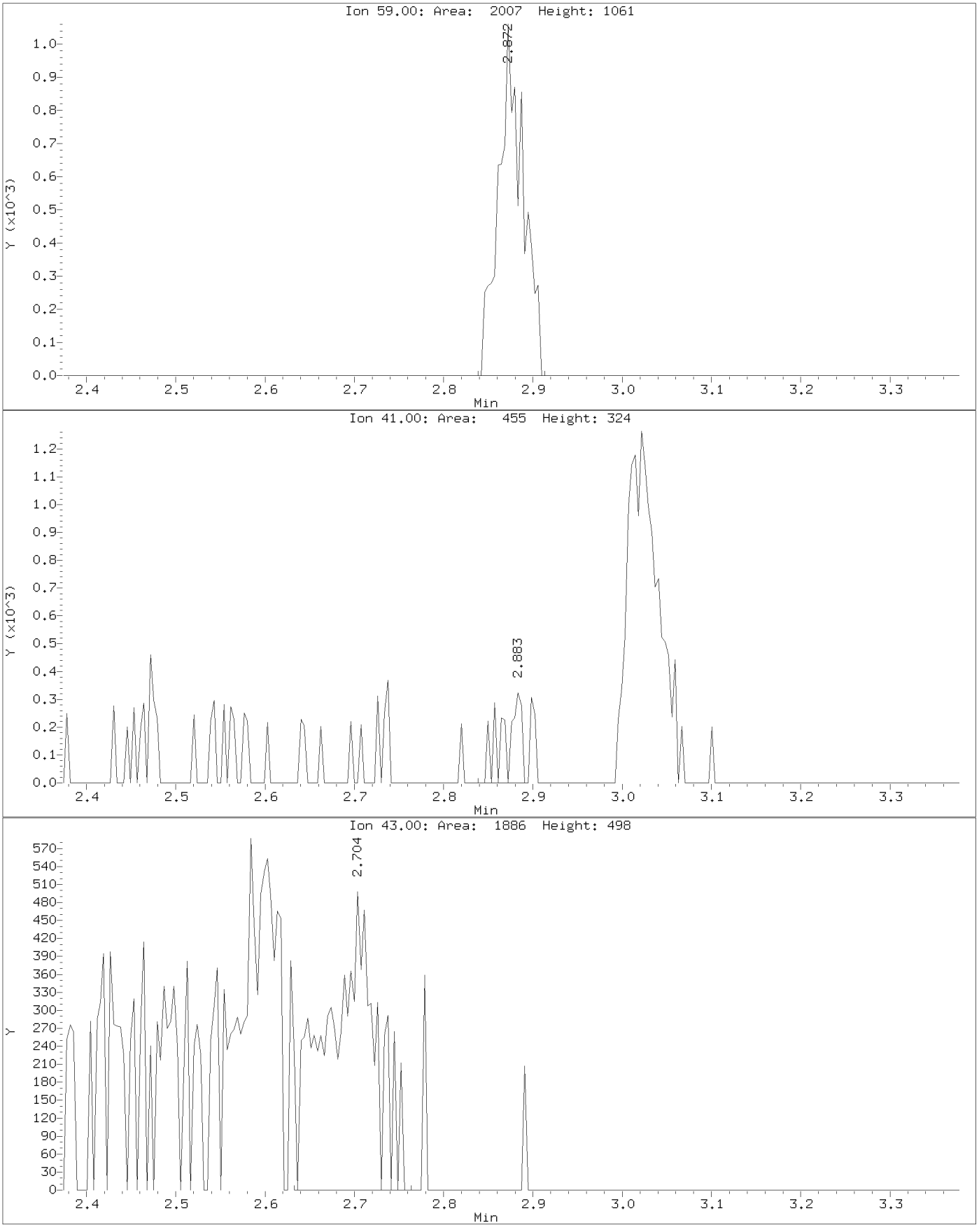
Injection Date: 04-AUG-2021 14:13
Instrument: gcms-t.i
Client Sample ID: WG303684-Blank

Compound: Tertiary-butyl alcohol
CAS Number: 75-65-0

BEFORE MANUAL INTEGRATION



AFTER MANUAL INTEGRATION

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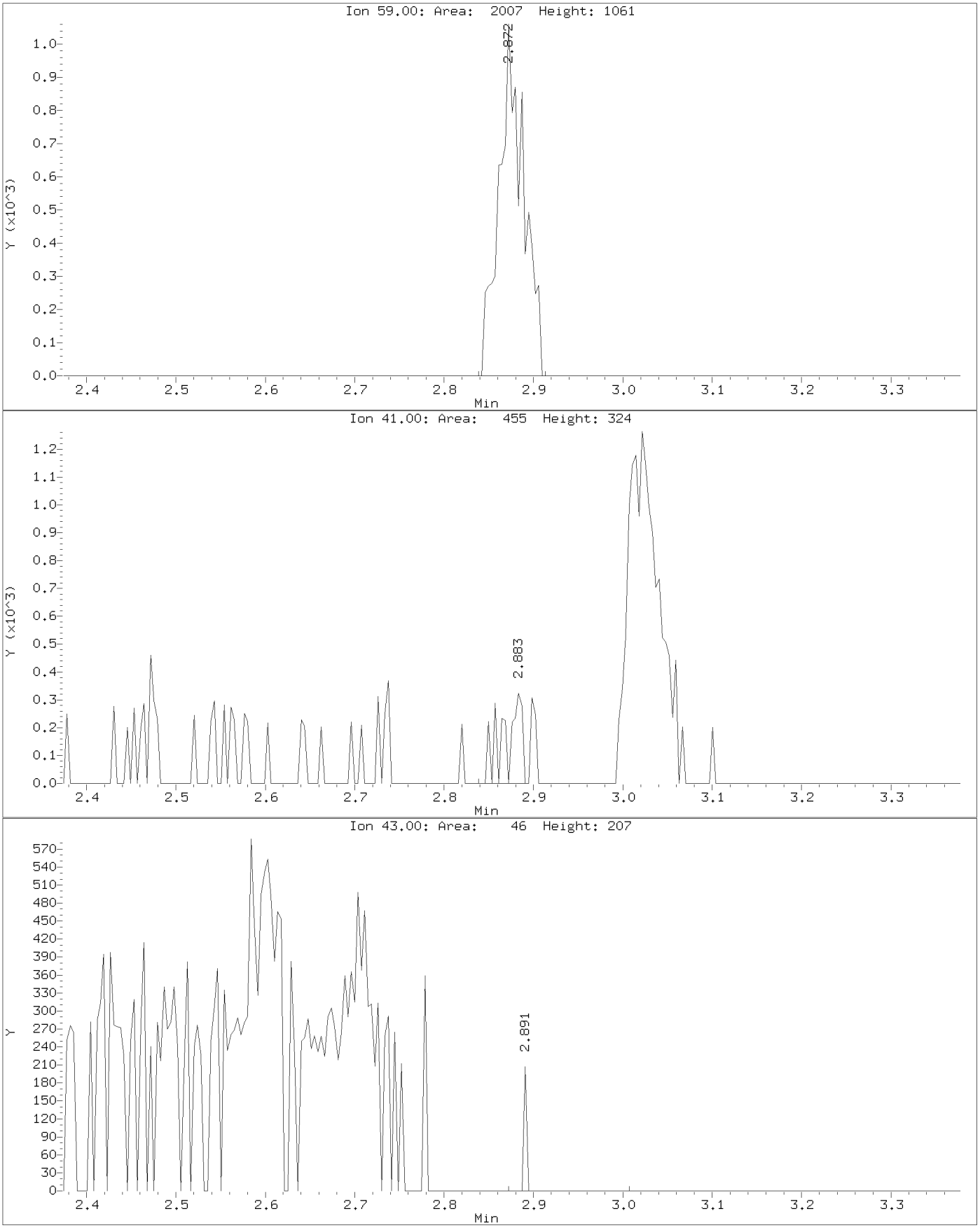
Injection Date: 04-AUG-2021 14:13
Instrument: gcms-t.i
Client Sample ID: WG303684-Blank

Compound: Tertiary-butyl alcohol
CAS Number: 75-65-0



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ANALYTICAL SERVICES

Report of Analytical Results

Lab ID: WG303781-2
Client ID: Method Blank
SDG: SO4723
Lab File ID: T2712.D

Extract Date: 05-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303781
% Solids: NA

Analysis Date: 05-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	J	2.2	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Xylenes (Total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50

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ANALYTICAL SERVICES

Report of Analytical Results

Lab ID: WG303781-2
Client ID: Method Blank
SDG: SO4723
Lab File ID: T2712.D

Extract Date: 05-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303781
% Solids: NA

Analysis Date: 05-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
P-Bromofluorobenzene		102.	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4		102.	%					
Dibromofluoromethane		101.	%					

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Data File: \\target_server\gg\chem\gcms-t.i\T080521.b\T2712.D
Report Date: 10-Aug-2021 11:11

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-t.i\T080521.b\T2712.D
Lab Smp Id: WG303781-2
Inj Date : 05-AUG-2021 10:35
Operator : HG   Inst ID: gcms-t.i
Smp Info : WG303781-2,SO4723
Misc Info : WG303781,WG303684-4,SO4723-8
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-t.i\T080521.b\T8A05(66)D.m
Meth Date : 06-Aug-2021 05:48 hgould   Quant Type: ISTD
Cal Date : 04-AUG-2021 12:24   Cal File: T2690.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12
Processing Host: ORGANICS2

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

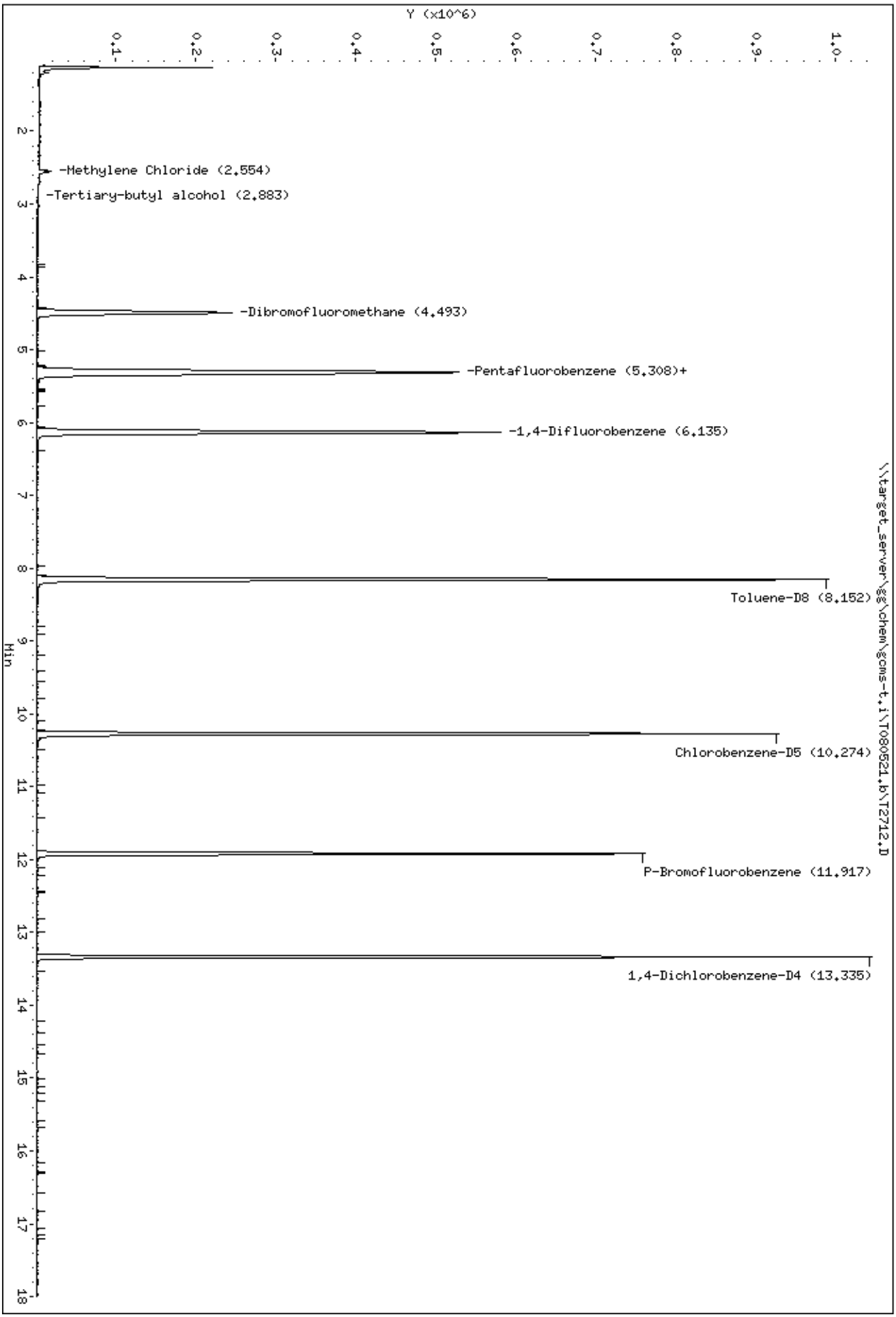
Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

CR
11:35 am, Aug 10, 2021

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)	REVIEW CODE
	14 Methylene Chloride	84	2.554	2.554	(0.481)	5316	2.17437	2.2(a)	
	19 Tertiary-butyl alcohol	59	2.883	2.876	(0.544)	1219	3.68889	3.7(aM)	M10
$	34 Dibromofluoromethane	113	4.492	4.489	(0.847)	224692	50.4015	50.4	
*	41 Pentafluorobenzene	168	5.304	5.301	(1.000)	411001	50.0000		
$	42 1,2-Dichloroethane-D4	65	5.327	5.323	(1.004)	272824	51.0684	51.1	
*	48 1,4-Difluorobenzene	114	6.135	6.132	(1.000)	689730	50.0000		
$	56 Toluene-D8	98	8.152	8.153	(1.329)	801982	51.2676	51.3	
*	68 Chlorobenzene-D5	117	10.274	10.274	(1.000)	611919	50.0000		
$	77 P-Bromofluorobenzene	95	11.917	11.921	(1.942)	289547	51.0103	51.0	
*	93 1,4-Dichlorobenzene-D4	152	13.335	13.336	(1.000)	276027	50.0000		

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.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0.4
0.5
0.6
0.7
0.8
0.9
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3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
-Methylene Chloride (2.554)
-Tertiary-butyl alcohol (2.883)
-Dibromofluoromethane (4.493)
-Pentafluorobenzene (5.308)+
-1,4-Difluorobenzene (6.135)
Toluene-D8 (8.152)
Chlorobenzene-D5 (10.274)
P-Bromofluorobenzene (11.917)
1,4-Dichlorobenzene-D4 (13.335)
Data File: \\target_server\gg\chem\gcms-t.i\T080521.b\T2712.D
Date : 05-AUG-2021 10:35
Client ID:
Sample Info: WG303781-2,SD4723
Instrument: gcms-t.i
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Data File: \\target_server\gg\chem\gcms-t.i\T080521.b\T2712.D

Date : 05-AUG-2021 10:35

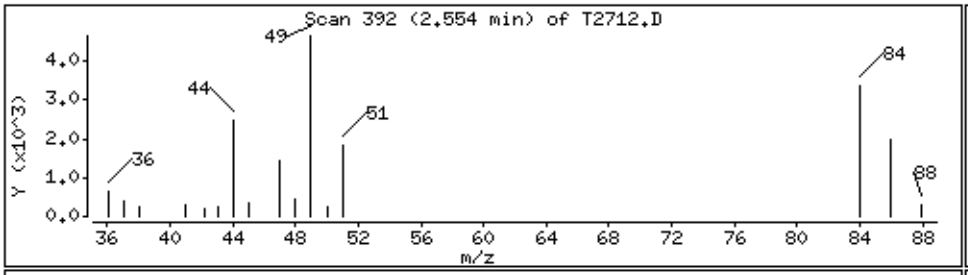
Client ID:

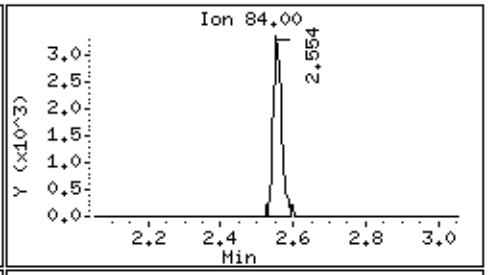
Instrument: gcms-t.i

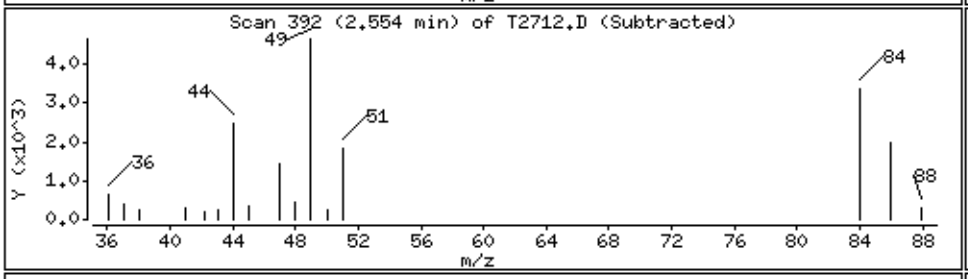
Sample Info: WG303781-2,SO4723

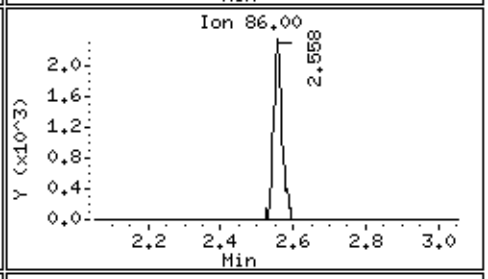
14 Methylene Chloride

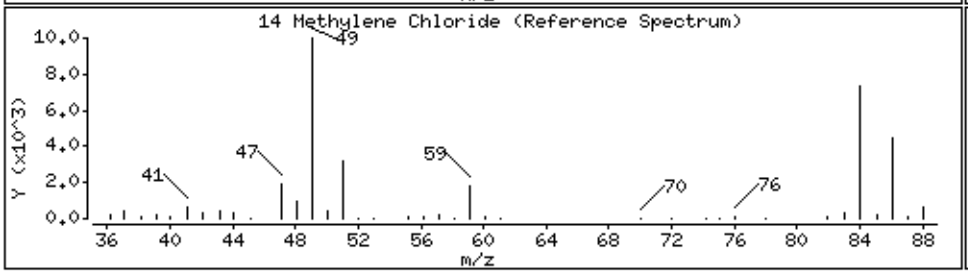
Concentration: 2.2 ug/l

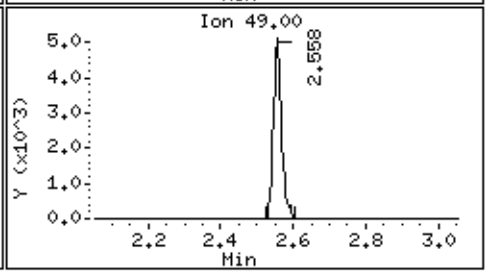






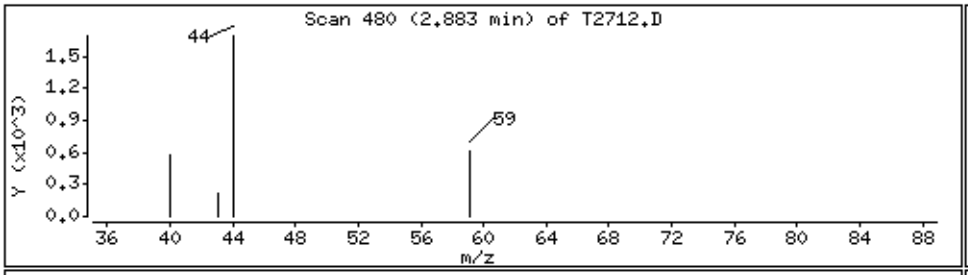


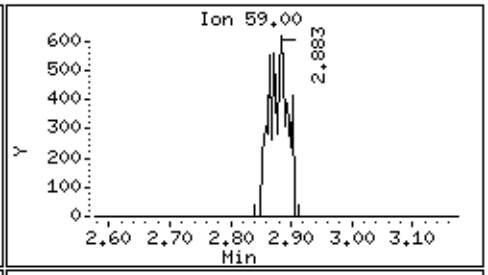


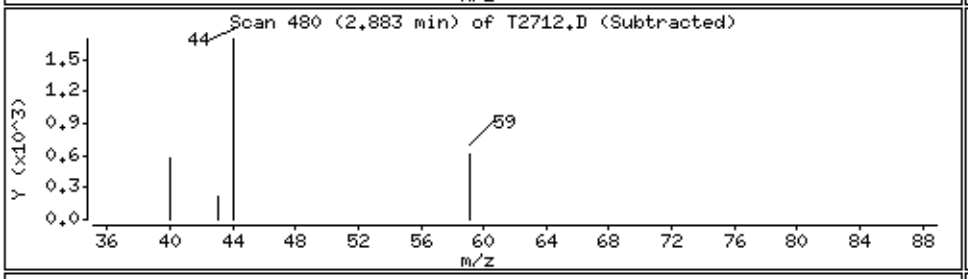


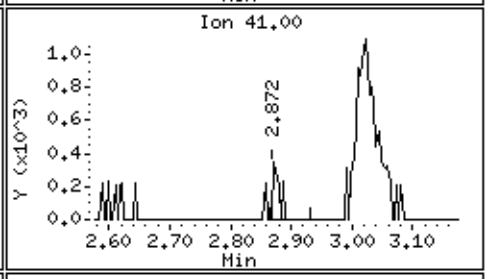
19 Tertiary-butyl alcohol

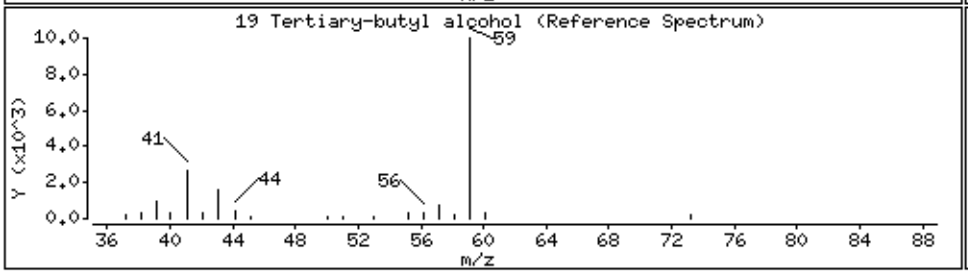
Concentration: 3.7 ug/l

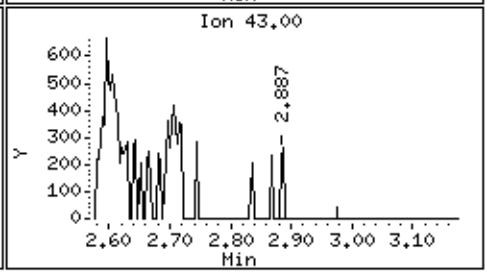












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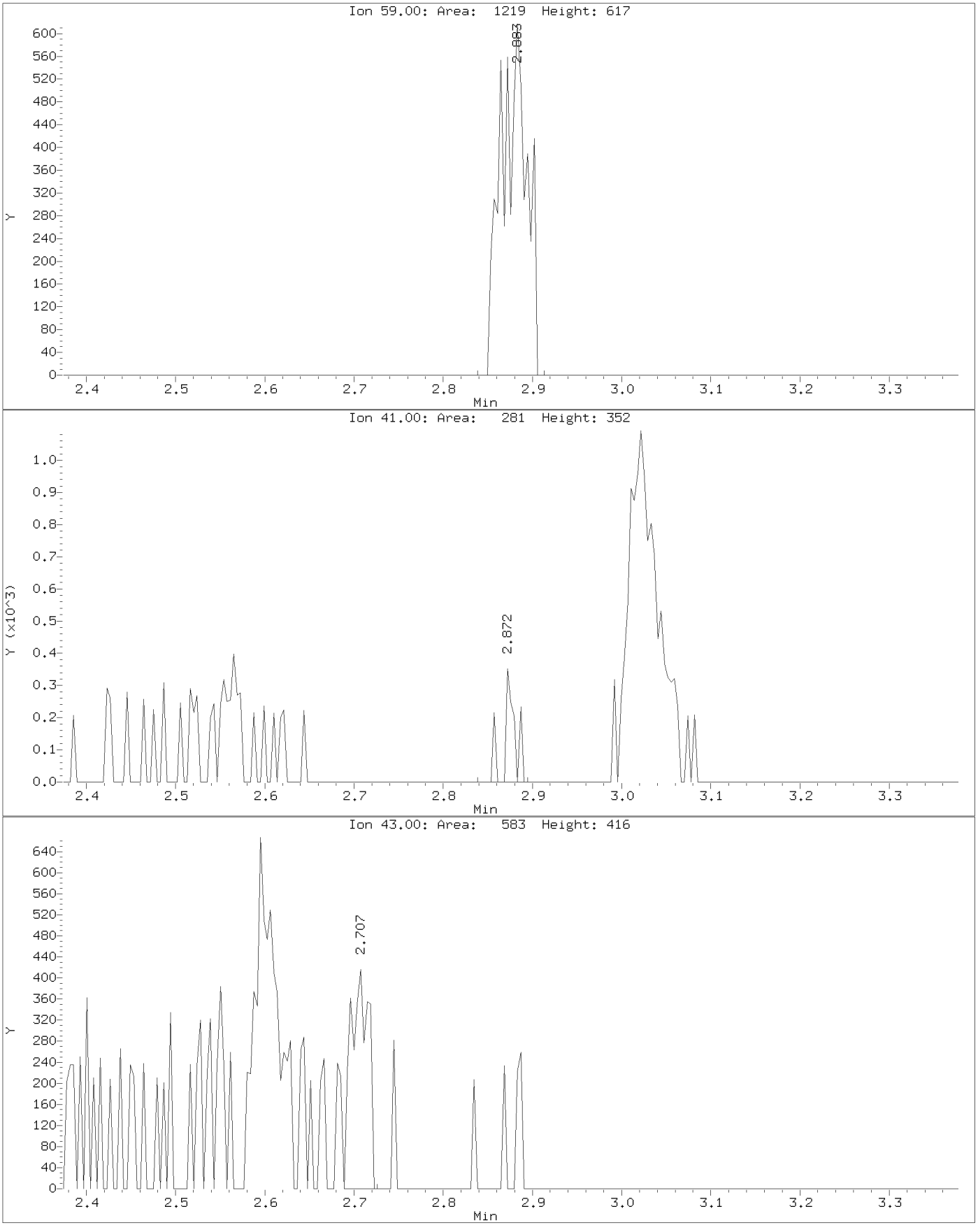
Injection Date: 05-AUG-2021 10:35
Instrument: gcms-t.i
Client Sample ID:

Compound: Tertiary-butyl alcohol
CAS Number: 75-65-0

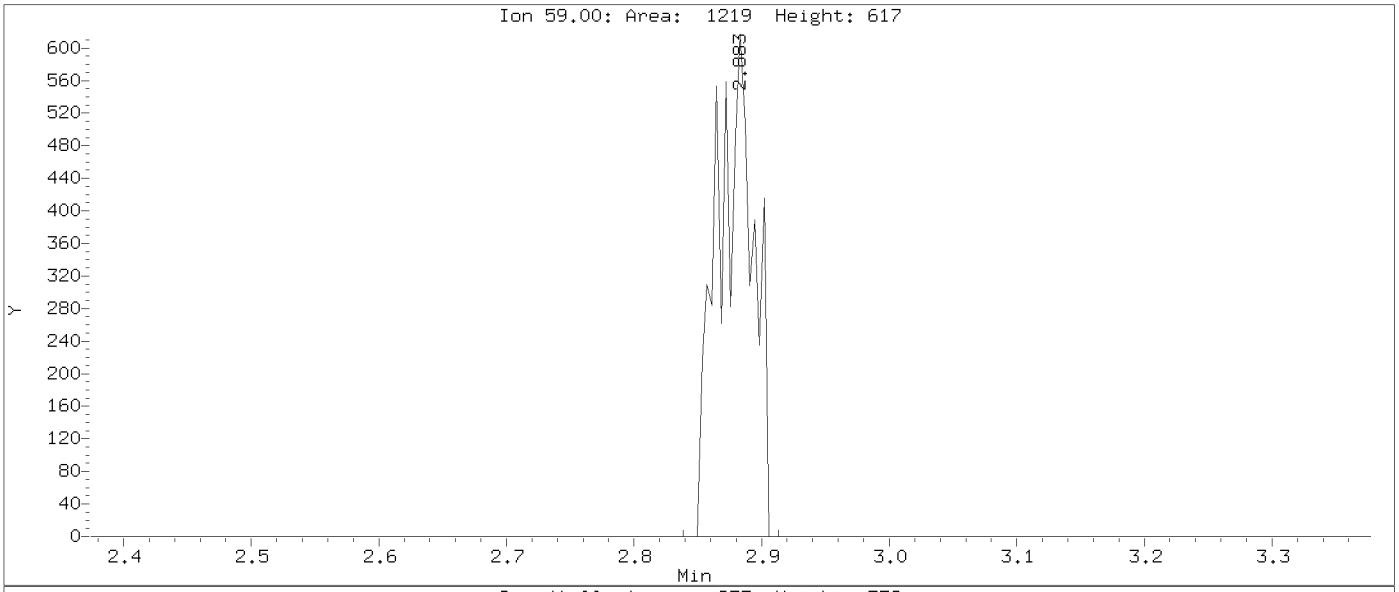
BEFORE MANUAL INTEGRATION

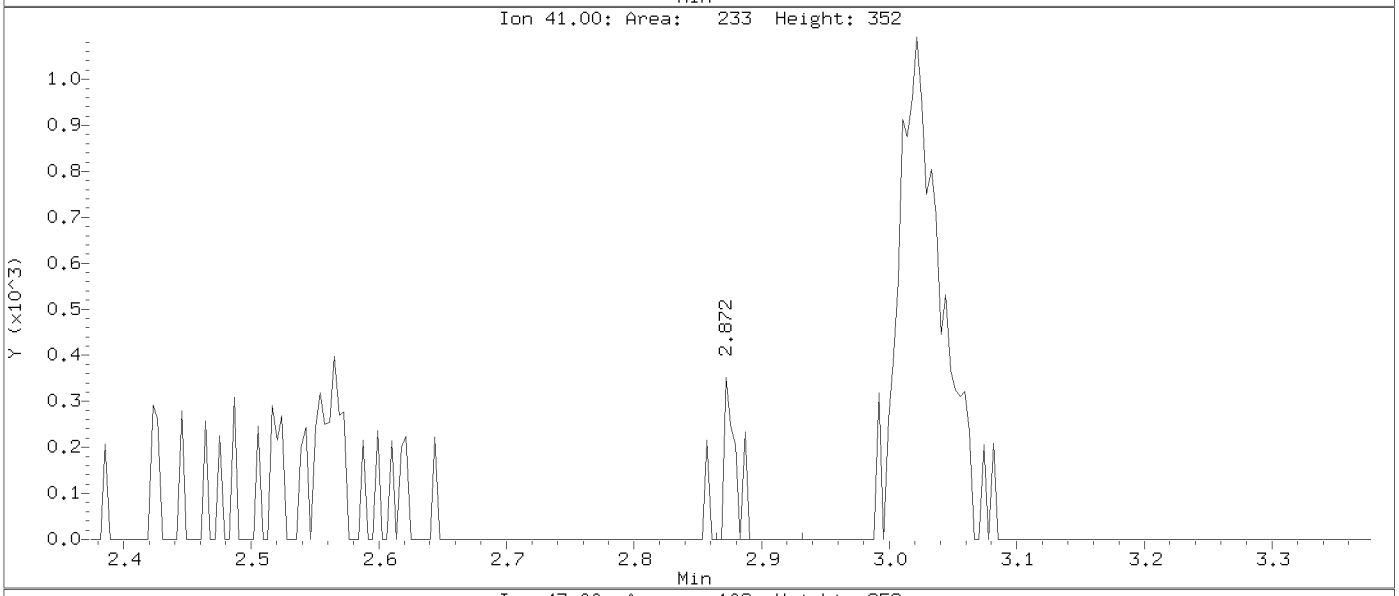


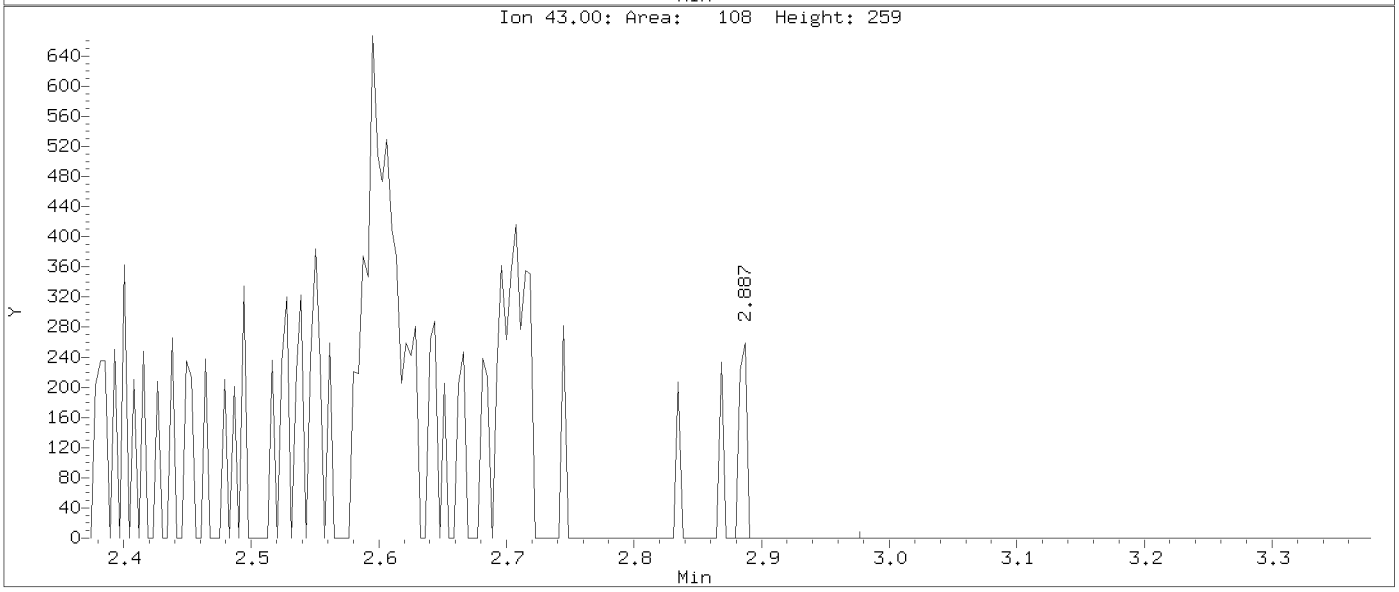
Data File: \\target_server\gg\chem\gcms-t.i\T080521.b\T2712.D
Injection Date: 05-AUG-2021 10:35
Instrument: gcms-t.i
Client Sample ID:

Compound: Tertiary-butyl alcohol
CAS Number: 75-65-0

AFTER MANUAL INTEGRATION







Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Lab ID: WG303527-2
Client ID: Method Blank
SDG: SO4723
Lab File ID: W9699.D

Extract Date: 02-AUG-21
Extracted By: CR/ES
Extraction Method: SW846 5030
Lab Prep Batch: WG303527
% Solids: NA

Analysis Date: 02-AUG-21
Analyst: CR/ES
Analysis Method: SW846 8260C
Matrix: AQ
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	J	1.3	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Xylenes (Total)	U	1.5	ug/L	1	3	3.0	0.25	1.5
m+p-Xylenes	U	1.0	ug/L	1	2	2.0	0.59	1.0
o-Xylene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50

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ANALYTICAL SERVICES

Report of Analytical Results

Lab ID: WG303527-2
Client ID: Method Blank
SDG: SO4723
Lab File ID: W9699.D

Extract Date: 02-AUG-21
Extracted By: CR/ES
Extraction Method: SW846 5030
Lab Prep Batch: WG303527
% Solids: NA

Analysis Date: 02-AUG-21
Analyst: CR/ES
Analysis Method: SW846 8260C
Matrix: AQ
Report Date: 10-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
P-Bromofluorobenzene		100.	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4	*	119.	%					
Dibromofluoromethane		112.	%					

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Data File: \\target_server\gg\chem\gcms-w.i\W080221.b\W9699.D
Report Date: 10-Aug-2021 11:27

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W080221.b\W9699.D
Lab Smp Id: WG303527-2 Client Smp ID: WG303527-Blank
Inj Date : 02-AUG-2021 09:06
Operator : CR/ES Inst ID: gcms-w.i
Smp Info : WG303527-2,SO4723
Misc Info : WG303527,WG303228-4,SO4723-2
Comment : SW846 5030
Method : \\target_server\gg\chem\gcms-w.i\W080221.b\W8A05(03).m
Meth Date : 10-Aug-2021 11:24 croy Quant Type: ISTD
Cal Date : 28-JUL-2021 11:04 Cal File: W9625.D
Als bottle: 4 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

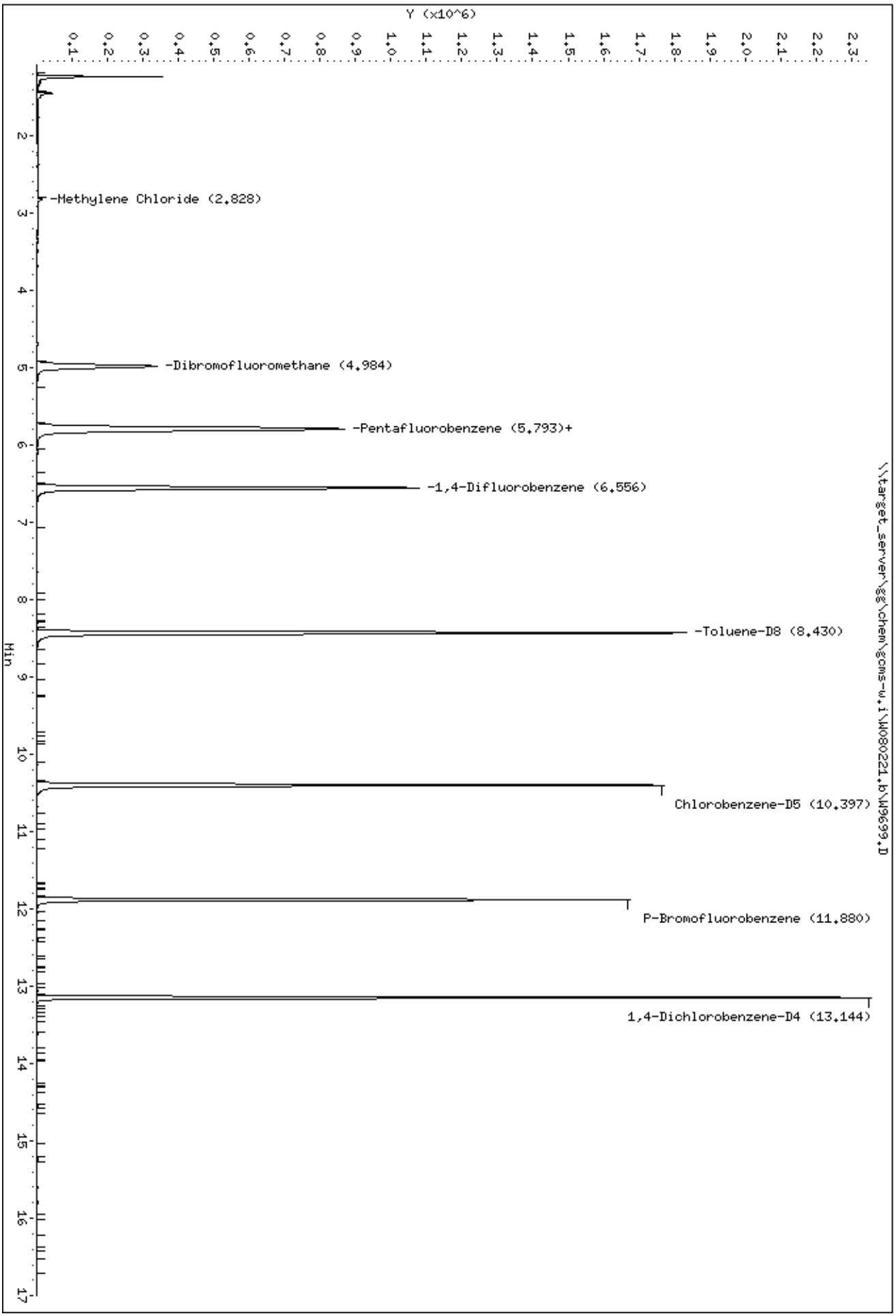
Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)	REVIEW CODE
	14 Methylene Chloride	84	2.827	2.824	(0.489)	5982	1.33341	1.3(a)	
$	34 Dibromofluoromethane	113	4.984	4.981	(0.861)	351890	55.7802	55.8	
*	41 Pentafluorobenzene	168	5.786	5.780	(1.000)	704085	50.0000		
$	42 1,2-Dichloroethane-D4	65	5.805	5.809	(1.003)	420105	59.4908	59.5	
*	48 1,4-Difluorobenzene	114	6.553	6.556	(1.000)	1205398	50.0000		
$	58 Toluene-D8	98	8.427	8.427	(1.286)	1494406	51.0508	51.0	
*	68 Chlorobenzene-D5	117	10.397	10.397	(1.000)	1181428	50.0000		
$	77 P-Bromofluorobenzene	95	11.879	11.880	(1.813)	604360	50.2517	50.2	
*	93 1,4-Dichlorobenzene-D4	152	13.144	13.144	(1.000)	613159	50.0000		

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).


Data File: \\target_server\gg\chem\gcms-w.i\W080221.b\W9699.D
Date : 02-AUG-2021 09:06
Client ID: WG303527-Blank
Sample Info: WG303527-2,S04723
Instrument: gcms-w.i
\\target_server\gg\chem\gcms-w.i\W080221.b\W9699.D
Y (x10^6)
Min
-Methylene Chloride (2.828)
-Dibromofluoromethane (4.984)
-Pentafluorobenzene (5.793)+
-1,4-Difluorobenzene (6.556)
-Toluene-D8 (8.430)
Chlorobenzene-D5 (10.397)
P-Bromofluorobenzene (11.880)
1,4-Dichlorobenzene-D4 (13.144)

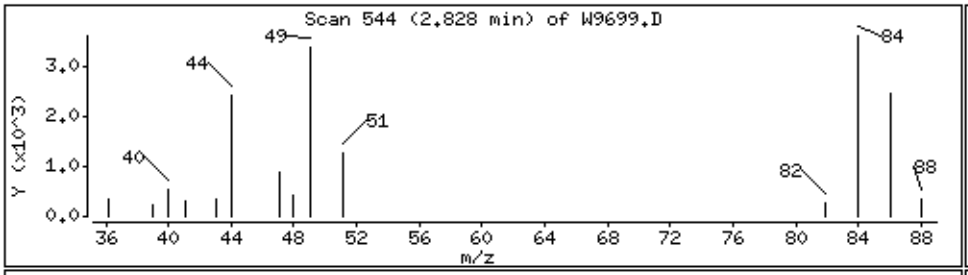
Data File: \\target_server\gg\chem\gcms-w.i\W080221.b\W9699.D

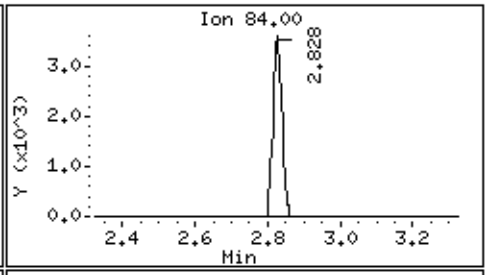
Date : 02-AUG-2021 09:06

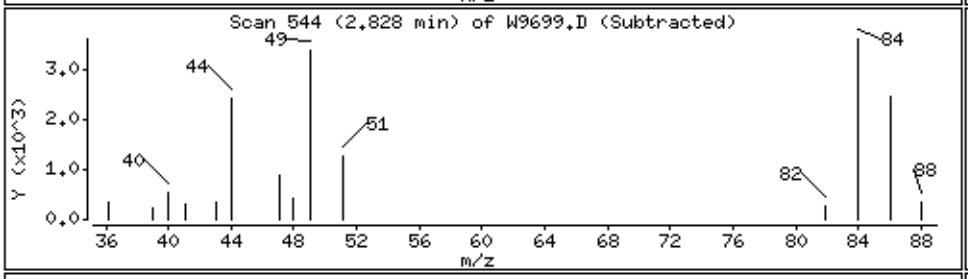
Client ID: WG303527-Blank Instrument: gcms-w.i

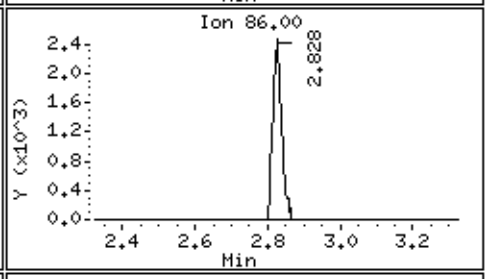
Sample Info: WG303527-2,SO4723

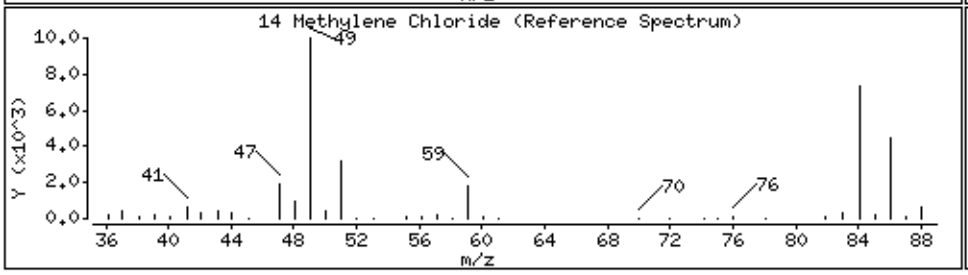
14 Methylene Chloride Concentration: 1.3 ug/l

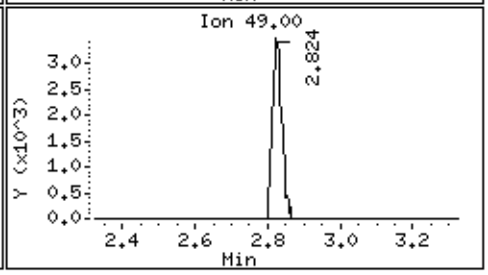












Katahdin
ANALYTICAL SERVICES

LCS Recovery Report

Lab ID: WG303684-9
Client ID: LCS
SDG: SO4723
LCS File ID: T2691.D
Report Date: 10-AUG-21

Extract Date: 04-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303684

Analysis Date: 04-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Chloromethane	109.	50.0	54.6	ug/L	50-139
Vinyl Chloride	106.	50.0	53.2	ug/L	58-137
Bromomethane	99.2	50.0	49.6	ug/L	53-141
Chloroethane	94.0	50.0	47.0	ug/L	60-138
1,1-Dichloroethene	94.2	50.0	47.1	ug/L	71-131
Carbon Disulfide	114.	50.0	57.1	ug/L	64-133
Methylene Chloride	101.	50.0	50.7	ug/L	74-124
Acetone	* 162.	50.0	81.1	ug/L	39-160
trans-1,2-Dichloroethene	108.	50.0	54.1	ug/L	75-124
1,1-Dichloroethane	104.	50.0	51.8	ug/L	77-125
cis-1,2-Dichloroethene	99.8	50.0	49.9	ug/L	78-123
Chloroform	98.4	50.0	49.2	ug/L	79-124
Carbon Tetrachloride	101.	50.0	50.5	ug/L	72-136
1,1,1-Trichloroethane	98.0	50.0	49.0	ug/L	74-131
2-Butanone	* 148.	50.0	73.9	ug/L	56-143
Benzene	106.	50.0	53.1	ug/L	79-120
1,2-Dichloroethane	103.	50.0	51.5	ug/L	73-128
Trichloroethene	106.	50.0	52.8	ug/L	79-123
1,2-Dichloropropane	105.	50.0	52.4	ug/L	78-122
Bromodichloromethane	108.	50.0	53.8	ug/L	79-125
cis-1,3-Dichloropropene	110.	50.0	55.0	ug/L	75-124
Toluene	106.	50.0	53.0	ug/L	80-121
4-Methyl-2-Pentanone	117.	50.0	58.3	ug/L	67-130
Tetrachloroethene	99.0	50.0	49.5	ug/L	74-129
trans-1,3-Dichloropropene	111.	50.0	55.4	ug/L	73-127
1,1,2-Trichloroethane	105.	50.0	52.3	ug/L	80-119
Dibromochloromethane	104.	50.0	52.1	ug/L	74-126
2-Hexanone	119.	50.0	59.6	ug/L	57-139
Chlorobenzene	106.	50.0	53.1	ug/L	82-118
Ethylbenzene	107.	50.0	53.7	ug/L	79-121
Xylenes (Total)	107.	150.	160.	ug/L	79-121
m+p-Xylenes	107.	100.	107.	ug/L	80-121
o-Xylene	106.	50.0	53.2	ug/L	78-122
Styrene	112.	50.0	56.0	ug/L	78-123
Bromoform	97.4	50.0	48.7	ug/L	66-130
1,1,2,2-Tetrachloroethane	108.	50.0	54.2	ug/L	71-121

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ANALYTICAL SERVICES

LCS Recovery Report

Lab ID: WG303684-9
Client ID: LCS
SDG: SO4723
LCS File ID: T2691.D
Report Date: 10-AUG-21

Extract Date: 04-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303684

Analysis Date: 04-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
P-Bromofluorobenzene	100.				85-114
Toluene-d8	100.				89-112
1,2-Dichloroethane-d4	98.8				81-118
Dibromofluoromethane	98.6				80-119

600 Technology Way
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Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2691.D
Report Date: 10-Aug-2021 11:00

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-t.i\T080421.b\T2691.D
Lab Smp Id: WG303684-9
Inj Date : 04-AUG-2021 13:03
Operator : HG Inst ID: gcms-t.i
Smp Info : WG303684-9,SO4723
Misc Info : WG303684,WG303684-4,SO4723-1
Comment : SW846 5030,AQ
Method : \\target_server\gg\chem\gcms-t.i\T080421.b\T8A05(66)D.m
Meth Date : 10-Aug-2021 10:55 croy Quant Type: ISTD
Cal Date : 04-AUG-2021 12:24 Cal File: T2690.D
Als bottle: 10 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: ORGANICS2

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.225	1.226	(0.231)	236811	53.0030	53.0	
2	Chloromethane	50	1.352	1.353	(0.255)	249681	54.6484	54.6	
3	Vinyl chloride	62	1.397	1.398	(0.263)	180139	53.1536	53.2	
4	Bromomethane	94	1.599	1.600	(0.302)	56321	49.6228	49.6	
5	Chloroethane	64	1.674	1.678	(0.316)	66734	46.9676	47.0	
6	Trichlorofluoromethane	101	1.764	1.768	(0.333)	212539	49.8821	49.9	
7	Diethyl Ether	59	1.970	1.970	(0.371)	102828	48.7918	48.8	
8	1,1-Dichloroethene	96	2.112	2.113	(0.398)	113596	47.0804	47.1	
9	Freon-113	151	2.134	2.138	(0.402)	81637	45.7723	45.8	
10	Carbon Disulfide	76	2.142	2.142	(0.404)	353360	57.1063	57.1	
11	Iodomethane	142	2.224	2.225	(0.419)	113516	48.3763	48.4	
12	Acrolein	56	2.366	2.367	(0.446)	52884	241.161	241	
13	Allyl Chloride	41	2.467	2.468	(0.465)	198248	47.6592	47.6	
14	Methylene Chloride	84	2.553	2.554	(0.481)	133607	50.7034	50.7	
15	Acetone	43	2.602	2.599	(0.491)	76611	81.1148	81.1	
16	trans-1,2-Dichloroethene	96	2.684	2.685	(0.506)	195201	54.0791	54.1	
17	Methyl Acetate	43	2.703	2.704	(0.510)	149235	51.8615	51.9	
18	Methyl tert-butyl ether	73	2.778	2.782	(0.524)	581202	54.7940	54.8	
19	Tertiary-butyl alcohol	59	2.875	2.876	(0.542)	127457	357.861	358	
20	Acetonitrile	41	3.017	3.018	(0.569)	290784	633.700	634(R)	
21	Di-isopropyl ether	45	3.133	3.134	(0.591)	650353	50.6046	50.6	
22	Chloroprene	53	3.235	3.235	(0.610)	298814	49.3751	49.4	
23	1,1-Dichloroethane	63	3.261	3.261	(0.615)	377373	51.7892	51.8	

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2691.D
Report Date: 10-Aug-2021 11:00

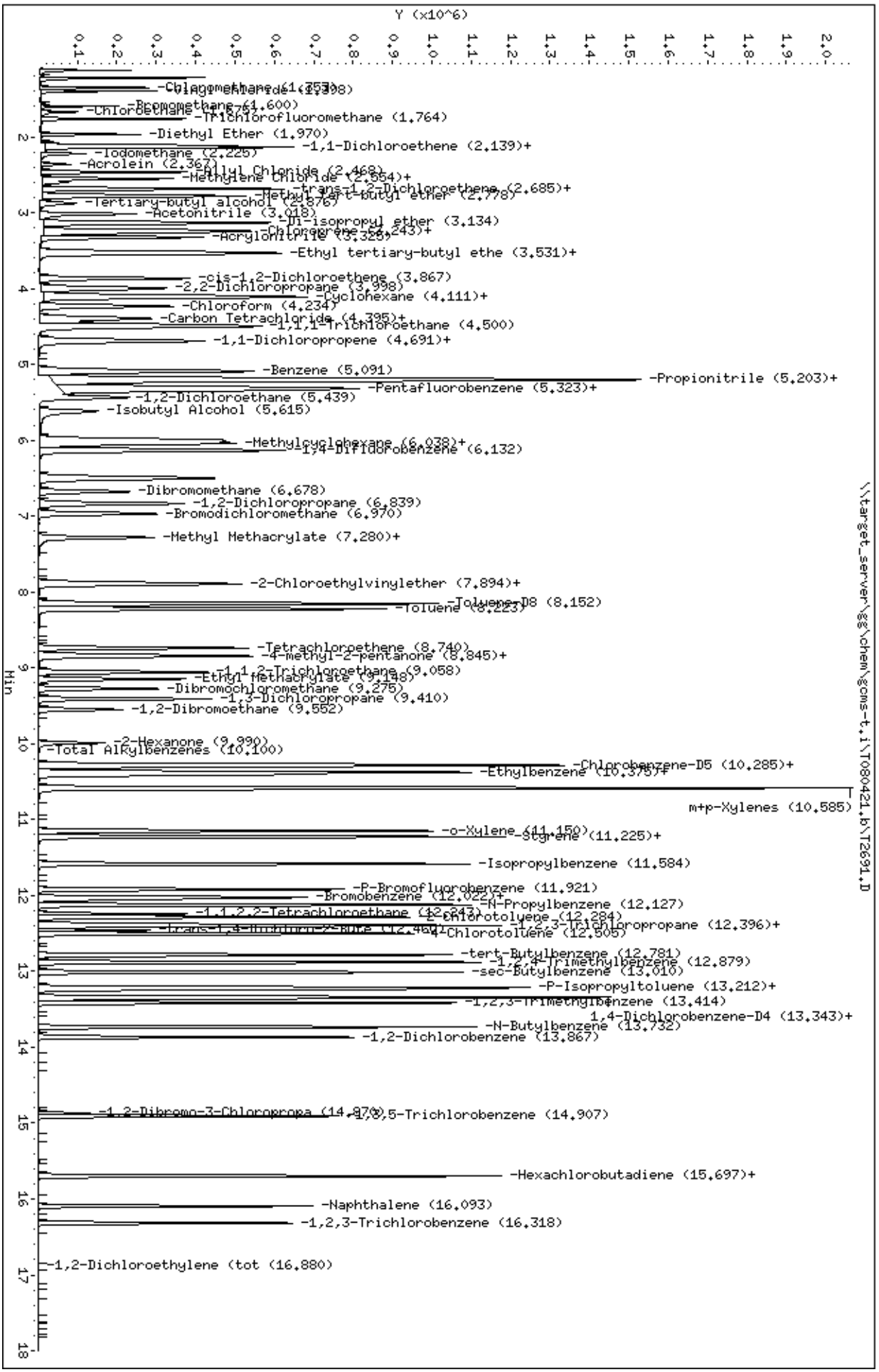
		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
	24	Acrylonitrile	52	3.324	3.325	(0.627)	291992	258.320	258	
	25	Ethyl tertiary-butyl ether	59	3.523	3.523	(0.664)	576065	50.9003	50.9	
	26	Vinyl Acetate	43	3.541	3.542	(0.578)	508524	59.3667	59.4	
	27	cis-1,2-Dichloroethene	96	3.867	3.868	(0.729)	210333	49.8943	49.9	
	28	2,2-Dichloropropane	77	3.998	3.999	(0.754)	305568	51.5278	51.5	
	29	Cyclohexane	56	4.103	4.099	(0.774)	318125	52.0584	52.0	
	30	Bromochloromethane	128	4.118	4.118	(0.776)	101651	57.6218	57.6	
	31	Chloroform	83	4.230	4.234	(0.798)	372796	49.2088	49.2	
	32	Carbon Tetrachloride	117	4.395	4.395	(0.717)	279354	50.5044	50.5	
	33	Tetrahydrofuran	42	4.454	4.451	(0.840)	83467	65.3023	65.3(R)	
$	34	Dibromofluoromethane	113	4.492	4.489	(0.847)	236976	49.3197	49.3	
	35	1,1,1-Trichloroethane	97	4.499	4.496	(0.848)	340593	49.0477	49.0	
	36	1,1-Dichloropropene	75	4.687	4.691	(0.764)	279319	51.9805	52.0	
	37	2-Butanone	43	4.705	4.698	(0.887)	132806	73.9118	73.9(R)	
	38	Benzene	78	5.091	5.091	(0.830)	792102	53.1498	53.1	
	39	Propionitrile	54	5.177	5.177	(0.976)	283547	583.550	584	
	40	Methacrylonitrile	41	5.203	5.200	(0.981)	1193411	508.178	508	
*	41	Pentafluorobenzene	168	5.304	5.301	(1.000)	442979	50.0000		
$	42	1,2-Dichloroethane-D4	65	5.330	5.323	(1.005)	284469	49.4043	49.4	
	43	Tertiary-amyl methyl ether	73	5.338	5.335	(1.006)	510868	50.7762	50.8	
	44	1,2-Dichloroethane	62	5.439	5.439	(0.887)	275148	51.4633	51.5	
	45	Isobutyl Alcohol	43	5.615	5.619	(1.059)	187847	1369.02	1370	
	46	Methylcyclohexane	83	5.996	5.997	(1.131)	309034	48.2052	48.2	
	47	Trichloroethene	95	6.037	6.042	(0.985)	201325	52.7689	52.8	
*	48	1,4-Difluorobenzene	114	6.131	6.132	(1.000)	726083	50.0000		
	49	Dibromomethane	93	6.674	6.682	(1.088)	124385	51.3379	51.3	
	50	1,2-Dichloropropane	63	6.838	6.832	(1.115)	188155	52.4128	52.4	
	51	Bromodichloromethane	83	6.966	6.966	(1.136)	274372	53.7632	53.8	
	52	Methyl Methacrylate	41	7.280	7.277	(1.187)	161220	51.4735	51.5	
	53	1,4-Dioxane	88	7.287	7.284	(1.189)	67184	1690.90	1690(R)	
	54	2-Chloroethylvinylether	63	7.871	7.876	(1.284)	119419	58.3202	58.3	
	55	cis-1,3-dichloropropene	75	7.897	7.898	(1.288)	331516	54.9945	55.0	
$	56	Toluene-D8	98	8.152	8.153	(1.330)	827725	50.2640	50.3	
	57	Toluene	92	8.223	8.220	(1.341)	490848	52.9907	53.0	
	58	Tetrachloroethene	164	8.739	8.736	(0.851)	153202	49.4777	49.5	
	59	4-methyl-2-pentanone	43	8.822	8.822	(1.439)	188765	58.3495	58.3	
	60	trans-1,3-Dichloropropene	75	8.848	8.849	(1.443)	299519	55.4564	55.4	
	61	1,1,2-Trichloroethane	83	9.054	9.054	(1.477)	142484	52.2705	52.3	
	62	Ethyl Methacrylate	69	9.147	9.148	(1.492)	226465	54.3582	54.4	
	63	Dibromochloromethane	129	9.275	9.275	(0.903)	194330	52.1069	52.1	
	64	1,3-Dichloropropane	76	9.409	9.410	(0.916)	301672	51.3662	51.4	
	65	1,2-Dibromoethane	107	9.551	9.548	(1.558)	177940	53.4084	53.4	
M	66	Total Alkylbenzenes	100				5147046	378.600	379	
	67	2-Hexanone	43	9.989	9.986	(0.972)	135253	59.6261	59.6	
*	68	Chlorobenzene-D5	117	10.274	10.274	(1.000)	628965	50.0000		
	69	Chlorobenzene	112	10.296	10.293	(1.002)	529299	53.0669	53.1	
	70	Ethylbenzene	91	10.375	10.372	(1.010)	909773	53.7379	53.7	
	71	1,1,1,2-Tetrachloroethane	131	10.405	10.409	(1.013)	188001	55.4061	55.4	
	72	m+p-Xylenes	91	10.584	10.585	(1.030)	1376416	106.874	107	
	73	o-Xylene	91	11.149	11.150	(1.085)	695938	53.1568	53.2	
	74	Styrene	104	11.228	11.229	(1.093)	561165	55.9541	56.0	
	75	Bromoform	173	11.220	11.221	(1.092)	118647	48.7369	48.7	
	76	Isopropylbenzene	105	11.583	11.584	(0.869)	839800	52.8628	52.9	
$	77	P-Bromofluorobenzene	95	11.920	11.921	(1.944)	300240	50.2458	50.2	

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2691.D
Report Date: 10-Aug-2021 11:00

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
	78 Bromobenzene	156	12.025	12.022	(0.902)	195455	53.2538	53.2	
	79 cis-1,4-Dichloro-2-Butene	53	12.051	12.052	(0.904)	64502	53.0465	53.0	
	80 N-Propylbenzene	91	12.126	12.123	(0.909)	992062	52.9762	53.0	
	81 1,1,2,2-Tetrachloroethane	83	12.242	12.243	(0.918)	210886	54.2112	54.2	
	82 2-Chlorotoluene	91	12.283	12.284	(0.921)	592656	53.1243	53.1	
	83 1,2,3-Trichloropropane	75	12.373	12.378	(0.928)	173373	51.6197	51.6	
	84 1,3,5-Trimethylbenzene	105	12.399	12.400	(0.930)	674873	54.5936	54.6	
	85 trans-1,4-Dichloro-2-Butene	53	12.459	12.460	(0.934)	64222	52.8164	52.8	
	86 4-Chlorotoluene	91	12.504	12.505	(0.938)	617645	53.0350	53.0	
	87 tert-Butylbenzene	119	12.781	12.785	(0.958)	566308	52.2442	52.2	
	89 1,2,4-Trimethylbenzene	105	12.878	12.879	(0.966)	678006	53.8918	53.9	
	90 sec-Butylbenzene	105	13.009	13.010	(0.976)	848683	53.6862	53.7	
	91 P-Isopropyltoluene	119	13.211	13.212	(0.991)	729316	56.3373	56.3	
	92 1,3-Dichlorobenzene	146	13.234	13.238	(0.992)	365953	54.3545	54.4	
*	93 1,4-Dichlorobenzene-D4	152	13.335	13.336	(1.000)	286200	50.0000		
	94 1,4-Dichlorobenzene	146	13.354	13.354	(1.001)	371099	52.3953	52.4	
	95 1,2,3-Trimethylbenzene	105	13.413	13.414	(1.006)	649377	51.7937	51.8	
	96 N-Butylbenzene	91	13.732	13.736	(1.030)	657798	54.8710	54.9	
	97 1,2-Dichlorobenzene	146	13.866	13.867	(1.040)	333851	53.5642	53.6	
	98 1,2-Dibromo-3-Chloropropane	157	14.869	14.874	(1.115)	35611	49.0865	49.1	
	99 1,3,5-Trichlorobenzene	180	14.907	14.907	(1.118)	237605	52.2768	52.3	
	100 Hexachlorobutadiene	225	15.692	15.693	(1.177)	101586	52.6280	52.6	
	101 1,2,4-Trichlorobenzene	180	15.700	15.701	(1.177)	219263	56.2754	56.3	
	102 Naphthalene	128	16.093	16.094	(1.207)	529419	49.2720	49.3	
M	103 1,2-Dichloroethylene (total)	96				405534	103.973	104	
	104 1,2,3-Trichlorobenzene	180	16.317	16.318	(1.224)	195519	55.6671	55.7	
M	105 Xylenes (total)	91				2072354	160.031	160	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.



Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2691.D
Date : 04-AUG-2021 13:03
Client ID:
Sample Info: WG303684-9,SD4723
Purge Volume: 5.0
Column phase: RTX-VMS

Instrument: gcms-t.i
Operator: HG
Column diameter: 0.18

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ANALYTICAL SERVICES

LCS/LCSD Recovery Report

LCS ID: WG303781-1
LCSD ID: WG303781-6
SDG: SO4723
LCS File ID: T2709.D

Extract Date: 05-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303781
LCSD File ID: T2710.D

Analysis Date: 05-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
Report Date: 10-AUG-21

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Chloromethane	50.0	52.3	105.	53.3	107.	ug/L	2	20	50-139
Vinyl Chloride	50.0	53.2	106.	54.7	109.	ug/L	3	20	58-137
Bromomethane	50.0	49.4	98.8	51.4	103.	ug/L	4	20	53-141
Chloroethane	50.0	53.0	106.	55.2	110.	ug/L	4	20	60-138
1,1-Dichloroethene	50.0	48.1	96.2	48.9	97.8	ug/L	2	20	71-131
Carbon Disulfide	50.0	58.0	116.	58.5	117.	ug/L	1	20	64-133
Methylene Chloride	50.0	52.3	105.	51.9	104.	ug/L	1	20	74-124
Acetone	50.0	61.3	123.	49.3	98.6	ug/L	22*	20	39-160
trans-1,2-Dichloroethene	50.0	41.3	82.6	46.2	92.4	ug/L	11	20	75-124
1,1-Dichloroethane	50.0	51.0	102.	51.8	104.	ug/L	2	20	77-125
cis-1,2-Dichloroethene	50.0	49.2	98.4	50.0	100.	ug/L	2	20	78-123
Chloroform	50.0	48.6	97.2	49.6	99.2	ug/L	2	20	79-124
Carbon Tetrachloride	50.0	49.8	99.6	50.3	101.	ug/L	1	20	72-136
1,1,1-Trichloroethane	50.0	49.0	98.0	50.2	100.	ug/L	2	20	74-131
2-Butanone	50.0	57.0	114.	49.9	99.8	ug/L	13	20	56-143
Benzene	50.0	51.9	104.	51.9	104.	ug/L	0	20	79-120
1,2-Dichloroethane	50.0	51.8	104.	51.4	103.	ug/L	1	20	73-128
Trichloroethene	50.0	51.4	103.	52.7	105.	ug/L	2	20	79-123
1,2-Dichloropropane	50.0	50.4	101.	51.5	103.	ug/L	2	20	78-122
Bromodichloromethane	50.0	51.6	103.	52.5	105.	ug/L	2	20	79-125
cis-1,3-Dichloropropene	50.0	52.9	106.	53.5	107.	ug/L	1	20	75-124
Toluene	50.0	51.7	103.	52.6	105.	ug/L	2	20	80-121
4-Methyl-2-Pentanone	50.0	53.7	107.	53.4	107.	ug/L	0	20	67-130
Tetrachloroethene	50.0	47.7	95.4	48.4	96.8	ug/L	1	20	74-129
trans-1,3-Dichloropropene	50.0	53.3	107.	53.7	107.	ug/L	1	20	73-127
1,1,2-Trichloroethane	50.0	51.7	103.	52.3	105.	ug/L	1	20	80-119
Dibromochloromethane	50.0	51.2	102.	50.5	101.	ug/L	1	20	74-126
2-Hexanone	50.0	50.5	101.	49.7	99.4	ug/L	2	20	57-139
Chlorobenzene	50.0	51.4	103.	51.7	103.	ug/L	0	20	82-118
Ethylbenzene	50.0	52.1	104.	52.2	104.	ug/L	0	20	79-121
Xylenes (Total)	150.	156.	104.	156.	104.	ug/L	0	20	79-121
m+p-Xylenes	100.	104.	104.	104.	104.	ug/L	0	20	80-121
o-Xylene	50.0	51.6	103.	51.8	104.	ug/L	0	20	78-122
Styrene	50.0	54.0	108.	54.4	109.	ug/L	1	20	78-123
Bromoform	50.0	46.8	93.6	47.4	94.8	ug/L	1	20	66-130
1,1,2,2-Tetrachloroethane	50.0	53.3	107.	54.6	109.	ug/L	2	20	71-121

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LCS/LCSD Recovery Report

LCS ID: WG303781-1
LCSD ID: WG303781-6
SDG: SO4723
LCS File ID: T2709.D

Extract Date: 05-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303781
LCSD File ID: T2710.D

Analysis Date: 05-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
Report Date: 10-AUG-21

P-Bromofluorobenzene	99.8	101.		85-114
Toluene-d8	99.9	99.6		89-112
1,2-Dichloroethane-d4	100.	101.		81-118
Dibromofluoromethane	100.	102.		80-119

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
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Data File: \\target_server\gg\chem\gcms-t.i\T080521.b\T2709.D
Report Date: 10-Aug-2021 11:10

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-t.i\T080521.b\T2709.D
Lab Smp Id: WG303781-1 Client Smp ID: WG303781-LCS
Inj Date : 05-AUG-2021 08:53
Operator : HG Inst ID: gcms-t.i
Smp Info : WG303781-1,SO4723
Misc Info : WG303781,WG303684-4,SO4723-8
Comment : SW846 5030
Method : \\target_server\gg\chem\gcms-t.i\T080521.b\T8A05(66)D.m
Meth Date : 06-Aug-2021 05:48 hgould Quant Type: ISTD
Cal Date : 04-AUG-2021 12:24 Cal File: T2690.D
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.225	1.226	(0.231)	235390	54.4920	54.5	
2	Chloromethane	50	1.352	1.353	(0.255)	230895	52.2700	52.3	
3	Vinyl chloride	62	1.397	1.398	(0.264)	174411	53.2286	53.2	
4	Bromomethane	94	1.599	1.600	(0.302)	54178	49.3720	49.4	
5	Chloroethane	64	1.678	1.678	(0.317)	72771	52.9732	53.0	
6	Trichlorofluoromethane	101	1.768	1.768	(0.334)	228002	55.3466	55.3	
7	Diethyl Ether	59	1.970	1.970	(0.372)	100894	49.5162	49.5	
8	1,1-Dichloroethene	96	2.112	2.113	(0.398)	112216	48.1037	48.1	
9	Freon-113	151	2.138	2.138	(0.403)	82429	47.8015	47.8	
10	Carbon Disulfide	76	2.142	2.142	(0.404)	346897	57.9847	58.0	
11	Iodomethane	142	2.224	2.225	(0.420)	121993	53.7720	53.8	
12	Acrolein	56	2.366	2.367	(0.447)	50986	240.480	240	
13	Allyl Chloride	41	2.467	2.468	(0.466)	194107	48.2642	48.3	
14	Methylene Chloride	84	2.553	2.554	(0.482)	133242	52.2992	52.3	
15	Acetone	43	2.602	2.599	(0.491)	55854	61.3233	61.3	
16	trans-1,2-Dichloroethene	96	2.688	2.685	(0.507)	144068	41.2821	41.3	
17	Methyl Acetate	43	2.699	2.704	(0.509)	127587	45.8593	45.8	
18	Methyl tert-butyl ether	73	2.782	2.782	(0.525)	540854	52.7391	52.7	
19	Tertiary-butyl alcohol	59	2.875	2.876	(0.542)	90191	261.915	262	
20	Acetonitrile	41	3.017	3.018	(0.569)	243516	548.892	549	
21	Di-isopropyl ether	45	3.133	3.134	(0.591)	635382	51.1355	51.1	
22	Chloroprene	53	3.234	3.235	(0.610)	292981	50.0717	50.1	
23	1,1-Dichloroethane	63	3.261	3.261	(0.615)	359101	50.9720	51.0	
24	Acrylonitrile	52	3.328	3.325	(0.628)	282939	258.897	259	

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		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
	25	Ethyl tertiary-butyl ether	59	3.526	3.523	(0.665)	556145	50.8256	50.8	
	26	Vinyl Acetate	43	3.545	3.542	(0.578)	502774	59.8248	59.8	
	27	cis-1,2-Dichloroethene	96	3.867	3.868	(0.730)	200452	49.1813	49.2	
	28	2,2-Dichloropropane	77	4.002	3.999	(0.755)	285715	49.8326	49.8	
	29	Cyclohexane	56	4.099	4.099	(0.773)	319983	54.1585	54.2	
	30	Bromochloromethane	128	4.118	4.118	(0.777)	98131	57.5344	57.5	
	31	Chloroform	83	4.230	4.234	(0.798)	355958	48.5978	48.6	
	32	Carbon Tetrachloride	117	4.395	4.395	(0.716)	270231	49.7951	49.8	
	33	Tetrahydrofuran	42	4.458	4.451	(0.841)	62160	50.3003	50.3	
$	34	Dibromofluoromethane	113	4.492	4.489	(0.848)	233203	50.1991	50.2	
	35	1,1,1-Trichloroethane	97	4.499	4.496	(0.849)	328827	48.9775	49.0	
	36	1,1-Dichloropropene	75	4.690	4.691	(0.765)	275845	52.3218	52.3	
	37	2-Butanone	43	4.705	4.698	(0.888)	99060	57.0218	57.0	
	38	Benzene	78	5.091	5.091	(0.830)	758308	51.8613	51.9	
	39	Propionitrile	54	5.177	5.177	(0.977)	251099	534.496	534	
	40	Methacrylonitrile	41	5.203	5.200	(0.982)	1202704	529.702	530	
*	41	Pentafluorobenzene	168	5.300	5.301	(1.000)	428289	50.0000		
$	42	1,2-Dichloroethane-D4	65	5.326	5.323	(1.005)	279599	50.2240	50.2	
	43	Tertiary-amyl methyl ether	73	5.338	5.335	(1.007)	489792	50.3511	50.4	
	44	1,2-Dichloroethane	62	5.435	5.439	(0.886)	272033	51.8597	51.8	
	45	Isobutyl Alcohol	43	5.615	5.619	(1.059)	144438	1088.76	1090	
	46	Methylcyclohexane	83	6.004	5.997	(1.133)	314587	50.7545	50.8	
	47	Trichloroethene	95	6.041	6.042	(0.985)	192320	51.3786	51.4	
*	48	1,4-Difluorobenzene	114	6.135	6.132	(1.000)	712376	50.0000		
	49	Dibromomethane	93	6.674	6.682	(1.088)	118462	49.8341	49.8	
	50	1,2-Dichloropropane	63	6.835	6.832	(1.114)	177558	50.4126	50.4	
	51	Bromodichloromethane	83	6.969	6.966	(1.136)	258581	51.6439	51.6	
	52	Methyl Methacrylate	41	7.280	7.277	(1.187)	163430	53.1831	53.2	
	53	1,4-Dioxane	88	7.287	7.284	(1.188)	42868	1099.67	1100	
	54	2-Chloroethylvinylether	63	7.875	7.876	(1.284)	114550	57.0188	57.0	
	55	cis-1,3-dichloropropene	75	7.897	7.898	(1.287)	313065	52.9329	52.9	
$	56	Toluene-D8	98	8.152	8.153	(1.329)	806706	49.9302	49.9	
	57	Toluene	92	8.223	8.220	(1.340)	469915	51.7069	51.7	
	58	Tetrachloroethene	164	8.739	8.736	(0.851)	144629	47.7019	47.7	
	59	4-methyl-2-pentanone	43	8.825	8.822	(1.439)	170547	53.7325	53.7	
	60	trans-1,3-Dichloropropene	75	8.848	8.849	(1.442)	282458	53.3038	53.3	
	61	1,1,2-Trichloroethane	83	9.054	9.054	(1.476)	138348	51.7297	51.7	
	62	Ethyl Methacrylate	69	9.147	9.148	(1.491)	225686	55.2135	55.2	
	63	Dibromochloromethane	129	9.271	9.275	(0.902)	187118	51.2396	51.2	
	64	1,3-Dichloropropane	76	9.409	9.410	(0.916)	289989	50.4265	50.4	
	65	1,2-Dibromoethane	107	9.551	9.548	(1.557)	171887	52.5843	52.6	
M	66	Total Alkylbenzenes	100				4932364	367.865	368	
	67	2-Hexanone	43	9.989	9.986	(0.972)	112159	50.4963	50.5	
*	68	Chlorobenzene-D5	117	10.274	10.274	(1.000)	615873	50.0000		
	69	Chlorobenzene	112	10.292	10.293	(1.002)	502584	51.4596	51.4	
	70	Ethylbenzene	91	10.375	10.372	(1.010)	863649	52.0979	52.1	
	71	1,1,1,2-Tetrachloroethane	131	10.405	10.409	(1.013)	177776	53.5064	53.5	
	72	m+p-Xylenes	91	10.584	10.585	(1.030)	1311550	104.002	104	
	73	o-Xylene	91	11.149	11.150	(1.085)	661309	51.5856	51.6	
	74	Styrene	104	11.228	11.229	(1.093)	529911	53.9609	54.0	
	75	Bromoform	173	11.220	11.221	(1.092)	111628	46.8285	46.8	
	76	Isopropylbenzene	105	11.583	11.584	(0.869)	811976	51.8540	51.8	
$	77	P-Bromofluorobenzene	95	11.920	11.921	(1.943)	292407	49.8765	49.9	
	78	Bromobenzene	156	12.025	12.022	(0.902)	182625	50.4811	50.5	

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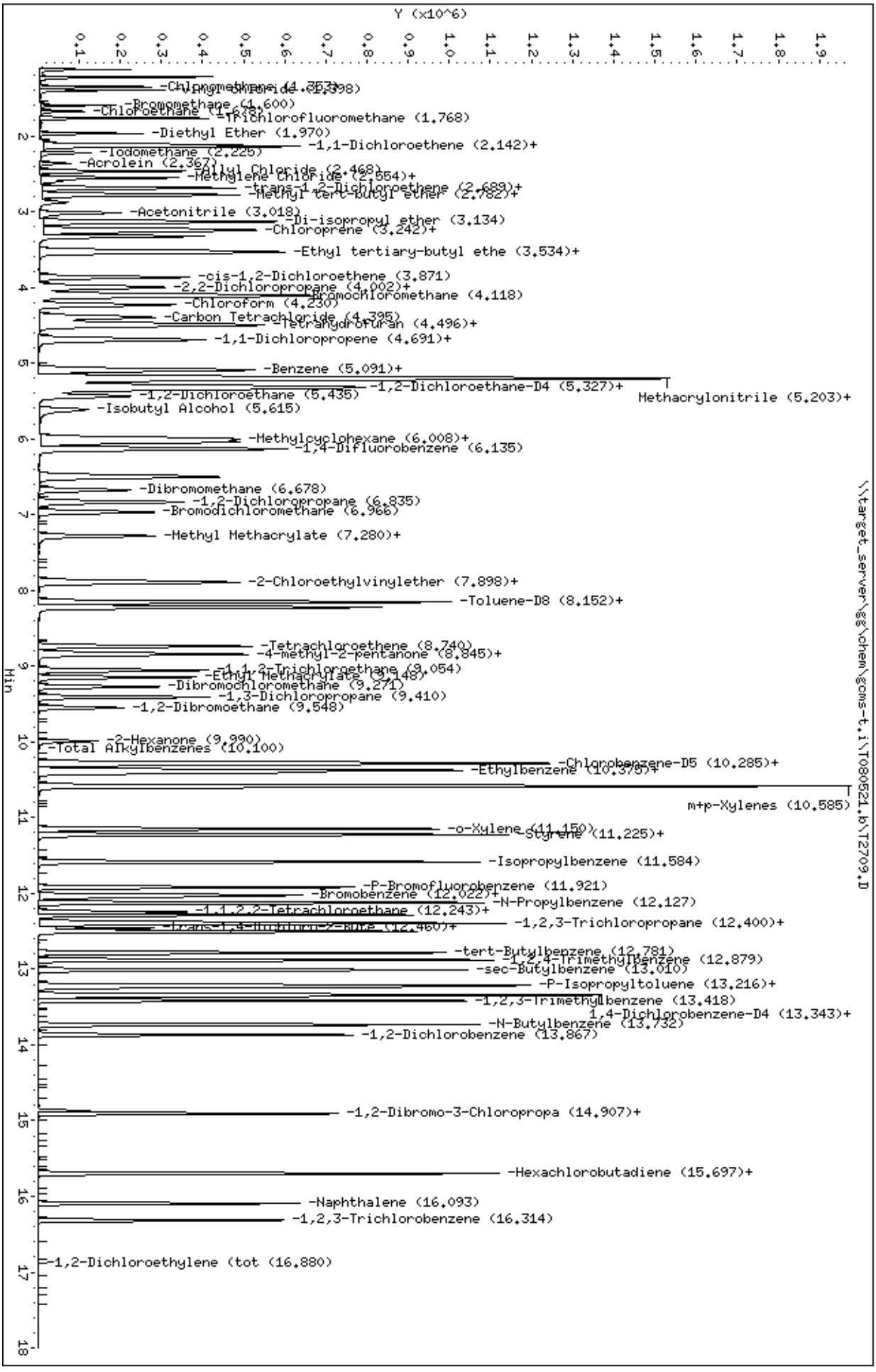
		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
	79	cis-1,4-Dichloro-2-Butene	53	12.051	12.052	(0.904)	63266	52.7860	52.8	
	80	N-Propylbenzene	91	12.122	12.123	(0.909)	958808	51.9444	51.9	
	81	1,1,2,2-Tetrachloroethane	83	12.242	12.243	(0.918)	204473	53.3264	53.3	
	82	2-Chlorotoluene	91	12.283	12.284	(0.921)	559066	50.8415	50.8	
	83	1,2,3-Trichloropropane	75	12.373	12.378	(0.928)	170785	51.5880	51.6	
	84	1,3,5-Trimethylbenzene	105	12.399	12.400	(0.930)	644160	52.8663	52.9	
	85	trans-1,4-Dichloro-2-Butene	53	12.459	12.460	(0.934)	63272	52.7912	52.8	
	86	4-Chlorotoluene	91	12.504	12.505	(0.938)	583416	50.8238	50.8	
	87	tert-Butylbenzene	119	12.781	12.785	(0.958)	548492	51.3359	51.3	
	89	1,2,4-Trimethylbenzene	105	12.878	12.879	(0.966)	644679	51.9874	52.0	
	90	sec-Butylbenzene	105	13.009	13.010	(0.976)	818617	52.5367	52.5	
	91	P-Isopropyltoluene	119	13.211	13.212	(0.991)	689025	53.9983	54.0	
	92	1,3-Dichlorobenzene	146	13.238	13.238	(0.993)	342668	51.6355	51.6	
*	93	1,4-Dichlorobenzene-D4	152	13.335	13.336	(1.000)	282101	50.0000		
	94	1,4-Dichlorobenzene	146	13.354	13.354	(1.001)	345839	49.5383	49.5	
	95	1,2,3-Trimethylbenzene	105	13.417	13.414	(1.006)	640744	51.8478	51.8	
	96	N-Butylbenzene	91	13.731	13.736	(1.030)	628583	53.1959	53.2	
	97	1,2-Dichlorobenzene	146	13.866	13.867	(1.040)	317143	51.6229	51.6	
	98	1,2-Dibromo-3-Chloropropane	157	14.869	14.874	(1.115)	34629	48.4265	48.4	
	99	1,3,5-Trichlorobenzene	180	14.907	14.907	(1.118)	231679	51.7136	51.7	
	100	Hexachlorobutadiene	225	15.692	15.693	(1.177)	96779	50.8662	50.9	
	101	1,2,4-Trichlorobenzene	180	15.696	15.701	(1.177)	203548	53.0011	53.0	
	102	Naphthalene	128	16.093	16.094	(1.207)	501067	47.3109	47.3	
M	103	1,2-Dichloroethylene (total)	96				344520	90.4634	90.5	
	104	1,2,3-Trichlorobenzene	180	16.317	16.318	(1.224)	182677	52.7666	52.8	
M	105	Xylenes (total)	91				1972859	155.588	156	



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Column phase: RTX-VMS

Instrument: gcms-t.i
Operator: HG
Column diameter: 0.18

Data File: \\target_server\gg\chem\gcms-t.i\T080521.b\T2710.D
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Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-t.i\T080521.b\T2710.D
Lab Smp Id: WG303781-6 Client Smp ID: WG303781-LCSD
Inj Date : 05-AUG-2021 09:29
Operator : HG Inst ID: gcms-t.i
Smp Info : WG303781-6,SO4723
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Meth Date : 06-Aug-2021 05:48 hgould Quant Type: ISTD
Cal Date : 04-AUG-2021 12:24 Cal File: T2690.D
Als bottle: 4 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.225	1.226	(0.231)	236162	56.6226	56.6	
2	Chloromethane	50	1.352	1.353	(0.255)	227195	53.2687	53.3	
3	Vinyl chloride	62	1.397	1.398	(0.264)	173178	54.7392	54.7	
4	Bromomethane	94	1.599	1.600	(0.302)	54467	51.4075	51.4	
5	Chloroethane	64	1.678	1.678	(0.317)	73151	55.1510	55.2	
6	Trichlorofluoromethane	101	1.768	1.768	(0.334)	227064	57.0868	57.1	
7	Diethyl Ether	59	1.970	1.970	(0.372)	98810	50.2248	50.2	
8	1,1-Dichloroethene	96	2.116	2.113	(0.399)	110063	48.8653	48.9	
9	Freon-113	151	2.138	2.138	(0.403)	78161	46.9447	46.9	
10	Carbon Disulfide	76	2.142	2.142	(0.404)	338119	58.5353	58.5	
11	Iodomethane	142	2.224	2.225	(0.420)	117826	53.7895	53.8	
12	Acrolein	56	2.366	2.367	(0.447)	51649	252.305	252	
13	Allyl Chloride	41	2.467	2.468	(0.466)	188365	48.5087	48.5	
14	Methylene Chloride	84	2.553	2.554	(0.482)	127631	51.8855	51.9	
15	Acetone	43	2.602	2.599	(0.491)	43259	49.2672	49.3	
16	trans-1,2-Dichloroethene	96	2.688	2.685	(0.507)	155762	46.2264	46.2	
17	Methyl Acetate	43	2.699	2.704	(0.509)	130172	48.4589	48.4	
18	Methyl tert-butyl ether	73	2.782	2.782	(0.525)	535576	54.0890	54.1	
19	Tertiary-butyl alcohol	59	2.879	2.876	(0.543)	91703	275.814	276	
20	Acetonitrile	41	3.014	3.018	(0.569)	243342	568.083	568	
21	Di-isopropyl ether	45	3.137	3.134	(0.592)	628140	52.3575	52.4	
22	Chloroprene	53	3.234	3.235	(0.610)	288478	51.0623	51.1	
23	1,1-Dichloroethane	63	3.261	3.261	(0.615)	352218	51.7799	51.8	
24	Acrylonitrile	52	3.328	3.325	(0.628)	281748	267.011	267	

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			QUANT SIG					CONCENTRATIONS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/l)	REVIEW CODE
	25	Ethyl tertiary-butyl ether	59	3.526	3.523	(0.665)	547860	51.8560	51.8	
	26	Vinyl Acetate	43	3.541	3.542	(0.577)	498946	60.4415	60.4	
	27	cis-1,2-Dichloroethene	96	3.871	3.868	(0.730)	196771	50.0018	50.0	
	28	2,2-Dichloropropane	77	3.998	3.999	(0.754)	275778	49.8167	49.8	
	29	Cyclohexane	56	4.103	4.099	(0.774)	312382	54.7597	54.8	
	30	Bromochloromethane	128	4.118	4.118	(0.777)	96383	58.5271	58.5	
	31	Chloroform	83	4.234	4.234	(0.799)	351136	49.6510	49.6	
	32	Carbon Tetrachloride	117	4.398	4.395	(0.717)	268081	50.2910	50.3	
	33	Tetrahydrofuran	42	4.454	4.451	(0.840)	53381	44.7385	44.7	
$	34	Dibromofluoromethane	113	4.492	4.489	(0.848)	228173	50.8700	50.9	
	35	1,1,1-Trichloroethane	97	4.499	4.496	(0.849)	325755	50.2523	50.2	
	36	1,1-Dichloropropene	75	4.686	4.691	(0.764)	271751	52.4761	52.5	
	37	2-Butanone	43	4.705	4.698	(0.888)	83773	49.9438	49.9	
	38	Benzene	78	5.087	5.091	(0.829)	745523	51.9077	51.9	
	39	Propionitrile	54	5.173	5.177	(0.976)	253167	558.138	558	
	40	Methacrylonitrile	41	5.203	5.200	(0.982)	1194761	544.990	545	
*	41	Pentafluorobenzene	168	5.300	5.301	(1.000)	413525	50.0000		
$	42	1,2-Dichloroethane-D4	65	5.326	5.323	(1.005)	272389	50.6758	50.7	
	43	Tertiary-amyl methyl ether	73	5.338	5.335	(1.007)	478102	50.9042	50.9	
	44	1,2-Dichloroethane	62	5.431	5.439	(0.885)	264846	51.4014	51.4	
	45	Isobutyl Alcohol	43	5.618	5.619	(1.060)	140291	1095.26	1100	
	46	Methylcyclohexane	83	5.996	5.997	(1.131)	315245	52.6766	52.7	
	47	Trichloroethene	95	6.041	6.042	(0.985)	193824	52.7155	52.7	
*	48	1,4-Difluorobenzene	114	6.135	6.132	(1.000)	699739	50.0000		
	49	Dibromomethane	93	6.677	6.682	(1.088)	116265	49.7931	49.8	
	50	1,2-Dichloropropane	63	6.835	6.832	(1.114)	178169	51.4996	51.5	
	51	Bromodichloromethane	83	6.969	6.966	(1.136)	258214	52.5019	52.5	
	52	Methyl Methacrylate	41	7.280	7.277	(1.187)	160004	53.0085	53.0	
	53	1,4-Dioxane	88	7.284	7.284	(1.187)	43492	1135.83	1140	
	54	2-Chloroethylvinylether	63	7.875	7.876	(1.284)	112094	56.8039	56.8	
	55	cis-1,3-dichloropropene	75	7.901	7.898	(1.288)	310616	53.4673	53.5	
$	56	Toluene-D8	98	8.152	8.153	(1.329)	790079	49.7842	49.8	
	57	Toluene	92	8.223	8.220	(1.340)	469618	52.6075	52.6	
	58	Tetrachloroethene	164	8.739	8.736	(0.851)	144468	48.3654	48.4	
	59	4-methyl-2-pentanone	43	8.825	8.822	(1.439)	166528	53.4138	53.4	
	60	trans-1,3-Dichloropropene	75	8.848	8.849	(1.442)	279403	53.6796	53.7	
	61	1,1,2-Trichloroethane	83	9.054	9.054	(1.476)	137315	52.2707	52.3	
	62	Ethyl Methacrylate	69	9.147	9.148	(1.491)	223945	55.7770	55.8	
	63	Dibromochloromethane	129	9.274	9.275	(0.903)	181739	50.5150	50.5	
	64	1,3-Dichloropropane	76	9.413	9.410	(0.916)	288661	50.9504	51.0	
	65	1,2-Dibromoethane	107	9.551	9.548	(1.557)	167885	52.2875	52.3	
M	66	Total Alkylbenzenes	100				4907238	376.537	376	
	67	2-Hexanone	43	9.989	9.986	(0.972)	108841	49.7393	49.7	
*	68	Chlorobenzene-D5	117	10.274	10.274	(1.000)	606749	50.0000		
	69	Chlorobenzene	112	10.292	10.293	(1.002)	497268	51.6809	51.7	
	70	Ethylbenzene	91	10.375	10.372	(1.010)	852014	52.1689	52.2	
	71	1,1,1,2-Tetrachloroethane	131	10.405	10.409	(1.013)	175176	53.5167	53.5	
	72	m+p-Xylenes	91	10.584	10.585	(1.030)	1296415	104.348	104	
	73	o-Xylene	91	11.149	11.150	(1.085)	653691	51.7581	51.8	
	74	Styrene	104	11.228	11.229	(1.093)	526190	54.3878	54.4	
	75	Bromoform	173	11.220	11.221	(1.092)	111373	47.4241	47.4	
	76	Isopropylbenzene	105	11.583	11.584	(0.869)	804092	52.8335	52.8	
$	77	P-Bromofluorobenzene	95	11.916	11.921	(1.942)	290879	50.5119	50.5	
	78	Bromobenzene	156	12.025	12.022	(0.902)	182152	51.8044	51.8	

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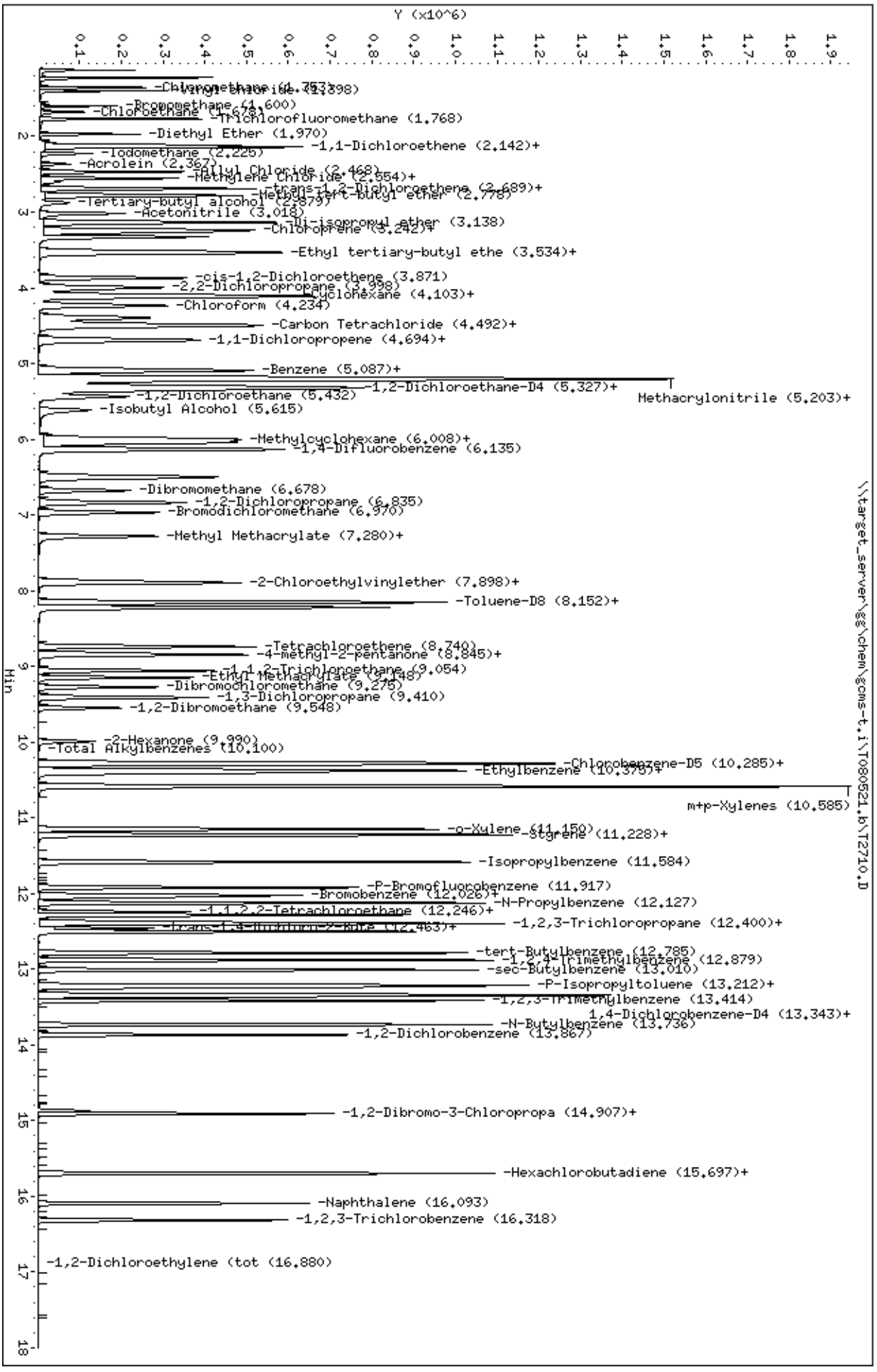
		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
	79	cis-1,4-Dichloro-2-Butene	53	12.051	12.052	(0.904)	64379	55.2659	55.3	
	80	N-Propylbenzene	91	12.126	12.123	(0.909)	952448	53.0899	53.1	
	81	1,1,2,2-Tetrachloroethane	83	12.242	12.243	(0.918)	203546	54.6177	54.6	
	82	2-Chlorotoluene	91	12.283	12.284	(0.921)	555524	51.9783	52.0	
	83	1,2,3-Trichloropropane	75	12.377	12.378	(0.928)	167510	52.0599	52.0	
	84	1,3,5-Trimethylbenzene	105	12.399	12.400	(0.930)	641507	54.1689	54.2	
	85	trans-1,4-Dichloro-2-Butene	53	12.459	12.460	(0.934)	62844	53.9483	53.9	
	86	4-Chlorotoluene	91	12.504	12.505	(0.938)	590903	52.9626	53.0	
	87	tert-Butylbenzene	119	12.785	12.785	(0.959)	545090	52.4908	52.5	
	89	1,2,4-Trimethylbenzene	105	12.878	12.879	(0.966)	639717	53.0770	53.1	
	90	sec-Butylbenzene	105	13.009	13.010	(0.976)	818672	54.0575	54.0	
	91	P-Isopropyltoluene	119	13.211	13.212	(0.991)	682370	55.0211	55.0	
	92	1,3-Dichlorobenzene	146	13.238	13.238	(0.993)	336482	52.1676	52.2	
*	93	1,4-Dichlorobenzene-D4	152	13.335	13.336	(1.000)	274183	50.0000		
	94	1,4-Dichlorobenzene	146	13.354	13.354	(1.001)	347874	51.2689	51.3	
	95	1,2,3-Trimethylbenzene	105	13.413	13.414	(1.006)	633930	52.7777	52.8	
	96	N-Butylbenzene	91	13.731	13.736	(1.030)	627434	54.6321	54.6	
	97	1,2-Dichlorobenzene	146	13.870	13.867	(1.040)	315607	52.8565	52.8	
	98	1,2-Dibromo-3-Chloropropane	157	14.869	14.874	(1.115)	34696	49.9214	49.9	
	99	1,3,5-Trichlorobenzene	180	14.907	14.907	(1.118)	229936	52.8067	52.8	
	100	Hexachlorobutadiene	225	15.696	15.693	(1.177)	93895	50.7755	50.8	
	101	1,2,4-Trichlorobenzene	180	15.700	15.701	(1.177)	202753	54.3188	54.3	
	102	Naphthalene	128	16.093	16.094	(1.207)	496098	48.1945	48.2	
M	103	1,2-Dichloroethylene (total)	96				352533	96.2283	96.2	
	104	1,2,3-Trichlorobenzene	180	16.317	16.318	(1.224)	179455	53.3328	53.3	
M	105	Xylenes (total)	91				1950106	156.106	156	



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Client ID: WG303781-LCSD
Sample Info: WG303784-6,SD4723
Purge Volume: 5.0
Column phase: RTX-VMS

Instrument: gcms-t.i
Operator: HG
Column diameter: 0.18

Katahdin
ANALYTICAL SERVICES

LCS Recovery Report

Lab ID: WG303527-1
Client ID: LCS
SDG: SO4723
LCS File ID: W9697.D
Report Date: 10-AUG-21

Extract Date: 02-AUG-21
Extracted By: CR/ES
Extraction Method: SW846 5030
Lab Prep Batch: WG303527

Analysis Date: 02-AUG-21
Analyst: CR/ES
Analysis Method: SW846 8260C
Matrix: AQ

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Chloromethane	107.	50.0	53.7	ug/L	50-139
Vinyl Chloride	101.	50.0	50.3	ug/L	58-137
Bromomethane	104.	50.0	52.1	ug/L	53-141
Chloroethane	* 157.	50.0	78.3	ug/L	60-138
1,1-Dichloroethene	97.2	50.0	48.6	ug/L	71-131
Carbon Disulfide	129.	50.0	64.3	ug/L	64-133
Methylene Chloride	113.	50.0	56.7	ug/L	74-124
Acetone	111.	50.0	55.5	ug/L	39-160
trans-1,2-Dichloroethene	112.	50.0	56.1	ug/L	75-124
1,1-Dichloroethane	98.0	50.0	49.0	ug/L	77-125
cis-1,2-Dichloroethene	95.4	50.0	47.7	ug/L	78-123
Chloroform	94.2	50.0	47.1	ug/L	79-124
Carbon Tetrachloride	100.	50.0	50.2	ug/L	72-136
1,1,1-Trichloroethane	95.0	50.0	47.5	ug/L	74-131
2-Butanone	96.0	50.0	48.0	ug/L	56-143
Benzene	98.6	50.0	49.3	ug/L	79-120
1,2-Dichloroethane	95.2	50.0	47.6	ug/L	73-128
Trichloroethene	95.0	50.0	47.5	ug/L	79-123
1,2-Dichloropropane	99.8	50.0	49.9	ug/L	78-122
Bromodichloromethane	100.	50.0	50.0	ug/L	79-125
cis-1,3-Dichloropropene	109.	50.0	54.7	ug/L	75-124
Toluene	96.0	50.0	48.0	ug/L	80-121
4-Methyl-2-Pentanone	109.	50.0	54.3	ug/L	67-130
Tetrachloroethene	88.6	50.0	44.3	ug/L	74-129
trans-1,3-Dichloropropene	108.	50.0	53.8	ug/L	73-127
1,1,2-Trichloroethane	99.4	50.0	49.7	ug/L	80-119
Dibromochloromethane	99.6	50.0	49.8	ug/L	74-126
2-Hexanone	84.6	50.0	42.3	ug/L	57-139
Chlorobenzene	95.6	50.0	47.8	ug/L	82-118
Ethylbenzene	99.4	50.0	49.7	ug/L	79-121
Xylenes (Total)	104.	150.	156.	ug/L	79-121
m+p-Xylenes	103.	100.	103.	ug/L	80-121
o-Xylene	106.	50.0	52.8	ug/L	78-122
Styrene	109.	50.0	54.5	ug/L	78-123
Bromoform	86.2	50.0	43.1	ug/L	66-130
1,1,2,2-Tetrachloroethane	98.6	50.0	49.3	ug/L	71-121

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ANALYTICAL SERVICES

LCS Recovery Report

Lab ID: WG303527-1
Client ID: LCS
SDG: SO4723
LCS File ID: W9697.D
Report Date: 10-AUG-21

Extract Date: 02-AUG-21
Extracted By: CR/ES
Extraction Method: SW846 5030
Lab Prep Batch: WG303527

Analysis Date: 02-AUG-21
Analyst: CR/ES
Analysis Method: SW846 8260C
Matrix: AQ

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
P-Bromofluorobenzene	102.				85-114
Toluene-d8	100.				89-112
1,2-Dichloroethane-d4	103.				81-118
Dibromofluoromethane	102.				80-119

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Data File: \\target_server\gg\chem\gcms-w.i\W080221.b\W9697.D
Report Date: 10-Aug-2021 11:24

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-w.i\W080221.b\W9697.D
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Inj Date : 02-AUG-2021 07:56
Operator : CR/ES   Inst ID: gcms-w.i
Smp Info : WG303527-1,SO4723
Misc Info : WG303527,WG303228-4,SO4723-2
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-w.i\W080221.b\W8A05(03).m
Meth Date : 03-Aug-2021 06:45 hgould   Quant Type: ISTD
Cal Date : 28-JUL-2021 11:04   Cal File: W9625.D
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Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.348	1.345	(0.233)	501658	53.7867	53.8	
2	Chloromethane	50	1.489	1.490	(0.258)	541205	53.6871	53.7	
3	Vinyl chloride	62	1.540	1.538	(0.266)	408250	50.3440	50.3	
4	Bromomethane	94	1.765	1.762	(0.305)	64831	52.0720	52.1	
5	Chloroethane	64	1.855	1.849	(0.321)	120340	78.2903	78.3	
6	Trichlorofluoromethane	101	1.951	1.952	(0.337)	460734	55.9276	55.9	
7	Diethyl Ether	59	2.176	2.176	(0.376)	230886	53.6767	53.7	
8	1,1-Dichloroethene	96	2.336	2.333	(0.404)	269738	48.6021	48.6	
9	Freon-113	151	2.362	2.359	(0.408)	231593	49.8312	49.8	
10	Carbon Disulfide	76	2.365	2.366	(0.409)	744760	64.3287	64.3	
11	Iodomethane	142	2.458	2.455	(0.425)	267049	54.3361	54.3	
12	Acrolein	56	2.615	2.619	(0.452)	201255	254.800	255	
13	Allyl Chloride	41	2.727	2.728	(0.472)	351162	53.9313	53.9	
14	Methylene Chloride	84	2.827	2.824	(0.489)	302712	56.7076	56.7	
15	Acetone	43	2.881	2.879	(0.498)	78669	55.4639	55.5	
16	trans-1,2-Dichloroethene	96	2.971	2.969	(0.514)	306846	56.0874	56.1	
17	Methyl Acetate	43	2.991	2.991	(0.517)	156384	51.2549	51.2	
18	Methyl tert-butyl ether	73	3.077	3.078	(0.532)	701231	49.4216	49.4	
19	Tertiary-butyl alcohol	59	3.186	3.184	(0.551)	113979	276.266	276	
20	Acetonitrile	41	3.344	3.341	(0.578)	455107	499.750	500	
21	Di-isopropyl ether	45	3.472	3.473	(0.600)	1169523	52.2441	52.2	
22	Chloroprene	53	3.581	3.582	(0.619)	596663	49.6860	49.7	
23	1,1-Dichloroethane	63	3.610	3.614	(0.624)	738758	48.9595	49.0	

Data File: \\target_server\gg\chem\gcms-w.i\W080221.b\W9697.D
Report Date: 10-Aug-2021 11:24

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
	24 Acrylonitrile	52	3.687	3.688	(0.638)	587117	247.195	247	
	25 Ethyl tertiary-butyl ether	59	3.905	3.906	(0.675)	1009662	53.0011	53.0	
	26 Vinyl Acetate	43	3.928	3.928	(0.599)	740882	60.9830	61.0	
	27 cis-1,2-Dichloroethene	96	4.287	4.288	(0.741)	435774	47.7026	47.7	
	28 2,2-Dichloropropane	77	4.435	4.432	(0.767)	488555	52.9035	52.9	
	29 Bromochloromethane	128	4.566	4.564	(0.790)	198360	52.4675	52.5	
	30 Cyclohexane	56	4.544	4.541	(0.786)	743329	53.5786	53.6	
	31 Chloroform	83	4.695	4.695	(0.812)	692400	47.1004	47.1	
	32 Carbon Tetrachloride	117	4.871	4.872	(0.743)	461727	50.1673	50.2	
	33 Tetrahydrofuran	42	4.958	4.939	(0.857)	84103	42.1828	42.2	
$	34 Dibromofluoromethane	113	4.983	4.981	(0.862)	384351	51.2030	51.2	
	35 1,1,1-Trichloroethane	97	4.987	4.987	(0.862)	594316	47.5070	47.5	
	36 2-Butanone	43	5.214	5.212	(0.902)	135409	47.9505	48.0	
	37 1,1-Dichloropropene	75	5.195	5.193	(0.792)	568888	49.5065	49.5	
	38 Benzene	78	5.587	5.587	(0.852)	1729051	49.2830	49.3	
	39 Propionitrile	54	5.670	5.671	(0.981)	526198	510.149	510	
	40 Methacrylonitrile	41	5.693	5.693	(0.984)	1840857	515.595	516	
*	41 Pentafluorobenzene	168	5.782	5.780	(1.000)	837781	50.0000		
$	42 1,2-Dichloroethane-D4	65	5.808	5.809	(1.004)	431100	51.3056	51.3	
	43 Tertiary-amyl methyl ether	73	5.821	5.822	(1.007)	818196	51.2577	51.2	
	44 1,2-Dichloroethane	62	5.911	5.908	(0.902)	465771	47.6001	47.6	
	45 Isobutyl Alcohol	43	6.074	6.075	(1.050)	203771	932.927	933	
	46 Methylcyclohexane	83	6.431	6.431	(1.112)	797204	51.5603	51.6	
	47 Trichloroethene	95	6.472	6.473	(0.987)	409566	47.5358	47.5	
*	48 1,4-Difluorobenzene	114	6.556	6.556	(1.000)	1341146	50.0000		
	49 Dibromomethane	93	7.066	7.067	(1.078)	224164	46.6106	46.6	
	50 1,2-Dichloropropane	63	7.210	7.211	(1.100)	421701	49.8761	49.9	
	51 Bromodichloromethane	83	7.332	7.327	(1.118)	502523	49.9952	50.0	
	52 Methyl Methacrylate	41	7.611	7.612	(1.161)	250237	46.0637	46.1	
	53 Ethyl Methacrylate	69	9.331	9.332	(1.423)	473031	45.6531	45.6	
	54 1,4-Dioxane	88	7.634	7.635	(1.164)	81594	1015.54	1020	
M	55 Total Alkylbenzenes	100				13014965	360.358	360	
	56 2-Chloroethylvinylether	63	8.160	8.157	(1.245)	18485	51.5272	51.5	
	57 cis-1,3-dichloropropene	75	8.192	8.189	(1.250)	652279	54.7297	54.7	
$	58 Toluene-D8	98	8.430	8.427	(1.286)	1628021	49.9859	50.0	
	59 Toluene	92	8.494	8.494	(1.296)	1067875	48.0054	48.0	
	60 Tetrachloroethene	164	8.975	8.973	(0.863)	334791	44.3459	44.3	
	61 4-methyl-2-pentanone	43	9.043	9.040	(1.379)	268042	54.3196	54.3	
	62 trans-1,3-Dichloropropene	75	9.065	9.069	(1.383)	550940	53.8149	53.8	
	63 1,1,2-Trichloroethane	83	9.264	9.265	(1.413)	295130	49.7281	49.7	
	64 Dibromochloromethane	129	9.469	9.467	(0.911)	364691	49.7570	49.8	
	65 1,3-Dichloropropane	76	9.595	9.595	(0.923)	633509	49.3725	49.4	
	66 1,2-Dibromoethane	107	9.733	9.733	(1.485)	336951	49.4949	49.5	
	67 2-Hexanone	43	10.118	10.115	(0.973)	165176	42.2691	42.3	
*	68 Chlorobenzene-D5	117	10.397	10.397	(1.000)	1303795	50.0000		
	69 Chlorobenzene	112	10.416	10.417	(1.002)	1142865	47.7570	47.8	
	70 Ethylbenzene	91	10.480	10.481	(1.008)	1999037	49.6904	49.7	
	71 1,1,1,2-Tetrachloroethane	131	10.516	10.519	(1.011)	371358	49.8458	49.8	
	72 m+p-Xylenes	91	10.673	10.673	(1.027)	2992414	103.007	103	
	73 o-Xylene	91	11.186	11.184	(1.076)	1541920	52.7828	52.8	
	74 Styrene	104	11.254	11.254	(1.082)	1284594	54.4765	54.5	
	75 Bromoform	173	11.257	11.257	(1.083)	233120	43.1342	43.1	
	76 Isopropylbenzene	105	11.568	11.569	(0.880)	1952382	51.1074	51.1	
$	77 P-Bromofluorobenzene	95	11.879	11.880	(1.812)	685933	51.2615	51.3	

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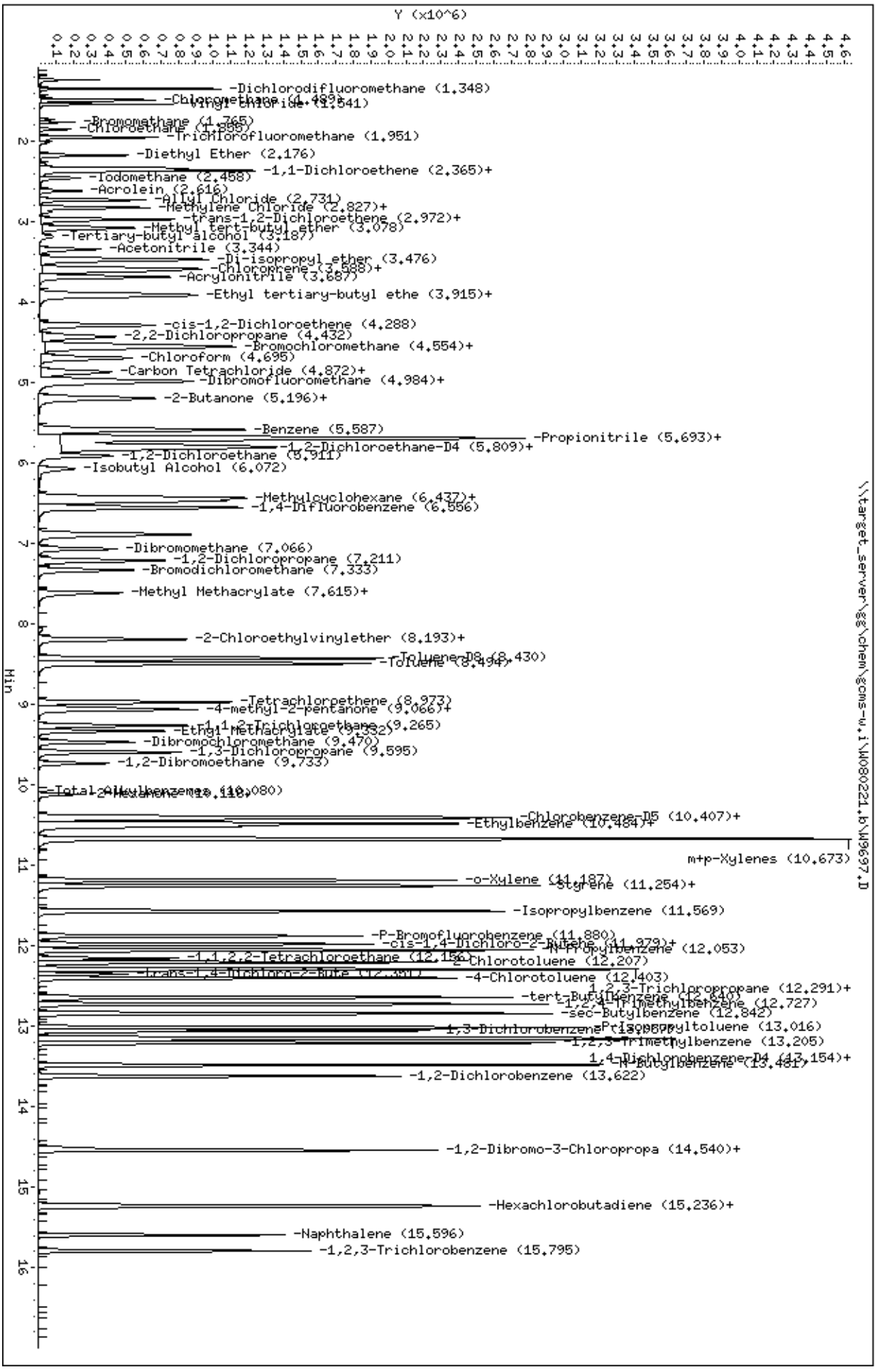
Report Date: 10-Aug-2021 11:24

			QUANT SIG					CONCENTRATIONS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/l)	FINAL (ug/l)	REVIEW CODE
	78	cis-1,4-Dichloro-2-Butene	53	11.988	11.989	(0.912)	107862	50.7960	50.8	
	79	Bromobenzene	156	11.979	11.979	(0.911)	476969	46.9136	46.9	
	80	N-Propylbenzene	91	12.053	12.053	(0.917)	2370078	49.4163	49.4	
	81	1,1,2,2-Tetrachloroethane	83	12.155	12.159	(0.925)	438664	49.3231	49.3	
	82	2-Chlorotoluene	91	12.207	12.207	(0.929)	1410338	48.7154	48.7	
	83	1,2,3-Trichloropropane	75	12.284	12.287	(0.935)	356204	47.2182	47.2	
	84	1,3,5-Trimethylbenzene	105	12.293	12.294	(0.935)	1652267	51.1612	51.2	
	85	trans-1,4-Dichloro-2-Butene	53	12.351	12.352	(0.940)	109806	51.5962	51.6	
	86	4-Chlorotoluene	91	12.402	12.400	(0.944)	1486274	49.4432	49.4	
	87	tert-Butylbenzene	119	12.640	12.640	(0.962)	1435002	49.9779	50.0	
	89	1,2,4-Trimethylbenzene	105	12.726	12.727	(0.968)	1686501	51.2475	51.2	
	90	sec-Butylbenzene	105	12.842	12.843	(0.977)	2207577	51.1947	51.2	
	91	P-Isopropyltoluene	119	13.015	13.016	(0.990)	1879648	53.5919	53.6	
	92	1,3-Dichlorobenzene	146	13.057	13.058	(0.993)	954596	47.7640	47.8	
*	93	1,4-Dichlorobenzene-D4	152	13.144	13.144	(1.000)	755345	50.0000		
	94	1,4-Dichlorobenzene	146	13.160	13.160	(1.001)	978782	46.7287	46.7	
	95	1,2,3-Trimethylbenzene	105	13.205	13.205	(1.005)	1739944	49.1164	49.1	
	96	N-Butylbenzene	91	13.481	13.481	(1.026)	1783892	53.7687	53.8	
M	97	1,2-Dichloroethylene (total)	96				742620	103.790	104	
	98	1,2-Dichlorobenzene	146	13.622	13.622	(1.036)	887359	48.6773	48.7	
	99	1,2-Dibromo-3-Chloropropane	157	14.514	14.511	(1.104)	67611	41.4312	41.4	
	100	1,3,5-Trichlorobenzene	180	14.539	14.540	(1.106)	716015	48.9904	49.0	
	101	Hexachlorobutadiene	225	15.226	15.227	(1.158)	338188	46.7660	46.8	
	102	1,2,4-Trichlorobenzene	180	15.242	15.243	(1.160)	571793	45.7974	45.8	
	103	Naphthalene	128	15.595	15.596	(1.187)	1002855	46.1014	46.1	
	104	1,2,3-Trichlorobenzene	180	15.794	15.795	(1.202)	463329	45.1981	45.2	
M	105	Xylenes (total)	106				4534334	155.790	156	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Client ID:
Sample Info: WG303527-1,SD4723
Purge Volume: 5.0
Column phase: RTX-VMS
Instrument: gcms-w.i
Operator: CR/ES
Column diameter: 0.18
Y (x10^6)
Min
\\target_server\gg\chem\gcms-w.i\W080221.b\W9697.D
-Dichlorodifluoromethane (1.348)
-Chloromethane (1.489)
Vinyl Chloride (1.541)
-Bromomethane (1.765)
-Chloroethane (1.855)
-Trichlorofluoromethane (1.951)
-Diethyl Ether (2.176)
-1,1-Dichloroethene (2.365)+
-Iodomethane (2.458)
-Acrolein (2.616)
-Allyl Chloride (2.731)
-Methylene Chloride (2.827)+
-trans-1,2-Dichloroethene (2.972)+
-Methyl tert-butyl ether (3.078)
-Tertiary-butyl alcohol (3.187)
-Acetonitrile (3.344)
-Di-isopropyl ether (3.476)
-Chloroprene (3.588)+
-Acrylonitrile (3.687)
-Ethyl tertiary-butyl ethe (3.915)+
-cis-1,2-Dichloroethene (4.288)
-2,2-Dichloropropane (4.432)
-Bromochloromethane (4.554)+
-Chloroform (4.695)
-Carbon Tetrachloride (4.872)+
-Dibromofluoromethane (4.984)+
-2-Butanone (5.196)+
-Benzene (5.587)
-Propionitrile (5.693)+
-1,2-Dichloroethane-D4 (5.809)+
-1,2-Dichloroethane (5.911)
-Isobutyl Alcohol (6.072)
-Methylcyclohexane (6.437)+
-1,4-Difluorobenzene (6.556)
-Dibromomethane (7.066)
-1,2-Dichloropropane (7.211)
-Bromodichloromethane (7.333)
-Methyl Methacrylate (7.615)+
-2-Chloroethylvinylether (8.193)+
-Toluene-D8 (8.430)
-Toluene (8.494)
-Tetrachloroethene (8.973)
-4-methyl-2-pentanone (9.066)+
-1,1,2-Trichloroethane (9.265)
-Ethyl Methacrylate (9.332)
-Dibromochloromethane (9.470)
-1,3-Dichloropropane (9.595)
-1,2-Dibromoethane (9.733)
-Total Alkylbenzenes (10.080)
-Chlorobenzene-D5 (10.407)+
-Ethylbenzene (10.484)+
m+p-Xylenes (10.673)
-o-Xylene (11.187)
-Styrene (11.254)+
-Isopropylbenzene (11.569)
-P-Bromofluorobenzene (11.880)
-cis-1,4-Dichloro-2-Butene (11.979)+
-n-Propylbenzene (12.053)
-1,1,2,2-Tetrachloroethane (12.150)
-2-Chlorotoluene (12.207)
-4-Chlorotoluene (12.403)
-1,2,3-Trichloropropane (12.291)+
-tert-Butylbenzene (12.540)
-1,2,4-Trimethylbenzene (12.727)
-sec-Butylbenzene (12.842)
-1,3-Dichlorobenzene
-p-Isopropyltoluene (13.016)
-1,2,3-Trimethylbenzene (13.205)
-n-Butylbenzene (13.481)
-1,2-Dichlorobenzene (13.622)
-1,2-Dibromo-3-Chloropropa (14.540)+
-Hexachlorobutadiene (15.236)+
-Naphthalene (15.596)
-1,2,3-Trichlorobenzene (15.795)

Katahdin
ANALYTICAL SERVICES

MS/MSD Recovery Report

MS ID: WG303684-14
MSD ID: WG303684-15
Sample ID: SO4723-1
Client ID: MW-01-SUMMER2021
SDG: SO4723
MS File ID: T2700.D

Extract Date: 04-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303684
Report Date: 10-AUG-21
MSD File ID: T2701.D

Analysis Date: 04-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
Chloromethane	50.0	50.0	ug/L	U1.0	57.8	58.2	116.	116.	1	20	50-139
Vinyl Chloride	50.0	50.0	ug/L	U1.0	59.4	61.1	119.	122.	3	20	58-137
Bromomethane	50.0	50.0	ug/L	U1.0	54.3	53.3	109.	107.	2	20	53-141
Chloroethane	50.0	50.0	ug/L	U1.0	59.4	59.8	119.	120.	1	20	60-138
1,1-Dichloroethene	50.0	50.0	ug/L	U0.50	53.8	54.8	108.	110.	2	20	71-131
Carbon Disulfide	50.0	50.0	ug/L	U0.50	63.7	64.4	127.	129.	1	20	64-133
Methylene Chloride	50.0	50.0	ug/L	U2.5	52.4	54.2	105.	108.	3	20	74-124
Acetone	50.0	50.0	ug/L	UL2.5	46.8	50.3	93.6	101.	7	20	39-160
trans-1,2-Dichloroethene	50.0	50.0	ug/L	U0.50	40.9	40.7	81.8	81.4	0	20	75-124
1,1-Dichloroethane	50.0	50.0	ug/L	U0.50	54.6	56.4	109.	113.	3	20	77-125
cis-1,2-Dichloroethene	50.0	50.0	ug/L	U0.50	53.0	54.0	106.	108.	2	20	78-123
Chloroform	50.0	50.0	ug/L	U0.50	52.0	52.9	104.	106.	2	20	79-124
Carbon Tetrachloride	50.0	50.0	ug/L	U0.50	54.6	55.0	109.	110.	1	20	72-136
1,1,1-Trichloroethane	50.0	50.0	ug/L	U0.50	54.1	55.0	108.	110.	2	20	74-131
2-Butanone	50.0	50.0	ug/L	UL2.5	47.8	50.4	95.6	101.	5	20	56-143
Benzene	50.0	50.0	ug/L	U0.50	56.1	56.0	112.	112.	0	20	79-120
1,2-Dichloroethane	50.0	50.0	ug/L	U0.50	53.8	54.1	108.	108.	0	20	73-128
Trichloroethene	50.0	50.0	ug/L	U0.50	56.6	56.6	113.	113.	0	20	79-123
1,2-Dichloropropane	50.0	50.0	ug/L	U0.50	55.1	54.8	110.	110.	0	20	78-122
Bromodichloromethane	50.0	50.0	ug/L	U0.50	55.3	55.2	111.	110.	0	20	79-125
cis-1,3-Dichloropropene	50.0	50.0	ug/L	U0.50	54.4	54.5	109.	109.	0	20	75-124
Toluene	50.0	50.0	ug/L	U0.50	56.1	56.0	112.	112.	0	20	80-121
4-Methyl-2-Pentanone	50.0	50.0	ug/L	U2.5	54.2	54.6	108.	109.	1	20	67-130
Tetrachloroethene	50.0	50.0	ug/L	U0.50	52.6	51.9	105.	104.	1	20	74-129
trans-1,3-Dichloropropene	50.0	50.0	ug/L	U0.50	55.6	56.1	111.	112.	1	20	73-127
1,1,2-Trichloroethane	50.0	50.0	ug/L	U0.50	54.7	54.8	109.	110.	0	20	80-119
Dibromochloromethane	50.0	50.0	ug/L	U0.50	53.3	54.4	107.	109.	2	20	74-126
2-Hexanone	50.0	50.0	ug/L	U2.5	49.0	50.0	98.0	100.	2	20	57-139
Chlorobenzene	50.0	50.0	ug/L	U0.50	54.7	55.4	109.	111.	1	20	82-118
Ethylbenzene	50.0	50.0	ug/L	U0.50	56.0	56.7	112.	113.	1	20	79-121
Xylenes (Total)	150.	150.	ug/L	U1.5	166.	169.	111.	113.	2	20	79-121
m+p-Xylenes	100.	100.	ug/L	U1.0	111.	113.	111.	113.	2	20	80-121
o-Xylene	50.0	50.0	ug/L	U0.50	55.2	55.5	110.	111.	0	20	78-122
Styrene	50.0	50.0	ug/L	U0.50	57.0	58.0	114.	116.	2	20	78-123
Bromoform	50.0	50.0	ug/L	U0.50	49.0	49.6	98.0	99.2	1	20	66-130

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ANALYTICAL SERVICES

MS/MSD Recovery Report

MS ID: WG303684-14
MSD ID: WG303684-15
Sample ID: SO4723-1
Client ID: MW-01-SUMMER2021
SDG: SO4723
MS File ID: T2700.D

Extract Date: 04-AUG-21
Extracted By: HG
Extraction Method: SW846 5030
Lab Prep Batch: WG303684
Report Date: 10-AUG-21
MSD File ID: T2701.D

Analysis Date: 04-AUG-21
Analyst: HG
Analysis Method: SW846 8260C
Matrix: AQ
% Solids: NA

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
1,1,2,2-Tetrachloroethane	50.0	50.0	ug/L	U0.50	58.0	57.4	116.	115.	1	20	71-121
P-Bromofluorobenzene							102.	99.6			85-114
Toluene-d8							101.	99.5			89-112
1,2-Dichloroethane-d4							99.4	101.			81-118
Dibromofluoromethane							102.	102.			80-119

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Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2700.D
Report Date: 10-Aug-2021 11:00

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-t.i\T080421.b\T2700.D
Lab Smp Id: WG303684-14
Inj Date : 04-AUG-2021 18:03
Operator : HG   Inst ID: gcms-t.i
Smp Info : WG303684-14,SO4723
Misc Info : WG303684,WG303684-4,SO4723-1
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-t.i\T080421.b\T8A05(66)D.m
Meth Date : 10-Aug-2021 10:55 croy   Quant Type: ISTD
Cal Date : 04-AUG-2021 12:24   Cal File: T2690.D
Als bottle: 19   QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.225	1.226	(0.231)	272415	62.7215	62.7	
2	Chloromethane	50	1.352	1.353	(0.255)	256643	57.7841	57.8	
3	Vinyl chloride	62	1.397	1.398	(0.264)	195759	59.4201	59.4	
4	Bromomethane	94	1.599	1.600	(0.302)	59960	54.3450	54.3	
5	Chloroethane	64	1.678	1.678	(0.317)	82059	59.4107	59.4	
6	Trichlorofluoromethane	101	1.768	1.768	(0.334)	260455	62.8819	62.9	
7	Diethyl Ether	59	1.970	1.970	(0.372)	108972	53.1909	53.2	
8	1,1-Dichloroethene	96	2.112	2.113	(0.399)	126084	53.7557	53.8	
9	Freon-113	151	2.138	2.138	(0.403)	91729	52.9065	52.9	
10	Carbon Disulfide	76	2.142	2.142	(0.404)	383206	63.7068	63.7	
11	Iodomethane	142	2.224	2.225	(0.420)	123829	54.2856	54.3	
12	Acrolein	56	2.366	2.367	(0.447)	54257	254.522	254	
13	Allyl Chloride	41	2.467	2.468	(0.466)	215391	53.2663	53.3	
14	Methylene Chloride	84	2.553	2.554	(0.482)	134193	52.3872	52.4	
15	Acetone	43	2.598	2.599	(0.490)	42761	46.7815	46.8	
16	trans-1,2-Dichloroethene	96	2.684	2.685	(0.507)	143528	40.9045	40.9	
17	Methyl Acetate	43	2.703	2.704	(0.510)	108054	38.6280	38.6	
18	Methyl tert-butyl ether	73	2.782	2.782	(0.525)	574027	55.6705	55.7	
19	Tertiary-butyl alcohol	59	2.875	2.876	(0.543)	74713	215.791	216	
20	Acetonitrile	41	3.014	3.018	(0.569)	220134	493.500	494	
21	Di-isopropyl ether	45	3.134	3.134	(0.591)	669549	53.5933	53.6	
22	Chloroprene	53	3.235	3.235	(0.610)	326117	55.4328	55.4	
23	1,1-Dichloroethane	63	3.264	3.261	(0.616)	386946	54.6268	54.6	

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2700.D
Report Date: 10-Aug-2021 11:00

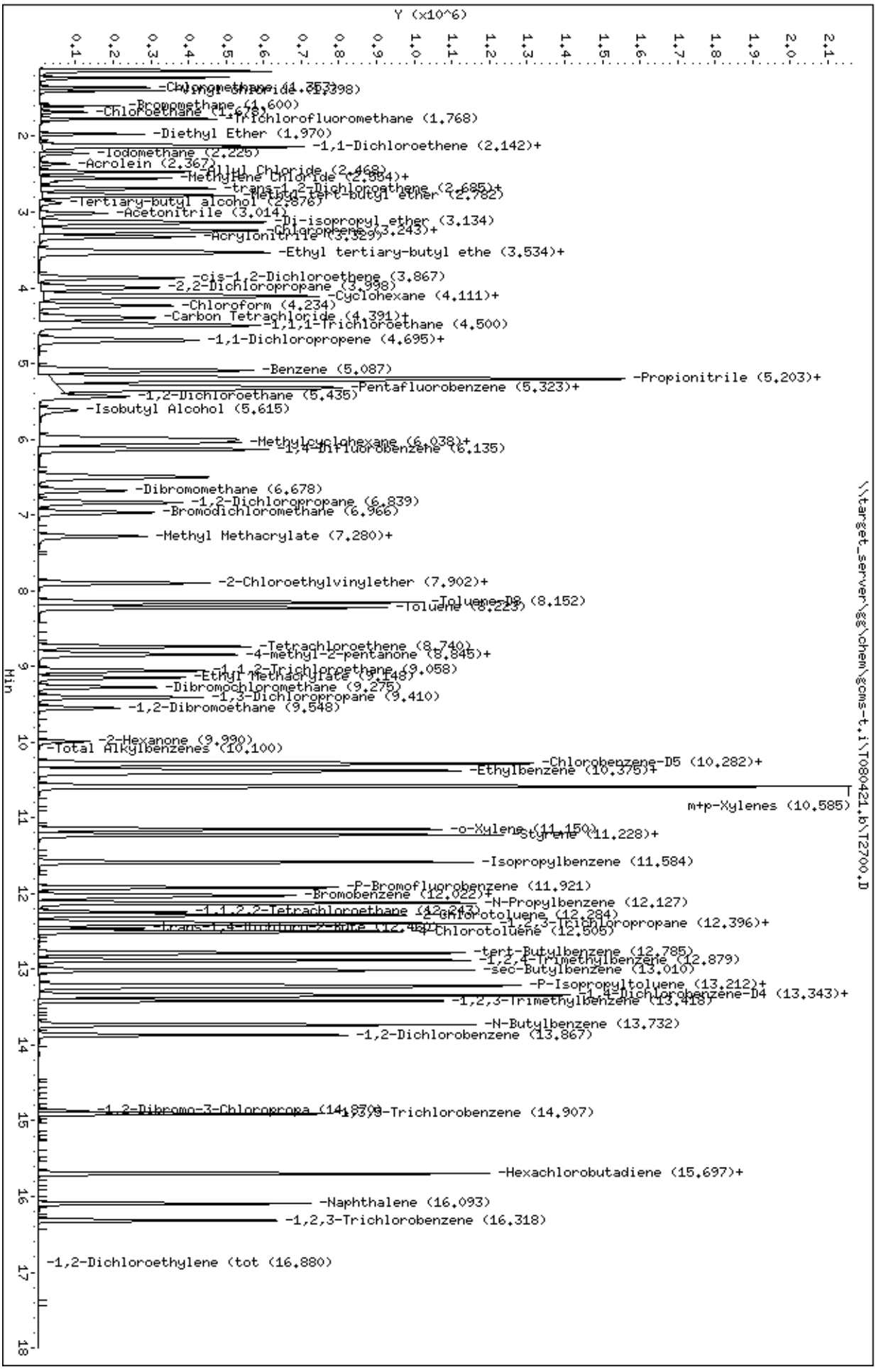
		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
	24	Acrylonitrile	52	3.328	3.325	(0.628)	289320	263.301	263	
	25	Ethyl tertiary-butyl ether	59	3.523	3.523	(0.665)	577078	52.4529	52.4	
	26	Vinyl Acetate	43	3.545	3.542	(0.578)	500546	59.2674	59.3	
	27	cis-1,2-Dichloroethene	96	3.867	3.868	(0.730)	217042	52.9632	53.0	
	28	2,2-Dichloropropane	77	3.998	3.999	(0.754)	298248	51.7367	51.7	
	29	Cyclohexane	56	4.103	4.099	(0.774)	358991	60.4316	60.4	
	30	Bromochloromethane	128	4.118	4.118	(0.777)	104124	60.7174	60.7	
	31	Chloroform	83	4.234	4.234	(0.799)	383188	52.0319	52.0	
	32	Carbon Tetrachloride	117	4.395	4.395	(0.716)	297896	54.6234	54.6	
	33	Tetrahydrofuran	42	4.455	4.451	(0.840)	54283	43.6882	43.7	
$	34	Dibromofluoromethane	113	4.488	4.489	(0.847)	237709	50.8919	50.9	
	35	1,1,1-Trichloroethane	97	4.499	4.496	(0.849)	364944	54.0625	54.1	
	36	1,1-Dichloropropene	75	4.687	4.691	(0.764)	300515	56.7213	56.7	
	37	2-Butanone	43	4.702	4.698	(0.887)	83512	47.8115	47.8	
	38	Benzene	78	5.087	5.091	(0.829)	824693	56.1246	56.1	
	39	Propionitrile	54	5.169	5.177	(0.975)	243797	516.141	516	
	40	Methacrylonitrile	41	5.207	5.200	(0.982)	1242989	544.478	544	
*	41	Pentafluorobenzene	168	5.300	5.301	(1.000)	430622	50.0000		
$	42	1,2-Dichloroethane-D4	65	5.326	5.323	(1.005)	278235	49.7082	49.7	
	43	Tertiary-amyl methyl ether	73	5.338	5.335	(1.007)	505194	51.6531	51.6	
	44	1,2-Dichloroethane	62	5.435	5.439	(0.886)	283656	53.8100	53.8	
	45	Isobutyl Alcohol	43	5.611	5.619	(1.059)	118817	890.782	891	
	46	Methylcyclohexane	83	6.000	5.997	(1.132)	344824	55.3315	55.3	
	47	Trichloroethene	95	6.045	6.042	(0.985)	212921	56.6030	56.6	
*	48	1,4-Difluorobenzene	114	6.135	6.132	(1.000)	715890	50.0000		
	49	Dibromomethane	93	6.677	6.682	(1.088)	125768	52.6478	52.6	
	50	1,2-Dichloropropane	63	6.838	6.832	(1.115)	194928	55.0726	55.1	
	51	Bromodichloromethane	83	6.969	6.966	(1.136)	278078	55.2652	55.3	
	52	Methyl Methacrylate	41	7.280	7.277	(1.187)	167383	54.2021	54.2	
	53	1,4-Dioxane	88	7.284	7.284	(1.187)	35674	910.635	911	
	54	2-Chloroethylvinylether	63	7.897	7.876	(1.287)	1623	0.80390	0.80(aR)	
	55	cis-1,3-dichloropropene	75	7.901	7.898	(1.288)	323151	54.3701	54.4	
$	56	Toluene-D8	98	8.152	8.153	(1.329)	820380	50.5273	50.5	
	57	Toluene	92	8.219	8.220	(1.340)	512564	56.1230	56.1	
	58	Tetrachloroethene	164	8.739	8.736	(0.851)	161509	52.5789	52.6	
	59	4-methyl-2-pentanone	43	8.825	8.822	(1.439)	173025	54.2456	54.2	
	60	trans-1,3-Dichloropropene	75	8.848	8.849	(1.442)	295998	55.5848	55.6	
	61	1,1,2-Trichloroethane	83	9.057	9.054	(1.476)	146954	54.6779	54.7	
	62	Ethyl Methacrylate	69	9.147	9.148	(1.491)	238175	57.9829	58.0	
	63	Dibromochloromethane	129	9.275	9.275	(0.903)	197320	53.3329	53.3	
	64	1,3-Dichloropropane	76	9.409	9.410	(0.916)	309039	53.0426	53.0	
	65	1,2-Dibromoethane	107	9.551	9.548	(1.557)	181822	55.3506	55.4	
M	66	Total Alkylbenzenes	100				5377340	405.076	405	
	67	2-Hexanone	43	9.989	9.986	(0.972)	110275	49.0045	49.0	
*	68	Chlorobenzene-D5	117	10.274	10.274	(1.000)	623961	50.0000		
	69	Chlorobenzene	112	10.292	10.293	(1.002)	540943	54.6692	54.7	
	70	Ethylbenzene	91	10.375	10.372	(1.010)	940105	55.9748	56.0	
	71	1,1,1,2-Tetrachloroethane	131	10.408	10.409	(1.013)	190137	56.4850	56.5	
	72	m+p-Xylenes	91	10.584	10.585	(1.030)	1422522	111.340	111	
	73	o-Xylene	91	11.149	11.150	(1.085)	717020	55.2063	55.2	
	74	Styrene	104	11.228	11.229	(1.093)	566718	56.9610	57.0	
	75	Bromoform	173	11.221	11.221	(1.092)	118228	48.9543	49.0	
	76	Isopropylbenzene	105	11.584	11.584	(0.869)	892729	57.5840	57.6	
$	77	P-Bromofluorobenzene	95	11.920	11.921	(1.943)	300286	50.9691	51.0	

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2700.D
Report Date: 10-Aug-2021 11:00

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
	78 Bromobenzene	156	12.025	12.022	(0.902)	198172	55.3292	55.3	
	79 cis-1,4-Dichloro-2-Butene	53	12.051	12.052	(0.904)	64971	54.7534	54.8	
	80 N-Propylbenzene	91	12.122	12.123	(0.909)	1042431	57.0423	57.0	
	81 1,1,2,2-Tetrachloroethane	83	12.242	12.243	(0.918)	220379	58.0523	58.0	
	82 2-Chlorotoluene	91	12.283	12.284	(0.921)	610253	56.0542	56.0	
	83 1,2,3-Trichloropropane	75	12.377	12.378	(0.928)	178159	54.3563	54.4	
	84 1,3,5-Trimethylbenzene	105	12.399	12.400	(0.930)	696592	57.7439	57.7	
	85 trans-1,4-Dichloro-2-Butene	53	12.459	12.460	(0.934)	64664	54.4949	54.5	
	86 4-Chlorotoluene	91	12.504	12.505	(0.938)	639353	56.2565	56.2	
	87 tert-Butylbenzene	119	12.785	12.785	(0.959)	596759	56.4147	56.4	
	89 1,2,4-Trimethylbenzene	105	12.878	12.879	(0.966)	697087	56.7786	56.8	
	90 sec-Butylbenzene	105	13.009	13.010	(0.976)	897555	58.1817	58.2	
	91 P-Isopropyltoluene	119	13.211	13.212	(0.991)	753857	59.6729	59.7	
	92 1,3-Dichlorobenzene	146	13.238	13.238	(0.993)	364649	55.5000	55.5	
*	93 1,4-Dichlorobenzene-D4	152	13.335	13.336	(1.000)	279294	50.0000		
	94 1,4-Dichlorobenzene	146	13.354	13.354	(1.001)	374257	54.1478	54.1	
	95 1,2,3-Trimethylbenzene	105	13.413	13.414	(1.006)	667372	54.5452	54.5	
	96 N-Butylbenzene	91	13.732	13.736	(1.030)	693059	59.2419	59.2	
	97 1,2-Dichlorobenzene	146	13.866	13.867	(1.040)	336968	55.4012	55.4	
	98 1,2-Dibromo-3-Chloropropane	157	14.869	14.874	(1.115)	36954	52.1973	52.2	
	99 1,3,5-Trichlorobenzene	180	14.907	14.907	(1.118)	239001	53.8841	53.9	
	100 Hexachlorobutadiene	225	15.692	15.693	(1.177)	104256	55.3468	55.3	
	101 1,2,4-Trichlorobenzene	180	15.700	15.701	(1.177)	216443	56.9253	56.9	
	102 Naphthalene	128	16.093	16.094	(1.207)	553864	52.8216	52.8	
M	103 1,2-Dichloroethylene (total)	96				360570	93.8677	93.9	
	104 1,2,3-Trichlorobenzene	180	16.317	16.318	(1.224)	193772	56.5339	56.5	
M	105 Xylenes (total)	91				2139542	166.546	166	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.



Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2700.D
Date : 04-AUG-2021 18:03
Client ID:
Sample Info: WG303684-14,S04723
Purge Volume: 5.0
Column phase: RTX-VMS

Instrument: gcms-t.i
Operator: HG
Column diameter: 0.18

\\target_server\gg\chem\gcms-t.i\T080421.b\T2700.D

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2701.D
Report Date: 10-Aug-2021 11:01

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-t.i\T080421.b\T2701.D
Lab Smp Id: WG303684-15
Inj Date : 04-AUG-2021 18:35
Operator : HG   Inst ID: gcms-t.i
Smp Info : WG303684-15,SO4723
Misc Info : WG303684,WG303684-4,SO4723-1
Comment   : SW846 5030
Method   : \\target_server\gg\chem\gcms-t.i\T080421.b\T8A05(66)D.m
Meth Date : 10-Aug-2021 10:55 croy   Quant Type: ISTD
Cal Date : 04-AUG-2021 12:24   Cal File: T2690.D
Als bottle: 20   QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12
Processing Host: VOA-WS

Concentration Formula: Amt * DF * 5/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	5.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	FINAL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.225	1.226	(0.231)	264462	62.9899	63.0	
2	Chloromethane	50	1.352	1.353	(0.255)	250089	58.2500	58.2	
3	Vinyl chloride	62	1.401	1.398	(0.264)	194554	61.0905	61.1	
4	Bromomethane	94	1.599	1.600	(0.302)	56885	53.3357	53.3	
5	Chloroethane	64	1.678	1.678	(0.316)	79805	59.7710	59.8	
6	Trichlorofluoromethane	101	1.768	1.768	(0.333)	250551	62.5765	62.6	
7	Diethyl Ether	59	1.970	1.970	(0.371)	114285	57.7078	57.7	
8	1,1-Dichloroethene	96	2.116	2.113	(0.399)	124346	54.8426	54.8	
9	Freon-113	151	2.142	2.138	(0.404)	95192	56.7969	56.8	
10	Carbon Disulfide	76	2.142	2.142	(0.404)	374455	64.3984	64.4	
11	Iodomethane	142	2.224	2.225	(0.419)	125871	57.0834	57.1	
12	Acrolein	56	2.370	2.367	(0.447)	53888	261.507	262	
13	Allyl Chloride	41	2.471	2.468	(0.466)	217374	55.6102	55.6	
14	Methylene Chloride	84	2.557	2.554	(0.482)	134206	54.1987	54.2	
15	Acetone	43	2.606	2.599	(0.491)	44506	50.3463	50.3	
16	trans-1,2-Dichloroethene	96	2.688	2.685	(0.507)	138147	40.7285	40.7	
17	Methyl Acetate	43	2.703	2.704	(0.510)	101775	37.6379	37.6	
18	Methyl tert-butyl ether	73	2.782	2.782	(0.525)	423809	42.5192	42.5	
19	Tertiary-butyl alcohol	59	2.875	2.876	(0.542)	91177	272.424	272	
20	Acetonitrile	41	3.021	3.018	(0.570)	247975	575.083	575	
21	Di-isopropyl ether	45	3.134	3.134	(0.591)	686069	56.8091	56.8	
22	Chloroprene	53	3.235	3.235	(0.610)	329846	57.9999	58.0	
23	1,1-Dichloroethane	63	3.265	3.261	(0.616)	386320	56.4189	56.4	

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2701.D
Report Date: 10-Aug-2021 11:01

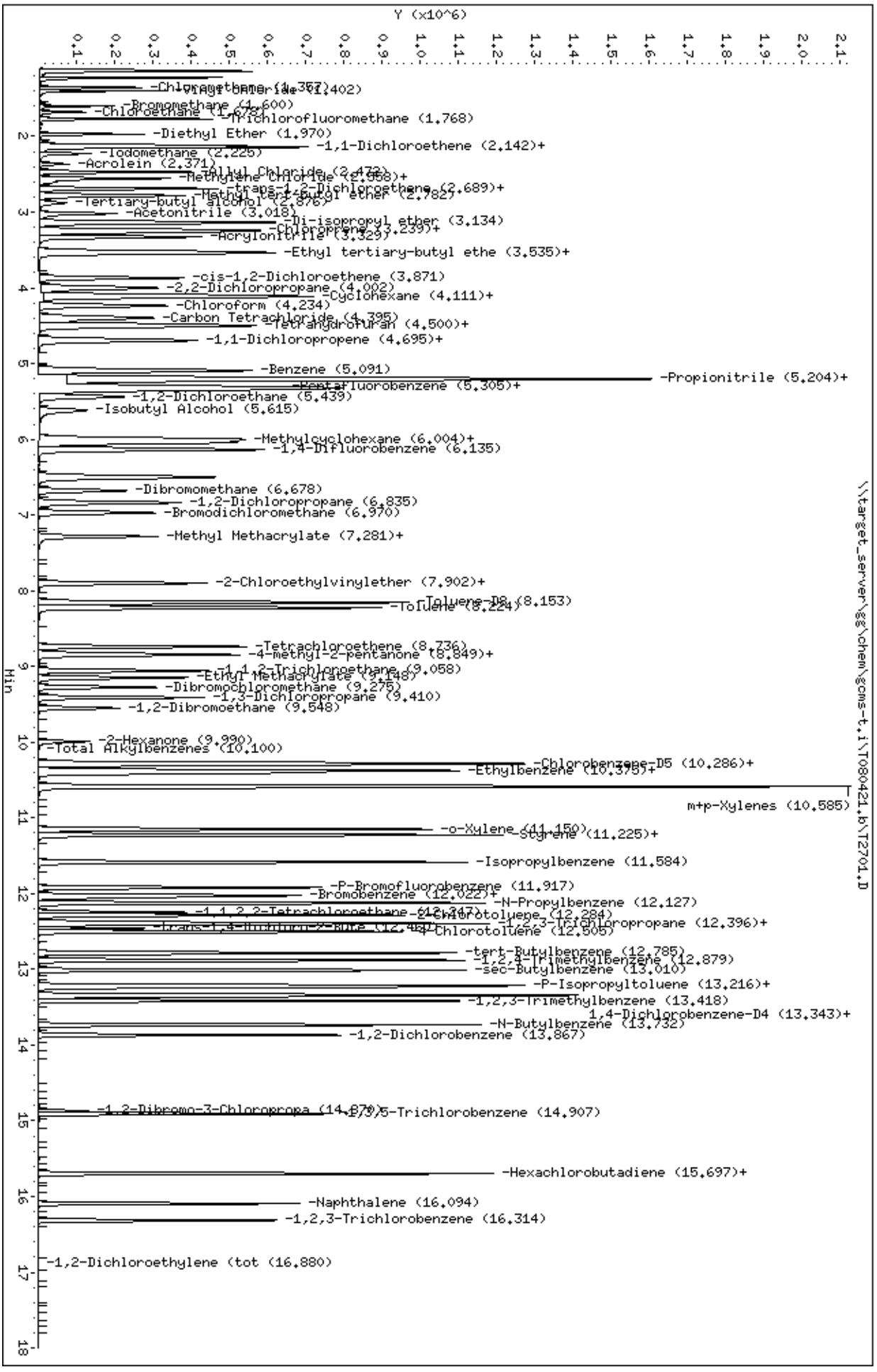
		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
	24	Acrylonitrile	52	3.328	3.325	(0.628)	304520	286.690	287	
	25	Ethyl tertiary-butyl ether	59	3.523	3.523	(0.664)	588412	55.3272	55.3	
	26	Vinyl Acetate	43	3.545	3.542	(0.578)	484192	58.4406	58.4	
	27	cis-1,2-Dichloroethene	96	3.871	3.868	(0.730)	213999	54.0212	54.0	
	28	2,2-Dichloropropane	77	4.002	3.999	(0.754)	289426	51.9374	51.9	
	29	Cyclohexane	56	4.107	4.099	(0.774)	347031	60.4325	60.4	
	30	Bromochloromethane	128	4.122	4.118	(0.777)	102270	61.6925	61.7(R)	
	31	Chloroform	83	4.238	4.234	(0.799)	376399	52.8724	52.9	
	32	Carbon Tetrachloride	117	4.399	4.395	(0.717)	294402	55.0276	55.0	
	33	Tetrahydrofuran	42	4.458	4.451	(0.841)	54181	45.1097	45.1	
$	34	Dibromofluoromethane	113	4.492	4.489	(0.847)	229713	50.8757	50.9	
	35	1,1,1-Trichloroethane	97	4.503	4.496	(0.849)	358999	55.0155	55.0	
	36	1,1-Dichloropropene	75	4.687	4.691	(0.764)	296606	57.0671	57.1	
	37	2-Butanone	43	4.709	4.698	(0.888)	85200	50.4597	50.4	
	38	Benzene	78	5.091	5.091	(0.830)	807867	56.0436	56.0	
	39	Propionitrile	54	5.177	5.177	(0.976)	258032	565.113	565	
	40	Methacrylonitrile	41	5.203	5.200	(0.981)	1269315	575.181	575	
*	41	Pentafluorobenzene	168	5.304	5.301	(1.000)	416269	50.0000		
$	42	1,2-Dichloroethane-D4	65	5.330	5.323	(1.005)	272742	50.4070	50.4	
	43	Tertiary-amyl methyl ether	73	5.338	5.335	(1.006)	511415	54.0921	54.1	
	44	1,2-Dichloroethane	62	5.439	5.439	(0.887)	280018	54.1480	54.1	
	45	Isobutyl Alcohol	43	5.615	5.619	(1.059)	143221	1110.76	1110	
	46	Methylcyclohexane	83	5.997	5.997	(1.131)	350990	58.2628	58.3	
	47	Trichloroethene	95	6.045	6.042	(0.985)	208714	56.5585	56.6	
*	48	1,4-Difluorobenzene	114	6.135	6.132	(1.000)	702297	50.0000		
	49	Dibromomethane	93	6.674	6.682	(1.088)	123483	52.6918	52.7	
	50	1,2-Dichloropropane	63	6.835	6.832	(1.114)	190234	54.7867	54.8	
	51	Bromodichloromethane	83	6.966	6.966	(1.135)	272359	55.1763	55.2	
	52	Methyl Methacrylate	41	7.280	7.277	(1.187)	170651	56.3299	56.3	
	53	1,4-Dioxane	88	7.295	7.284	(1.189)	45050	1172.23	1170	
	54	2-Chloroethylvinylether	63	7.901	7.876	(1.288)	1586	0.80078	0.80(aR)	
	55	cis-1,3-dichloropropene	75	7.901	7.898	(1.288)	317934	54.5277	54.5	
$	56	Toluene-D8	98	8.152	8.153	(1.329)	792511	49.7556	49.8	
	57	Toluene	92	8.223	8.220	(1.340)	502249	56.0579	56.0	
	58	Tetrachloroethene	164	8.736	8.736	(0.850)	154218	51.9369	51.9	
	59	4-methyl-2-pentanone	43	8.826	8.822	(1.439)	170840	54.5973	54.6	
	60	trans-1,3-Dichloropropene	75	8.848	8.849	(1.442)	293004	56.0876	56.1	
	61	1,1,2-Trichloroethane	83	9.054	9.054	(1.476)	144422	54.7758	54.8	
	62	Ethyl Methacrylate	69	9.147	9.148	(1.491)	239083	59.3305	59.3	
	63	Dibromochloromethane	129	9.275	9.275	(0.903)	194529	54.3920	54.4	
	64	1,3-Dichloropropane	76	9.409	9.410	(0.916)	299971	53.2619	53.3	
	65	1,2-Dibromoethane	107	9.548	9.548	(1.556)	177464	55.0696	55.1	
M	66	Total Alkylbenzenes	100				5260990	405.798	406	
	67	2-Hexanone	43	9.989	9.986	(0.972)	108880	50.0534	50.0	
*	68	Chlorobenzene-D5	117	10.274	10.274	(1.000)	603158	50.0000		
	69	Chlorobenzene	112	10.293	10.293	(1.002)	530181	55.4296	55.4	
	70	Ethylbenzene	91	10.375	10.372	(1.010)	920726	56.7118	56.7	
	71	1,1,1,2-Tetrachloroethane	131	10.409	10.409	(1.013)	187478	57.6160	57.6	
	72	m+p-Xylenes	91	10.584	10.585	(1.030)	1400493	113.396	113	
	73	o-Xylene	91	11.150	11.150	(1.085)	696870	55.5055	55.5	
	74	Styrene	104	11.228	11.229	(1.093)	557965	58.0154	58.0	
	75	Bromoform	173	11.224	11.221	(1.093)	115681	49.5517	49.6	
	76	Isopropylbenzene	105	11.584	11.584	(0.868)	868579	57.3747	57.4	
$	77	P-Bromofluorobenzene	95	11.917	11.921	(1.942)	287833	49.8009	49.8	

Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2701.D
Report Date: 10-Aug-2021 11:01

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/l)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
	78 Bromobenzene	156	12.022	12.022	(0.901)	192518	55.0442	55.0	
	79 cis-1,4-Dichloro-2-Butene	53	12.051	12.052	(0.903)	66987	57.8110	57.8	
	80 N-Propylbenzene	91	12.126	12.123	(0.909)	1018933	57.0984	57.1	
	81 1,1,2,2-Tetrachloroethane	83	12.246	12.243	(0.918)	212831	57.4134	57.4	
	82 2-Chlorotoluene	91	12.283	12.284	(0.921)	593173	55.7967	55.8	
	83 1,2,3-Trichloropropane	75	12.373	12.378	(0.928)	175022	54.6844	54.7	
	84 1,3,5-Trimethylbenzene	105	12.399	12.400	(0.930)	678536	57.6009	57.6	
	85 trans-1,4-Dichloro-2-Butene	53	12.459	12.460	(0.934)	65424	56.4623	56.5	
	86 4-Chlorotoluene	91	12.504	12.505	(0.937)	611412	55.0928	55.1	
	87 tert-Butylbenzene	119	12.785	12.785	(0.958)	588634	56.9859	57.0	
	89 1,2,4-Trimethylbenzene	105	12.882	12.879	(0.966)	683991	57.0527	57.0	
	90 sec-Butylbenzene	105	13.009	13.010	(0.975)	883044	58.6187	58.6	
	91 P-Isopropyltoluene	119	13.212	13.212	(0.990)	740910	60.0596	60.0	
	92 1,3-Dichlorobenzene	146	13.238	13.238	(0.992)	360089	56.1250	56.1	
*	93 1,4-Dichlorobenzene-D4	152	13.339	13.336	(1.000)	272730	50.0000		
	94 1,4-Dichlorobenzene	146	13.354	13.354	(1.001)	365019	54.0822	54.1	
	95 1,2,3-Trimethylbenzene	105	13.417	13.414	(1.006)	678304	56.7730	56.8	
	96 N-Butylbenzene	91	13.732	13.736	(1.029)	666942	58.3815	58.4	
	97 1,2-Dichlorobenzene	146	13.866	13.867	(1.040)	330744	55.6866	55.7	
	98 1,2-Dibromo-3-Chloropropane	157	14.869	14.874	(1.115)	36159	52.3036	52.3	
	99 1,3,5-Trichlorobenzene	180	14.907	14.907	(1.118)	242838	56.0669	56.1	
	100 Hexachlorobutadiene	225	15.693	15.693	(1.176)	102746	55.8579	55.8	
	101 1,2,4-Trichlorobenzene	180	15.700	15.701	(1.177)	214014	57.6411	57.6	
	102 Naphthalene	128	16.093	16.094	(1.206)	530952	51.8552	51.8	
M	103 1,2-Dichloroethylene (total)	96				352146	94.7497	94.7	
	104 1,2,3-Trichlorobenzene	180	16.314	16.318	(1.223)	191327	57.1640	57.2	
M	105 Xylenes (total)	91				2097363	168.902	169	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
R - Spike/Surrogate failed recovery limits.



Data File: \\target_server\gg\chem\gcms-t.i\T080421.b\T2701.D
Date : 04-AUG-2021 18:35
Client ID:
Sample Info: WG303684-15,S04723
Purge Volume: 5.0
Column phase: RTX-VMS

Instrument: gcms-t.i
Operator: HG
Column diameter: 0.18

Logbooks and Supporting Documents

KATAHDIN ANALYTICAL SERVICES

GCMS-T INSTRUMENT RUNLOG WG

7:30

DATE/TIME OF BFB INJECTION: 08-04-21

Method - Check One:	8260 ✓	8260 - 10 mL	8260 SIM	624	524
STD IDs: * BFB STD: V2269	CAL STD: V2258	GAS STD: V2279 6	XTRAs STD: V2282	LCS/MS STD: V2278	
SURR STD: V2275	IS STD: V2275				

SAMPLE NAME	DATAFILE	DF	ALS #	METHOD	Prep Method 5030	5035	1311	Criteria KAS	DoD	QAPP	Y/N	ANALYST	pH	TRC	COMMENTS
WG303684-11	TB535	—	—	VOAPrep	✓						Y	CS	N/A	N/A	
Rinse	TB582	1	1	TBA05(de)							—				
Vstd 001 -1	83	1	2								Y				
005 -2	84	1	3								Y				
020 -3	85	1	4								Y				Curve OK except Chloroethane 7100
050 -4	86	1	5								Y				
075 -7	87	1	6								Y				
100 -5	88	1	7								Y				
150	89	1	8								N				
150 -6	90	1	9								Y				
LCS/Ind -9/8	91	1	10								Y				Ind "A" OK
VBlank	92	1	11								N				
VBlank -10	93	1	12								Y				
MeOH Blank -13	94	1	13								✓		↓		(800uL MeOH)
SQ4723-7DM B	95	1	14						5.1		Y		12		
-6DM B	96	1	15								Y				
-4DM B	97	1	16								Y				
-1DM F	98	1	17						↓		Y				
SQ4720-2DM A	99	1	18			✓	✓				Y		N/A		(20uL MeOH)
SQ4723-1MSDM G	T7700	1	19						5.1		Y		12		
↓ -1MSDDM H	01	1	20						↓		Y		↓		
CCV	02	1	21								Y		N/A		11:08
CCV	03	1	22								N				max need
CCV	04	1	23								N				✓
Rinse	05	1	24	↓	↓						—	↓	↓	↓	
															SD 8-C-21

* Refer to page 1 for standard preparation instructions.

Katahdin Analytical Services 1000258

WG

GCMS-T INSTRUMENT RUNLOG

KATAHDIN ANALYTICAL SERVICES

DATE/TIME OF BFB INJECTION: 8-5-21 1711

Method - Check One:	8260	8260 - 10 mL	8260 SIM	624	524
STD IDs: * BFB STD: V2265	CAL STD: V2251	GAS STD: V2275B	XTRAs STD: V2252	LCS/MS STD: V2275	
SURR STD: V2275	IS STD:				

SAMPLE NAME	DATAFILE	DF	ALS #	METHOD	Prep Method 5030	Prep Method 5035	Prep Method 1311	Criteria KAS	Criteria DoD	Criteria QAPP	Y/N	ANALYST	pH	TRC	COMMENTS
WG39[illegible]-3	[illegible]	—	—	V-[illegible]	✓						Y	[illegible]			
VstBlo	T2277	1	1	TPH-D(46)							Y	[illegible]	N/A	N/A	
4	-8		2								Y				Bot Blank
LCS - 1	-9		3								Y				
LCSD - 6	10		4								Y				
VBlkA	11		5								Y				
VB-2	12		6								N				targ-V hits
MeOHBlk-7	13		7								Y				
So4723-9B	14		9								Y		✓		8oonl Meoh
So3404-20LA	15		5						5.6		Y		42		
✓ -30LA	16		10						5.1		Y				Dbnl Meoh
So4723-23 AA	17		11						✓		Y				✓
-3AA 5	18		12						5.3		Y				
-5AA B	19		13						✓		Y				
So4557-1A	20		14						42		Y				
-2 A	21		15								Y				
-3 A	22		16								Y				
-4 A	23		17								Y				
-5 A	24		18								Y				
-8 A	25		19								Y				
-11A	26		20								Y				
CCV, -5	27		21								Y		✓		
2	28		22								Y		N/A		IP'ane/
3	29		23								N				not needed
Rinse	30		24								N				✓

Refer to page 1 for standard preparation instructions.

Katahdin Analytical Services 1000259

WG

KATAHDIN ANALYTICAL SERVICES

7:38

GCMS-W INSTRUMENT RUNLOG

DATE/TIME OF BFB INJECTION: 07-28-21

Method - Check One:	8260 ✓	8260 - 10 mL	8260 SIM	624	524
STD IDs: * BFB STD: V22169	CAL STD: V22171	GAS STD: V22208	XTRAs STD: V22168	LCS/MS STD: V22164	
SURR STD: V22161	IS STD: V22161				

SAMPLE NAME	DATAFILE	DF	ALS #	METHOD	Prep Method: 5030	5035	5311	Criteria: ICAS	DoD	QAPP	pH Paper Lot # (<2): YN	Analyst	pH	TRC	COMMENTS
WG383228-1BS	WB1615	—	—	VOABFB	✓						Y	CR	N/A	N/A	
VStd 001 -1	W9619	1	1	W8A05 (03)							Y				Curve OK
005 -2	20	1	2								Y				except
010 -8	21	1	3								Y				chloroethene ↑ 100
020 -3	22	1	4								Y				not good for 2-LEVEL
050 -4	23	1	5								Y				
075 -7	24	1	6								Y				
100 -5	25	1	7								Y				
150 -6	26	1	8								Y				
LCS	27	1	9								N				started on wrong vial
LCS/Ind -10/9	28	1	10								Y				Ind "A" RIC
VBlank	29	1	10								N				
VBlank -11	30	1	12								Y		↓		
SB45163-5RA B	31	1	13						5.1		Y		<2		
SB45164-2RA B	32	1	14								Y				
SB45163-1RA B	33	1	15								Y				
-2RA D	34	1	16								Y				
-3RA B	35	1	17								Y				
-4RA B	36	1	18								Y				ISST NOTH > LOQ
-14 -2MSRA E	37	1	19								Y				
-15 2MSDRA F	38	1	20						↓		Y		↓		
CCV -13	39	1	21								Y		N/A		18:46 ✓
CCV	40	1	22								N				Not needed
CCV	41	1	23								N				↓
Rinse	↓ 42	1	24	↓	↓						—	↓	↓	↓	

* Refer to page 1 for standard preparation instructions.

Katahdin Analytical Services 1000260

WG

KATAHDIN ANALYTICAL SERVICES

GCMS-W INSTRUMENT RUNLOG

DATE/TIME OF BFB INJECTION: 08-02-21 0647

Method - Check One:	8260 ✓	8260 - 10 mL	8260 SIM	624	524
STD IDs: * BFB STD: V22609	CAL STD: V22711	GAS STD: V22713	XTRAs STD: V22716	LCS/MS STD: V22718	
SURR STD: V22701	IS STD: V22701				

pH Paper Lot #: 10033003 KI Paper Lot #: ———

SAMPLE NAME	DATAFILE	DF	ALS #	METHOD	Prep Method: 5030	5035	1311	Criteria: KAS	DoD	QAPP	Y/N	ANALYST	pH	TRC	COMMENTS
WG355273	W96918	—	—	V8260B	✓						Y	CB/ES	N/A	N/A	
Vbld ccb -4	W96936	1	1	W8260(03)							Y				
LCS -1	97	1	2								Y				
VBlank	98	1	3								N				
VBlank -2	99	1	4								Y/N				
MeOHBlank -6	W97000	1	5								Y/N				
SD4723-7A	01	1	6						5.1		N		<2		
-8A	02	1	7								N		✓		
SD3904-2A	03	1	8								N		N/A		
-3A	04	1	9								N		✓		
SD4650-11RMB	05	1	10					✓			Y		<2		
SD4720-2A	06	1	11					✓			N		N/A		
SD4723-2A	07	1	12						5.1		NY		<2		
-3A	08	1	13								NY				
-4A	09	1	14								N				
-5A	10	1	15								NY				
-6A	11	1	16								NY				
-1A	12	1	17								N				
-7 -1MSB	13	1	18								N				
-8 -1MSD	14	1	19								N				
CCV	15	1	20								Y		N/A		17:17
CCV	16	1	21								N				
CCV	17	1	22								N				
Rinse	18	1	24								—				
ES P+A	19	1	25												
ESP+A	20	1	26												

* Refer to page 1 for standard preparation instructions.

8270 SIM
POLYNUCLEAR AROMATIC HYDROCARBONS DATA

QC Summary Section

Katahdin
ANALYTICAL SERVICES

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** LO-58 Nike Missile Battery Launch Site **Matrix:** AQ
Lab Code: KAS **SDG:** SO4723

Client Sample ID	Lab Sample ID	Col. ID	2MN	#	FLO	#	PYR	#
MW-01-SUMMER2021	SO4723-1		69.6		64.4		90.8	
MW-02-SUMMER2021	SO4723-2		71.0		65.5		82.5	
MW-03-SUMMER2021	SO4723-3		64.4		61.1		83.4	
MW-04-SUMMER2021	SO4723-4		70.6		66.5		90.7	
MW-05-SUMMER2021	SO4723-5		70.8		72.6		88.5	
MW-FD-SUMMER2021	SO4723-6		70.4		64.9		75.3	
GW-EB-SUMMER2021	SO4723-8		54.8		53.9		74.0	
Method Blank	WG303222-1		70.0		70.8		82.4	
Laboratory Control S	WG303222-2		83.6		72.2		86.5	
Matrix Spike	WG303222-3		70.8		68.3		88.2	
Matrix Spike Duplica	WG303222-4		64.2		57.5		68.1	

		QC Limits
2MN	2-METHYLNAPHTHALENE-D10	43-92
FLO	FLUORENE-D10	29-101
PYR	PYRENE-D10	53-166

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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ANALYTICAL SERVICES

Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site
Lab File ID : N3626.D
Instrument ID : GCMS-N
Matrix : AQ

SDG : SO4723
Lab Sample ID : WG303222-1
Date Extracted : 27-JUL-21
Date Analyzed : 28-JUL-21
Time Analyzed : 20:12

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG303222-2	N3625.D	07/28/21	19:37
MW-01-SUMMER2021	SO4723-1	N3627.D	07/28/21	20:46
Matrix Spike	WG303222-3	N3628.D	07/28/21	21:20
Matrix Spike Duplica	WG303222-4	N3629.D	07/28/21	21:55
MW-02-SUMMER2021	SO4723-2	N3630.D	07/28/21	22:29
MW-03-SUMMER2021	SO4723-3	N3631.D	07/28/21	23:03
MW-04-SUMMER2021	SO4723-4	N3632.D	07/28/21	23:37
MW-05-SUMMER2021	SO4723-5	N3633.D	07/29/21	00:11
MW-FD-SUMMER2021	SO4723-6	N3634.D	07/29/21	00:45
GW-EB-SUMMER2021	SO4723-8	N3635.D	07/29/21	01:19

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Form 5
Semivolatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site
Lab File ID : ND198.D
Instrument ID : GCMS-N

SDG : SO4723
Date Analyzed : 28-JUL-21
Time Analyzed : 15:17

m/e	Ion Abundance Criteria	% Relative Abundance		
51	30.0 - 60.0% of mass 198	42.7		
68	Less than 2.0% of mass 69	0.7	1.64	1
69	Less than 100.0% of mass 198	42.8		
70	Less than 2.0% of mass 69	0.3	0.62	1
127	40.0 - 60.0% of mass 198	59.9		
197	Less than 1.0% of mass 198	0.4		
198	Base Peak, 100% relative abundance	100		
199	5.0 - 9.0% of mass 198	6.7		
275	10.0 - 30.0% of mass 198	21.4		
365	1.0 - 100.0% of mass 198	2.6		
441	0.0 - 100.0% of mass 443	10.4	73.64	2
442	40.0 - 100.0% of mass 198	70.9		
443	17.0 - 23.0% of mass 442	14.1	19.85	3

1-Value is % mass 69
2-Value is % mass 443
3-Value is % mass 442

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Initial Calibration	WG303306-4	N3618.D	07/28/21	15:35
Initial Calibration	WG303306-3	N3619.D	07/28/21	16:07
Initial Calibration	WG303306-2	N3620.D	07/28/21	16:39
Initial Calibration	WG303306-5	N3621.D	07/28/21	17:15
Initial Calibration	WG303306-6	N3622.D	07/28/21	17:52
Initial Calibration	WG303306-7	N3623.D	07/28/21	18:27
Independent Source	WG303306-8	N3624.D	07/28/21	19:02
Laboratory Control S	WG303222-2	N3625.D	07/28/21	19:37
Method Blank	WG303222-1	N3626.D	07/28/21	20:12
MW-01-SUMMER2021	SO4723-1	N3627.D	07/28/21	20:46
Matrix Spike	WG303222-3	N3628.D	07/28/21	21:20
Matrix Spike Duplica	WG303222-4	N3629.D	07/28/21	21:55
MW-02-SUMMER2021	SO4723-2	N3630.D	07/28/21	22:29
MW-03-SUMMER2021	SO4723-3	N3631.D	07/28/21	23:03
MW-04-SUMMER2021	SO4723-4	N3632.D	07/28/21	23:37
MW-05-SUMMER2021	SO4723-5	N3633.D	07/29/21	00:11
MW-FD-SUMMER2021	SO4723-6	N3634.D	07/29/21	00:45
GW-EB-SUMMER2021	SO4723-8	N3635.D	07/29/21	01:19
Continuing Calibrati	WG303306-9	N3638.D	07/29/21	03:02

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Lau
Lab ID : WG303306-4
Lab File ID : N3618.D

SDG: SO4723
Analytical Date: 07/28/21 15:35
Instrument ID: GCMS-N

		1,4-DICHLOROBENZENE-D4			NAPHTHALENE-D8			ACENAPHTHENE-D10		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	56073		7.39		190665		9.02		102028		11.37	
	Upper Limit	112146		7.56		381330		9.19		204056		11.54	
	Lower Limit	28036.5		7.22		95332.5		8.86		51014		11.20	
Client Sample ID	Lab Sample ID												
Laboratory Control S	WG303222-2	60059		7.39		207662		9.02		113688		11.36	
Method Blank	WG303222-1	59337		7.40		221580		9.03		114900		11.37	
MW-01-SUMMER202	SO4723-1	56210		7.40		188624		9.03		108959		11.37	
Matrix Spike	WG303222-3	65072		7.39		226138		9.02		121105		11.36	
Matrix Spike Duplica	WG303222-4	62713		7.39		210026		9.02		116599		11.37	
MW-02-SUMMER202	SO4723-2	60537		7.40		205614		9.03		118658		11.37	
MW-03-SUMMER202	SO4723-3	60228		7.40		200897		9.03		115785		11.37	
MW-04-SUMMER202	SO4723-4	55738		7.40		186195		9.03		107105		11.37	
MW-05-SUMMER202	SO4723-5	54914		7.39		194384		9.02		106996		11.37	
MW-FD-SUMMER202	SO4723-6	60460		7.40		203861		9.03		119203		11.37	
GW-EB-SUMMER202	SO4723-8	56530		7.39		189703		9.03		112201		11.37	
Continuing Calibrati	WG303306-9	62005		7.39		217432		9.02		117588		11.36	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Lau
Lab ID : WG303306-4
Lab File ID : N3618.D

SDG: SO4723
Analytical Date: 07/28/21 15:35
Instrument ID: GCMS-N

		PHENANTHRENE-D10		CHRYSENE-D12		PERYLENE-D12	
		Area #	RT #	Area #	RT #	Area #	RT #
	Std .	145626	13.35	67868	17.14	51613	20.15
	Upper Limit	291252	13.52	135736	17.31	103226	20.32
	Lower Limit	72813	13.18	33934	16.97	25806.5	19.98
Client Sample ID	Lab Sample ID						
Laboratory Control S	WG303222-2	169228	13.35	72506	17.14	45910	20.13
Method Blank	WG303222-1	165454	13.35	69785	17.14	42876	20.14
MW-01-SUMMER202	SO4723-1	154349	13.35	57277	17.14	35270	20.14
Matrix Spike	WG303222-3	187829	13.35	75937	17.14	48285	20.13
Matrix Spike Duplica	WG303222-4	167306	13.35	73040	17.14	48236	20.14
MW-02-SUMMER202	SO4723-2	176188	13.35	73415	17.14	47742	20.14
MW-03-SUMMER202	SO4723-3	165936	13.35	63164	17.15	38505	20.14
MW-04-SUMMER202	SO4723-4	150743	13.35	59524	17.14	36960	20.14
MW-05-SUMMER202	SO4723-5	154053	13.35	63213	17.14	41216	20.14
MW-FD-SUMMER202	SO4723-6	174126	13.35	79288	17.14	49211	20.14
GW-EB-SUMMER202	SO4723-8	166481	13.35	80359	17.14	45571	20.14
Continuing Calibrati	WG303306-9	178035	13.35	91062	17.14	58767	20.15

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Sample Data Section

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

* Compound recovery or percent RPD (relative percent difference) was outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

C Indicates that the flagged compound did not meet DoD criteria in the corresponding daily calibration verification (CV).

L Indicates that the flagged compound did not meet DoD criteria in the corresponding Laboratory Control Sample (LCS) and/or Laboratory Control Sample Duplicate (LCSD) prepared and/or analyzed concurrently with the sample.

M Indicates that the flagged compound did not meet DoD criteria in the Matrix Spike and/or Matrix Spike Duplicate prepared and/or analyzed concurrently with the native sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

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Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-1
Client ID: MW-01-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: N3627.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 28-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 29-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.11	ug/L	1	.2	0.22	0.069	0.11
2-Methylnaphthalene	U	0.11	ug/L	1	.2	0.22	0.083	0.11
1-Methylnaphthalene	U	0.11	ug/L	1	.2	0.22	0.073	0.11
Acenaphthylene	U	0.11	ug/L	1	.2	0.22	0.058	0.11
Acenaphthene	U	0.11	ug/L	1	.2	0.22	0.069	0.11
Fluorene	U	0.11	ug/L	1	.2	0.22	0.066	0.11
Phenanthrene	U	0.11	ug/L	1	.2	0.22	0.055	0.11
Anthracene	U	0.11	ug/L	1	.2	0.22	0.047	0.11
Fluoranthene	U	0.11	ug/L	1	.2	0.22	0.078	0.11
Pyrene	U	0.11	ug/L	1	.2	0.22	0.063	0.11
Benzo(a)anthracene	UM	0.11	ug/L	1	.2	0.22	0.049	0.11
Chrysene	U	0.11	ug/L	1	.2	0.22	0.039	0.11
Benzo(b)Fluoranthene	UM	0.11	ug/L	1	.2	0.22	0.096	0.11
Benzo(k)fluoranthene	UMM	0.11	ug/L	1	.2	0.22	0.053	0.11
Benzo(a)pyrene	UMM	0.11	ug/L	1	.2	0.22	0.071	0.11
Indeno(1,2,3-cd)pyrene	UMM	0.11	ug/L	1	.2	0.22	0.056	0.11
Dibenzo(a,h)anthracene	UMM	0.11	ug/L	1	.2	0.22	0.075	0.11
Benzo(g,h,i)perylene	UMM	0.11	ug/L	1	.2	0.22	0.070	0.11
2-Methylnaphthalene-D10		69.6	%					
Fluorene-D10		64.4	%					
Pyrene-D10		90.8	%					

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Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3627.D
Report Date: 29-Jul-2021 15:14

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3627.D
Lab Smp Id: SO4723-1 Client Smp ID: MW-01-SUMMER2021
Inj Date : 28-JUL-2021 20:46
Operator : JCG Inst ID: gcms-n.i
Smp Info : SO4723-1
Misc Info : WG303306,WG303222,WG303306-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 09:00 cgomez Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27 Cal File: N3623.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: sw8270sim+1mn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

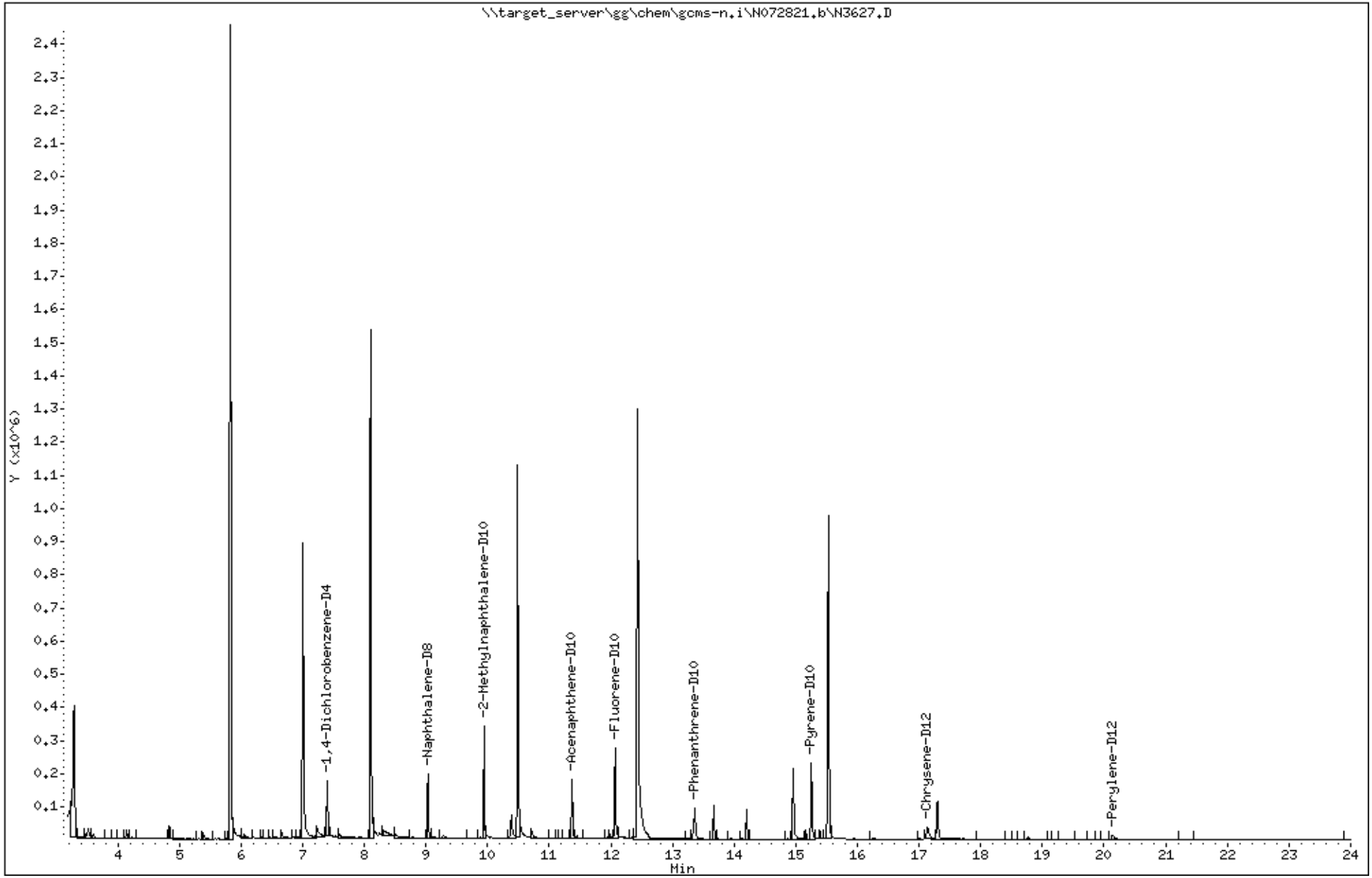
Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	0.93000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
* 10 1,4-Dichlorobenzene-D4	152	7.400	7.390	(1.000)	56210	0.80000	(aQ)	
* 27 Naphthalene-D8	136	9.033	9.022	(1.000)	188624	0.80000	(a)	
$ 33 2-Methylnaphthalene-D10	152	9.938	9.937	(1.100)	174800	1.39289	1.50	
* 48 Acenaphthene-D10	164	11.370	11.369	(1.000)	108959	0.80000	(a)	
$ 56 Fluorene-D10	174	12.067	12.067	(1.061)	164796	1.28703	1.38	
* 66 Phenanthrene-D10	188	13.350	13.350	(1.000)	154349	0.80000	(a)	
$ 73 Pyrene-D10	212	15.251	15.262	(0.890)	197089	1.81547	1.95	
* 78 Chrysene-D12	240	17.139	17.139	(1.000)	57277	0.80000	(a)	
* 85 Perylene-D12	264	20.139	20.139	(1.000)	35270	0.80000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3627.D
Date : 28-JUL-2021 20:46
Client ID: MW-01-SUMMER2021
Instrument: gcms-n.i
Sample Info: S04723-1
Volume Injected (uL): 1.0
Operator: JCG
Column phase: ZB5-MS
Column diameter: 0.25



Katahdin Analytical Services 2000013

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-2
Client ID: MW-02-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: N3630.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 28-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 29-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.10	ug/L	1	.2	0.21	0.067	0.10
2-Methylnaphthalene	U	0.10	ug/L	1	.2	0.21	0.081	0.10
1-Methylnaphthalene	U	0.10	ug/L	1	.2	0.21	0.072	0.10
Acenaphthylene	U	0.10	ug/L	1	.2	0.21	0.057	0.10
Acenaphthene	U	0.10	ug/L	1	.2	0.21	0.067	0.10
Fluorene	U	0.10	ug/L	1	.2	0.21	0.064	0.10
Phenanthrene	U	0.10	ug/L	1	.2	0.21	0.054	0.10
Anthracene	U	0.10	ug/L	1	.2	0.21	0.046	0.10
Fluoranthene	U	0.10	ug/L	1	.2	0.21	0.077	0.10
Pyrene	U	0.10	ug/L	1	.2	0.21	0.062	0.10
Benzo(a)anthracene	U	0.10	ug/L	1	.2	0.21	0.048	0.10
Chrysene	U	0.10	ug/L	1	.2	0.21	0.038	0.10
Benzo(b)Fluoranthene	U	0.10	ug/L	1	.2	0.21	0.094	0.10
Benzo(k)fluoranthene	U	0.10	ug/L	1	.2	0.21	0.052	0.10
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.21	0.069	0.10
Indeno(1,2,3-cd)pyrene	U	0.10	ug/L	1	.2	0.21	0.055	0.10
Dibenzo(a,h)anthracene	U	0.10	ug/L	1	.2	0.21	0.074	0.10
Benzo(g,h,i)perylene	U	0.10	ug/L	1	.2	0.21	0.068	0.10
2-Methylnaphthalene-D10		71.0	%					
Fluorene-D10		65.5	%					
Pyrene-D10		82.5	%					

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Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3630.D
Report Date: 29-Jul-2021 15:15

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3630.D
Lab Smp Id: SO4723-2 Client Smp ID: MW-02-SUMMER2021
Inj Date : 28-JUL-2021 22:29
Operator : JCG Inst ID: gcms-n.i
Smp Info : SO4723-2
Misc Info : WG303306,WG303222,WG303306-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 09:00 cgomez Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27 Cal File: N3623.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: sw8270sim+1mn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

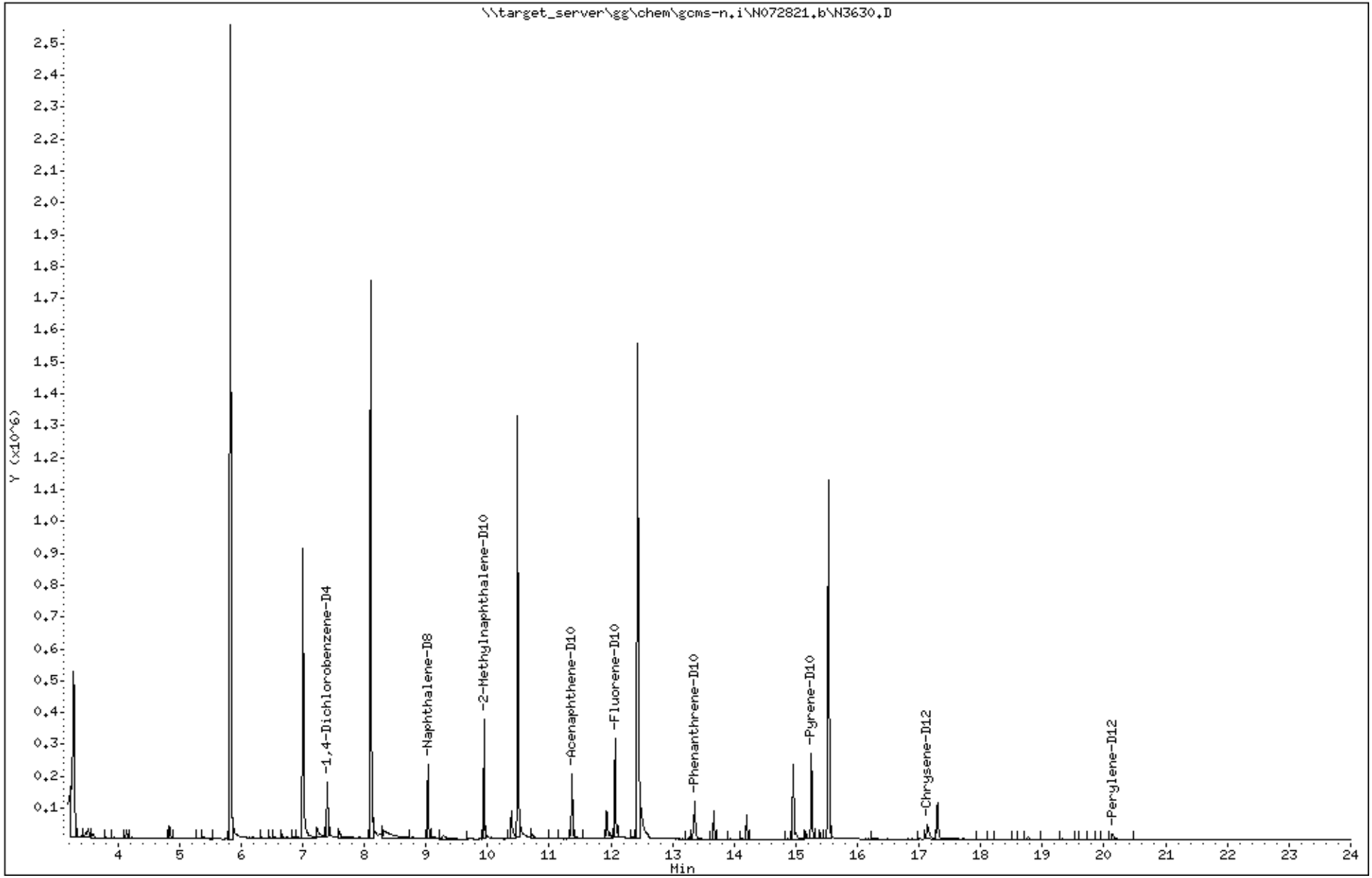
Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	0.95000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	7.400	7.390	(1.000)	60537	0.80000	(aQ)	
*	27 Naphthalene-D8	136	9.033	9.022	(1.000)	205614	0.80000	(a)	
$	33 2-Methylnaphthalene-D10	152	9.937	9.937	(1.100)	194388	1.42099	1.50	
*	48 Acenaphthene-D10	164	11.369	11.369	(1.000)	118658	0.80000	(a)	
$	56 Fluorene-D10	174	12.067	12.067	(1.061)	182572	1.30931	1.38	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	176188	0.80000	(a)	
$	73 Pyrene-D10	212	15.251	15.262	(0.890)	229590	1.64996	1.74	
*	78 Chrysene-D12	240	17.139	17.139	(1.000)	73415	0.80000	(a)	
*	85 Perylene-D12	264	20.139	20.139	(1.000)	47742	0.80000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3630.D
Date : 28-JUL-2021 22:29
Client ID: MW-02-SUMMER2021
Instrument: gcms-n.i
Sample Info: S04723-2
Volume Injected (uL): 1.0
Operator: JCG
Column phase: ZB5-MS
Column diameter: 0.25



Katahdin Analytical Services 2000016

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-3
Client ID: MW-03-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: N3631.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 28-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 29-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.11	ug/L	1	.2	0.22	0.069	0.11
2-Methylnaphthalene	U	0.11	ug/L	1	.2	0.22	0.083	0.11
1-Methylnaphthalene	U	0.11	ug/L	1	.2	0.22	0.073	0.11
Acenaphthylene	U	0.11	ug/L	1	.2	0.22	0.058	0.11
Acenaphthene	U	0.11	ug/L	1	.2	0.22	0.069	0.11
Fluorene	U	0.11	ug/L	1	.2	0.22	0.066	0.11
Phenanthrene	U	0.11	ug/L	1	.2	0.22	0.055	0.11
Anthracene	U	0.11	ug/L	1	.2	0.22	0.047	0.11
Fluoranthene	U	0.11	ug/L	1	.2	0.22	0.078	0.11
Pyrene	U	0.11	ug/L	1	.2	0.22	0.063	0.11
Benzo(a)anthracene	U	0.11	ug/L	1	.2	0.22	0.049	0.11
Chrysene	U	0.11	ug/L	1	.2	0.22	0.039	0.11
Benzo(b)Fluoranthene	U	0.11	ug/L	1	.2	0.22	0.096	0.11
Benzo(k)fluoranthene	U	0.11	ug/L	1	.2	0.22	0.053	0.11
Benzo(a)pyrene	U	0.11	ug/L	1	.2	0.22	0.071	0.11
Indeno(1,2,3-cd)pyrene	U	0.11	ug/L	1	.2	0.22	0.056	0.11
Dibenzo(a,h)anthracene	U	0.11	ug/L	1	.2	0.22	0.075	0.11
Benzo(g,h,i)perylene	U	0.11	ug/L	1	.2	0.22	0.070	0.11
2-Methylnaphthalene-D10		64.4	%					
Fluorene-D10		61.1	%					
Pyrene-D10		83.4	%					

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Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3631.D
Report Date: 29-Jul-2021 15:15

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Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3631.D
Lab Smp Id: SO4723-3 Client Smp ID: MW-03-SUMMER2021
Inj Date : 28-JUL-2021 23:03
Operator : JCG Inst ID: gcms-n.i
Smp Info : SO4723-3
Misc Info : WG303306,WG303222,WG303306-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 09:00 cgomez Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27 Cal File: N3623.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: sw8270sim+1mn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

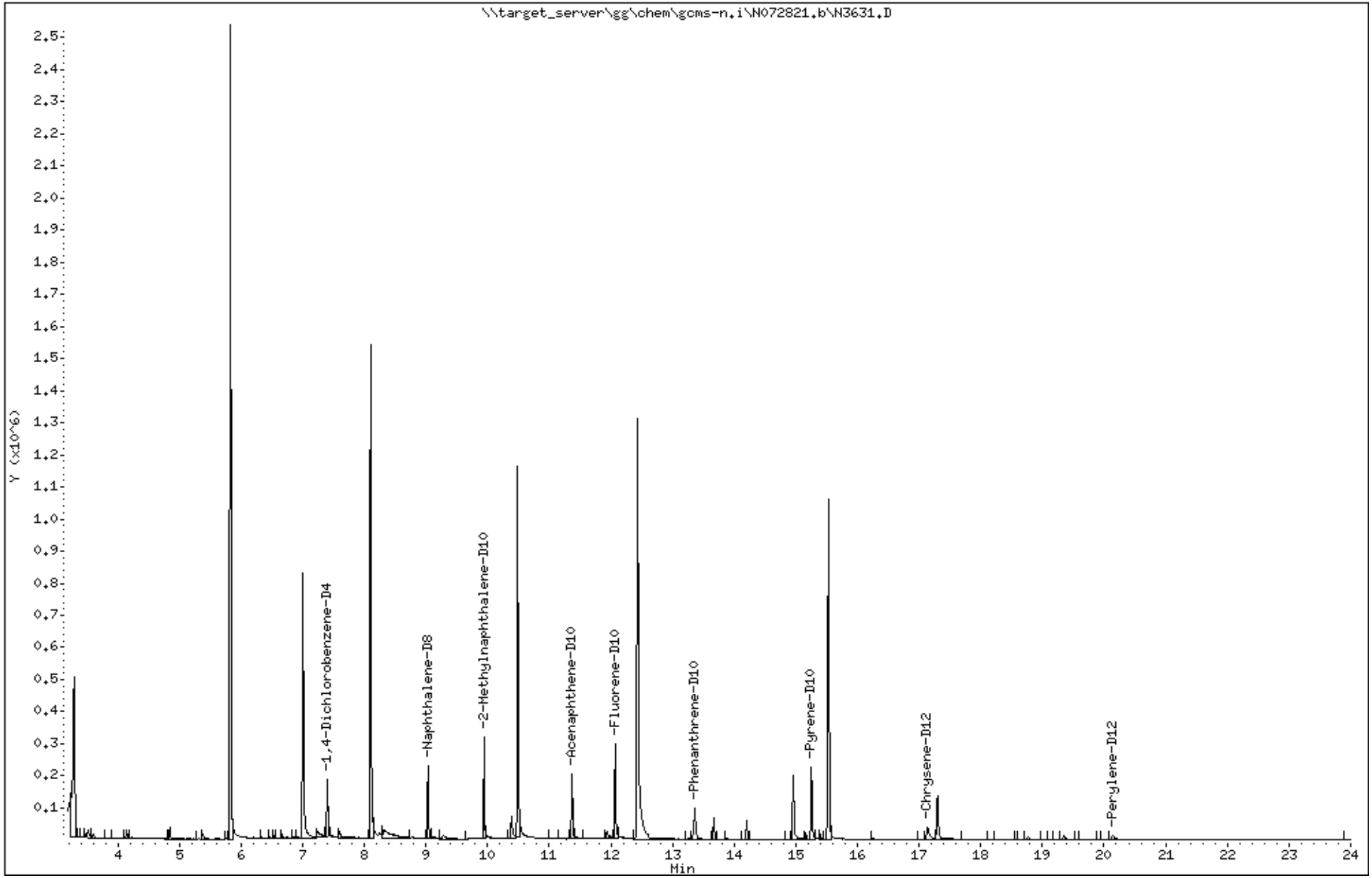
Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	0.93000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	7.400	7.390	(1.000)	60228	0.80000	(aQ)	
*	27 Naphthalene-D8	136	9.033	9.022	(1.000)	200897	0.80000	(a)	
$	33 2-Methylnaphthalene-D10	152	9.938	9.937	(1.100)	172286	1.28899	1.39	
*	48 Acenaphthene-D10	164	11.370	11.369	(1.000)	115785	0.80000	(a)	
$	56 Fluorene-D10	174	12.067	12.067	(1.061)	166284	1.22209	1.31	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	165936	0.80000	(a)	
$	73 Pyrene-D10	212	15.251	15.262	(0.889)	199823	1.66910	1.79	
*	78 Chrysene-D12	240	17.150	17.139	(1.000)	63164	0.80000	(a)	
*	85 Perylene-D12	264	20.139	20.139	(1.000)	38505	0.80000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3631.D
Date : 28-JUL-2021 23:03
Client ID: MW-03-SUMMER2021
Instrument: gcms-n.i
Sample Info: S04723-3
Volume Injected (uL): 1.0
Operator: JCG
Column phase: ZB5-MS
Column diameter: 0.25



Katahdin Analytical Services 2000019

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-4
Client ID: MW-04-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: N3632.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 28-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 29-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.093	ug/L	1	.2	0.19	0.060	0.093
2-Methylnaphthalene	U	0.093	ug/L	1	.2	0.19	0.072	0.093
1-Methylnaphthalene	U	0.093	ug/L	1	.2	0.19	0.064	0.093
Acenaphthylene	U	0.093	ug/L	1	.2	0.19	0.050	0.093
Acenaphthene	U	0.093	ug/L	1	.2	0.19	0.060	0.093
Fluorene	U	0.093	ug/L	1	.2	0.19	0.057	0.093
Phenanthrene	U	0.093	ug/L	1	.2	0.19	0.048	0.093
Anthracene	U	0.093	ug/L	1	.2	0.19	0.041	0.093
Fluoranthene	U	0.093	ug/L	1	.2	0.19	0.068	0.093
Pyrene	U	0.093	ug/L	1	.2	0.19	0.055	0.093
Benzo(a)anthracene	U	0.093	ug/L	1	.2	0.19	0.043	0.093
Chrysene	U	0.093	ug/L	1	.2	0.19	0.034	0.093
Benzo(b)Fluoranthene	U	0.093	ug/L	1	.2	0.19	0.083	0.093
Benzo(k)fluoranthene	U	0.093	ug/L	1	.2	0.19	0.046	0.093
Benzo(a)pyrene	U	0.093	ug/L	1	.2	0.19	0.062	0.093
Indeno(1,2,3-cd)pyrene	U	0.093	ug/L	1	.2	0.19	0.048	0.093
Dibenzo(a,h)anthracene	U	0.093	ug/L	1	.2	0.19	0.065	0.093
Benzo(g,h,i)perylene	U	0.093	ug/L	1	.2	0.19	0.061	0.093
2-Methylnaphthalene-D10		70.6	%					
Fluorene-D10		66.5	%					
Pyrene-D10		90.7	%					

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Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3632.D
Report Date: 29-Jul-2021 15:15

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Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3632.D
Lab Smp Id: SO4723-4 Client Smp ID: MW-04-SUMMER2021
Inj Date : 28-JUL-2021 23:37
Operator : JCG Inst ID: gcms-n.i
Smp Info : SO4723-4
Misc Info : WG303306,WG303222,WG303306-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 09:00 cgomez Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27 Cal File: N3623.D
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: sw8270sim+1mn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

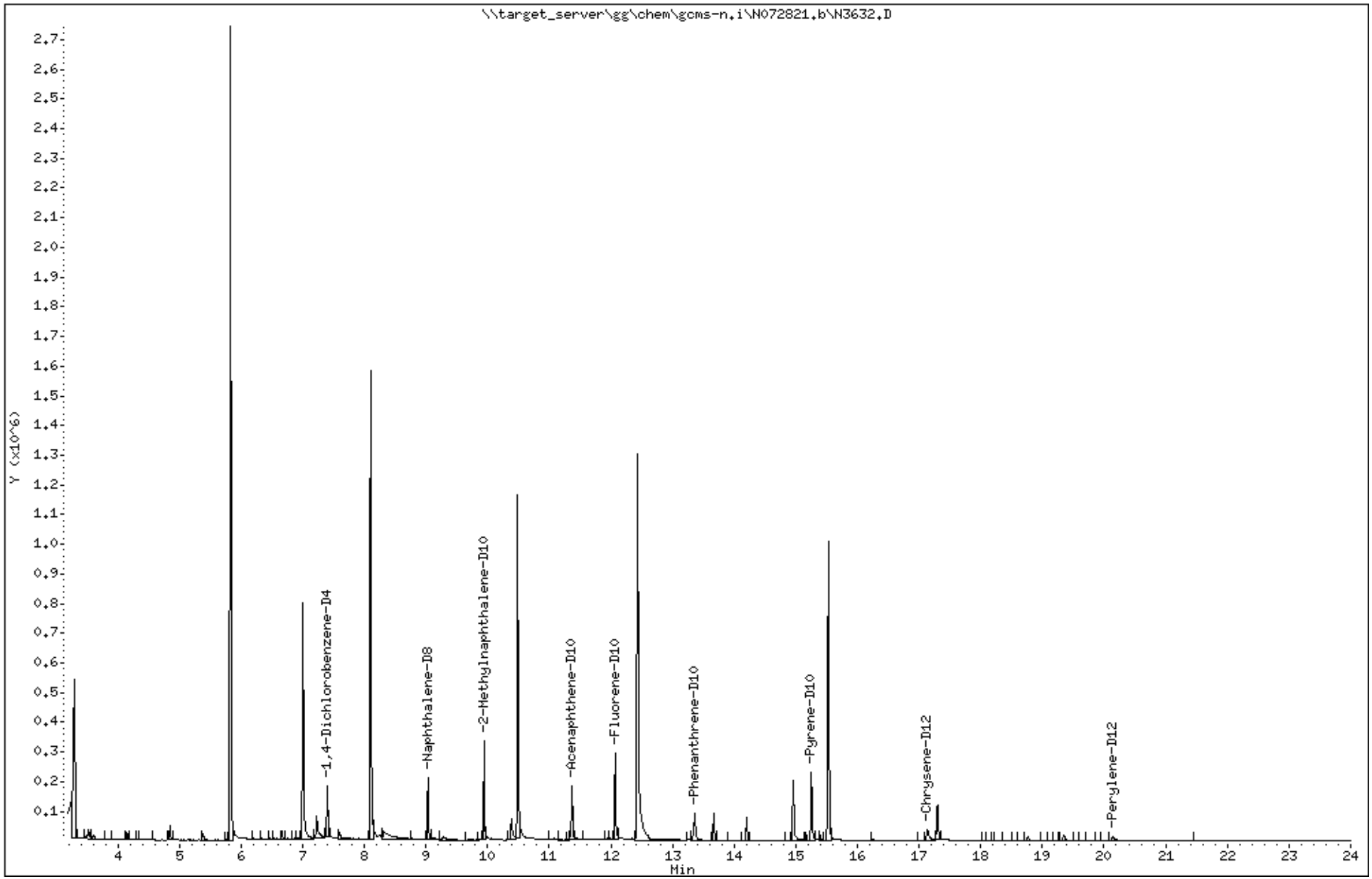
Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.070	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	7.400	7.390	(1.000)	55738	0.80000	(aQ)	
*	27 Naphthalene-D8	136	9.033	9.022	(1.000)	186195	0.80000	(a)	
$	33 2-Methylnaphthalene-D10	152	9.938	9.937	(1.100)	174964	1.41239	1.32	
*	48 Acenaphthene-D10	164	11.370	11.369	(1.000)	107105	0.80000	(a)	
$	56 Fluorene-D10	174	12.067	12.067	(1.061)	167434	1.33027	1.24	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	150743	0.80000	(a)	
$	73 Pyrene-D10	212	15.251	15.262	(0.890)	204739	1.81474	1.70	
*	78 Chrysene-D12	240	17.139	17.139	(1.000)	59524	0.80000	(a)	
*	85 Perylene-D12	264	20.139	20.139	(1.000)	36960	0.80000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3632.D
Date : 28-JUL-2021 23:37
Client ID: MW-04-SUMMER2021
Instrument: gcms-n.i
Sample Info: S04723-4
Volume Injected (uL): 1.0
Operator: JCG
Column phase: ZB5-MS
Column diameter: 0.25



Katahdin Analytical Services 2000022

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-5
Client ID: MW-05-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: N3633.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 29-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 29-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.093	ug/L	1	.2	0.19	0.060	0.093
2-Methylnaphthalene	U	0.093	ug/L	1	.2	0.19	0.072	0.093
1-Methylnaphthalene	J	0.16	ug/L	1	.2	0.19	0.064	0.093
Acenaphthylene	U	0.093	ug/L	1	.2	0.19	0.050	0.093
Acenaphthene	J	0.18	ug/L	1	.2	0.19	0.060	0.093
Fluorene		0.44	ug/L	1	.2	0.19	0.057	0.093
Phenanthrene		0.24	ug/L	1	.2	0.19	0.048	0.093
Anthracene	J	0.047	ug/L	1	.2	0.19	0.041	0.093
Fluoranthene	U	0.093	ug/L	1	.2	0.19	0.068	0.093
Pyrene	U	0.093	ug/L	1	.2	0.19	0.055	0.093
Benzo(a)anthracene	U	0.093	ug/L	1	.2	0.19	0.043	0.093
Chrysene	U	0.093	ug/L	1	.2	0.19	0.034	0.093
Benzo(b)Fluoranthene	U	0.093	ug/L	1	.2	0.19	0.083	0.093
Benzo(k)fluoranthene	U	0.093	ug/L	1	.2	0.19	0.046	0.093
Benzo(a)pyrene	U	0.093	ug/L	1	.2	0.19	0.062	0.093
Indeno(1,2,3-cd)pyrene	U	0.093	ug/L	1	.2	0.19	0.048	0.093
Dibenzo(a,h)anthracene	U	0.093	ug/L	1	.2	0.19	0.065	0.093
Benzo(g,h,i)perylene	U	0.093	ug/L	1	.2	0.19	0.061	0.093
2-Methylnaphthalene-D10		70.8	%					
Fluorene-D10		72.6	%					
Pyrene-D10		88.5	%					

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Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3633.D
Report Date: 29-Jul-2021 15:15

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3633.D
Lab Smp Id: SO4723-5 Client Smp ID: MW-05-SUMMER2021
Inj Date : 29-JUL-2021 00:11
Operator : JCG Inst ID: gcms-n.i
Smp Info : SO4723-5
Misc Info : WG303306,WG303222,WG303306-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 09:00 cgomez Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27 Cal File: N3623.D
Als bottle: 17
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: sw8270sim+1mn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

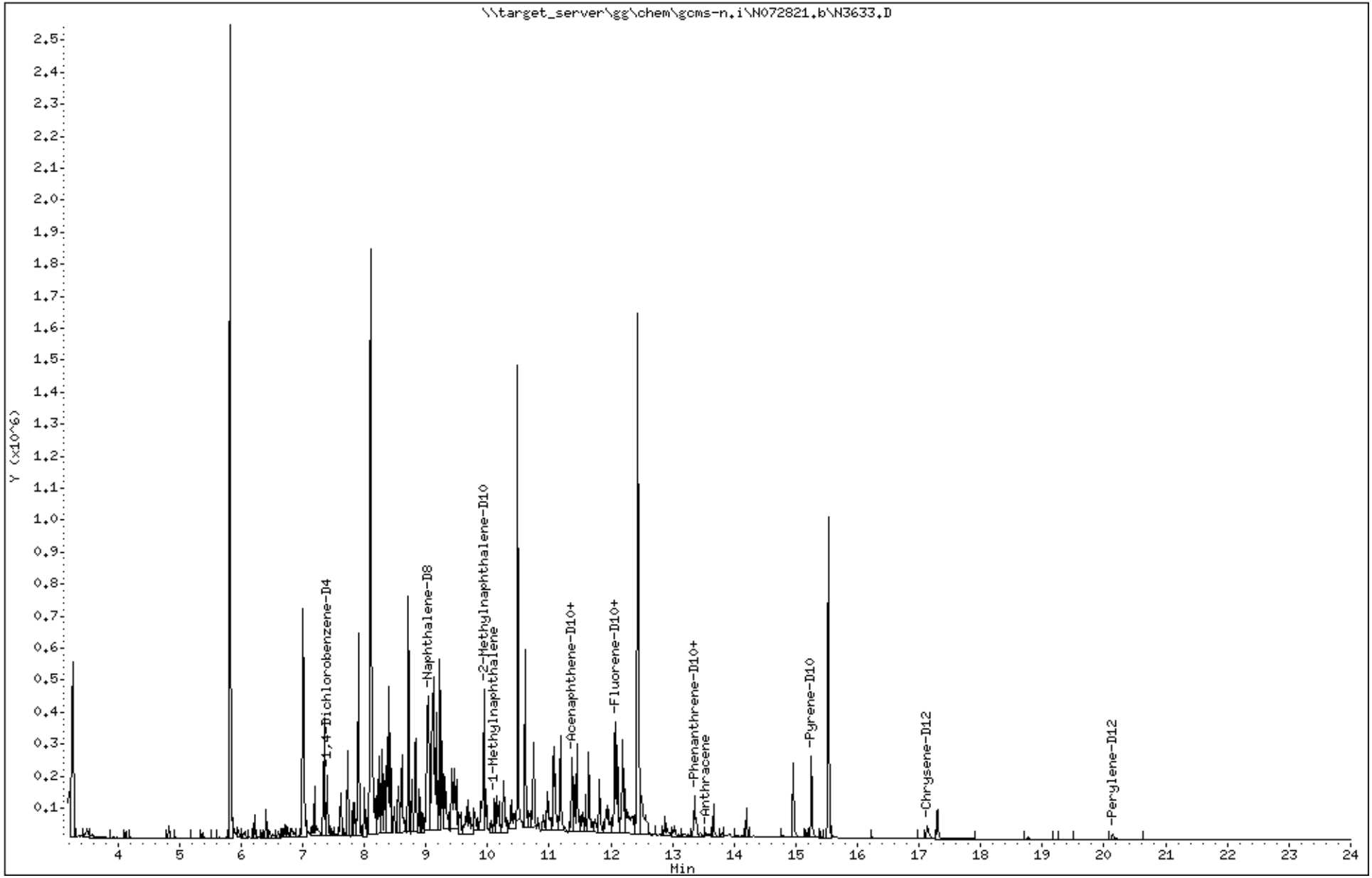
Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.070	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	7.390	7.390	(1.000)	54914	0.80000	(aQ)	
*	27 Naphthalene-D8	136	9.022	9.022	(1.000)	194384	0.80000	(a)	
$	33 2-Methylnaphthalene-D10	152	9.937	9.937	(1.101)	183179	1.41641	1.32	
	35 1-Methylnaphthalene	142	10.105	10.105	(1.120)	29256	0.17699	0.165(aQ)	
*	48 Acenaphthene-D10	164	11.370	11.369	(1.000)	106996	0.80000	(a)	
	49 Acenaphthene	153	11.402	11.413	(1.003)	33234	0.19667	0.184(aQ)	
$	56 Fluorene-D10	174	12.067	12.067	(1.061)	182594	1.45219	1.36	
	57 Fluorene	166	12.100	12.110	(1.064)	85184	0.47579	0.445	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	154053	0.80000	(a)	
	67 Phenanthrene	178	13.385	13.385	(1.003)	54574	0.25677	0.240	
	68 Anthracene	178	13.454	13.454	(1.008)	12583	0.05016	0.0469(aQ)	
$	73 Pyrene-D10	212	15.251	15.262	(0.890)	212051	1.76987	1.65	
*	78 Chrysene-D12	240	17.139	17.139	(1.000)	63213	0.80000	(a)	
*	85 Perylene-D12	264	20.139	20.139	(1.000)	41216	0.80000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3633.D
Date : 29-JUL-2021 00:11
Client ID: MW-05-SUMMER2021
Instrument: gcms-n.i
Sample Info: S04723-5
Volume Injected (uL): 1.0
Operator: JCG
Column phase: ZB5-MS
Column diameter: 0.25



Katahdin Analytical Services 2000025

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3633.D

Date : 29-JUL-2021 00:11

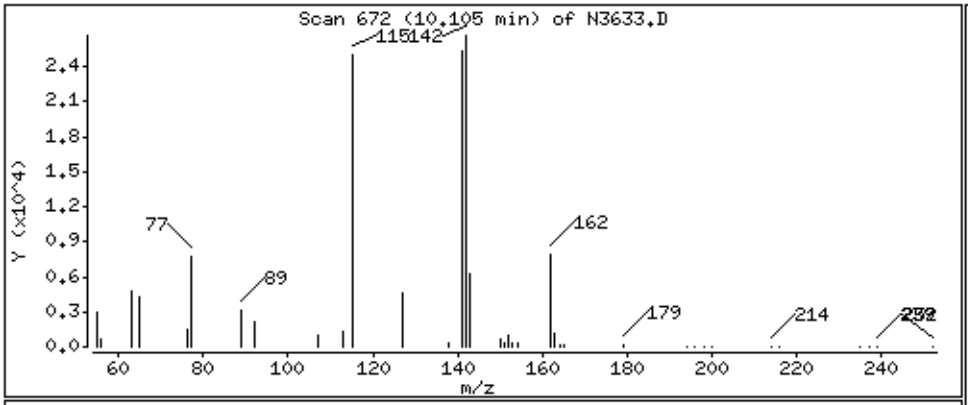
Client ID: MW-05-SUMMER2021 Instrument: gcms-n.i

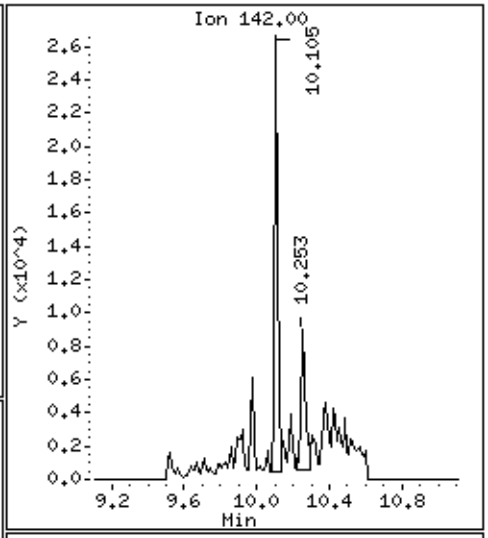
Sample Info: S04723-5

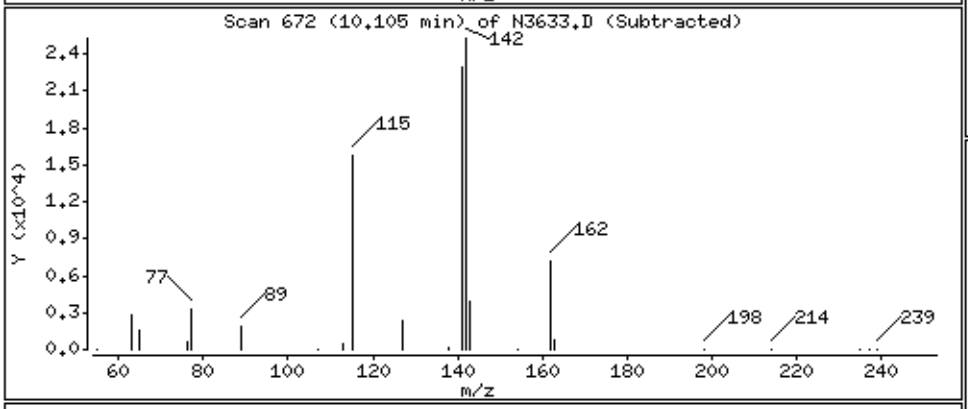
Volume Injected (uL): 1.0 Operator: JCG

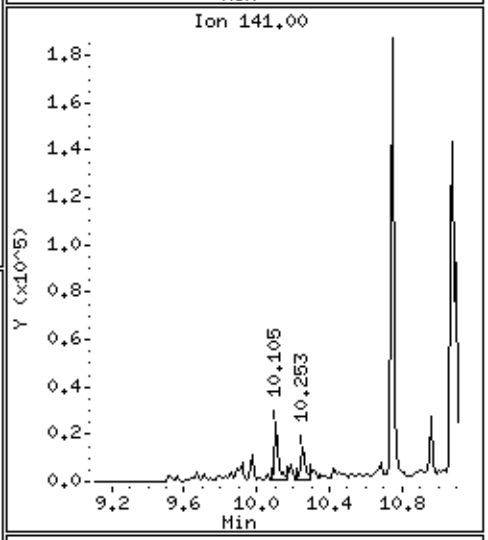
Column phase: ZB5-MS Column diameter: 0.25

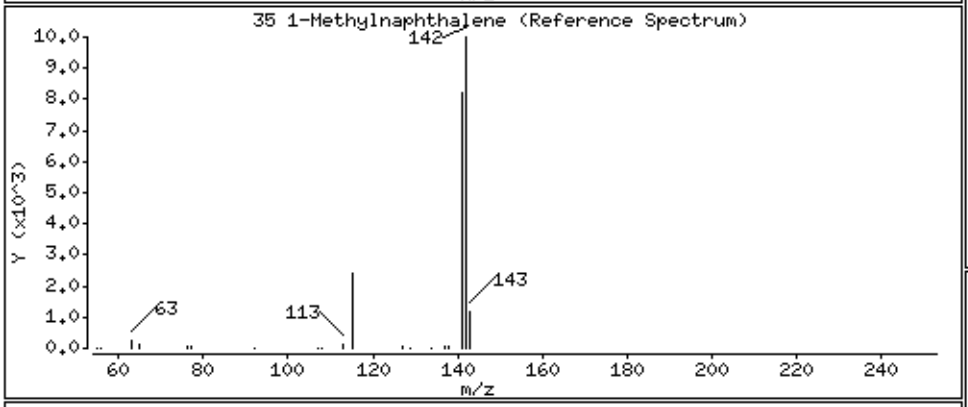
35 1-Methylnaphthalene Concentration: 0.165 ug/L

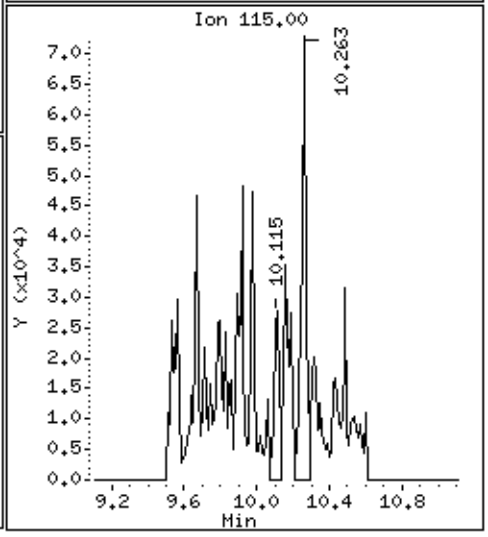


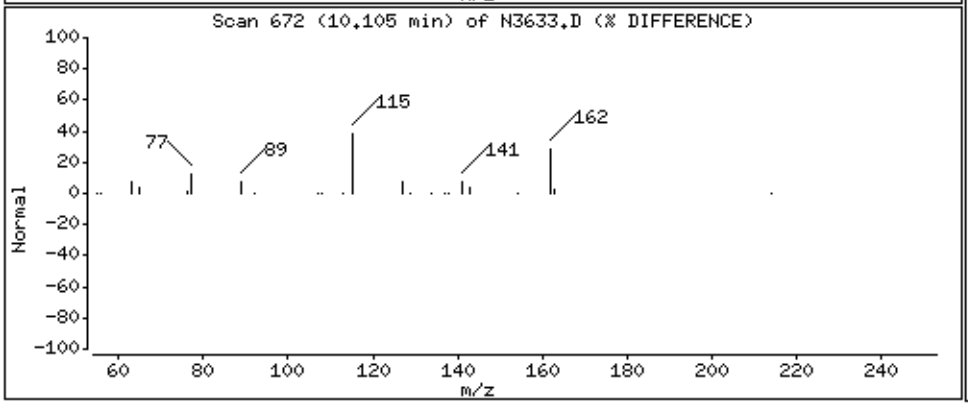












Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3633.D

Date : 29-JUL-2021 00:11

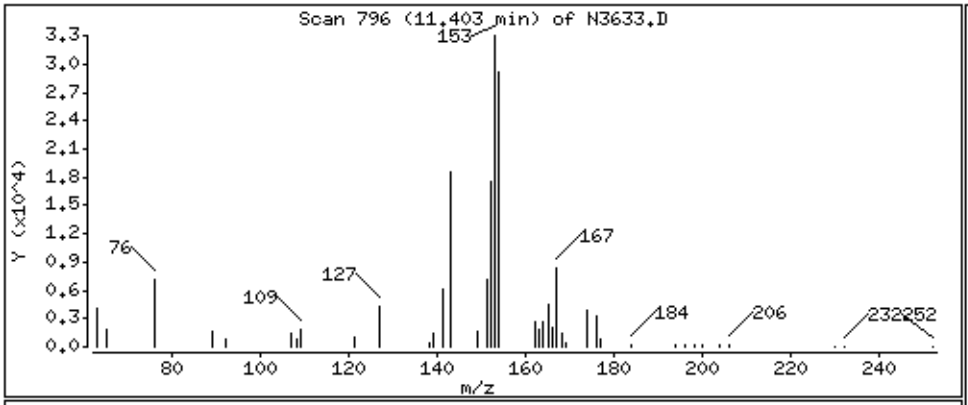
Client ID: MW-05-SUMMER2021 Instrument: gcms-n.i

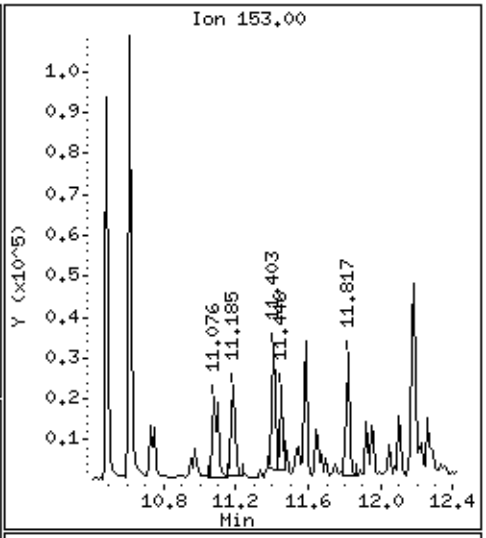
Sample Info: S04723-5

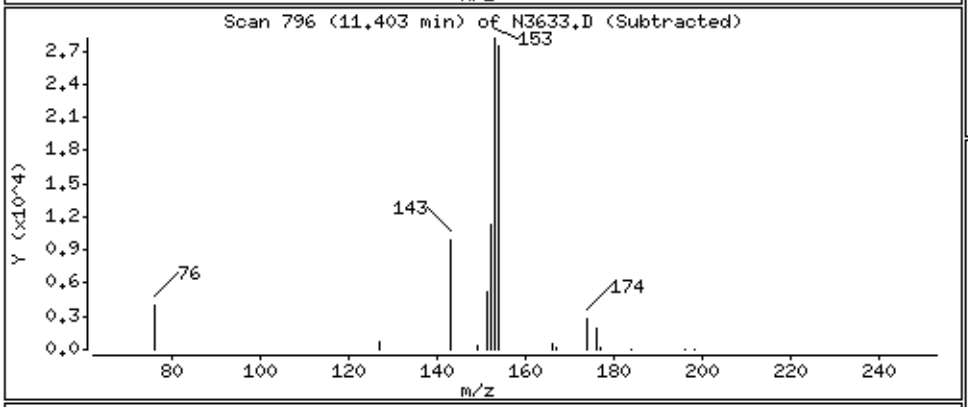
Volume Injected (uL): 1.0 Operator: JCG

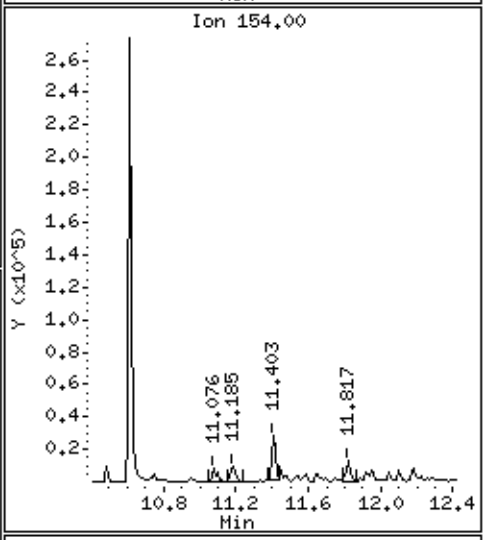
Column phase: ZB5-MS Column diameter: 0.25

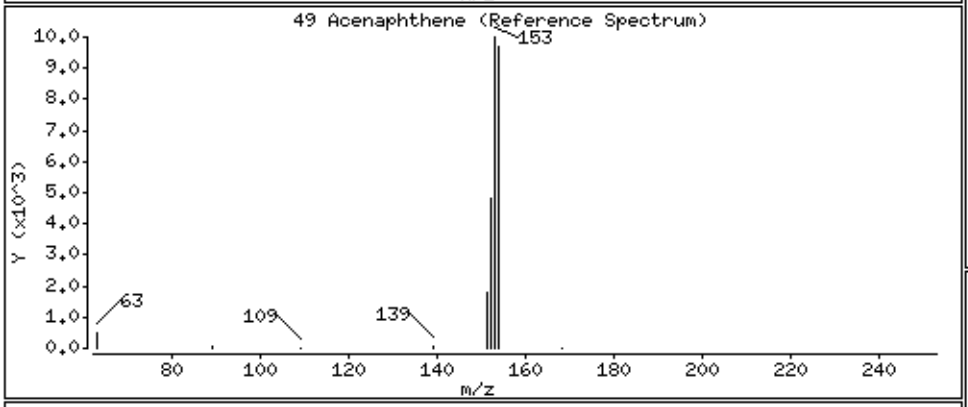
49 Acenaphthene Concentration: 0.184 ug/L

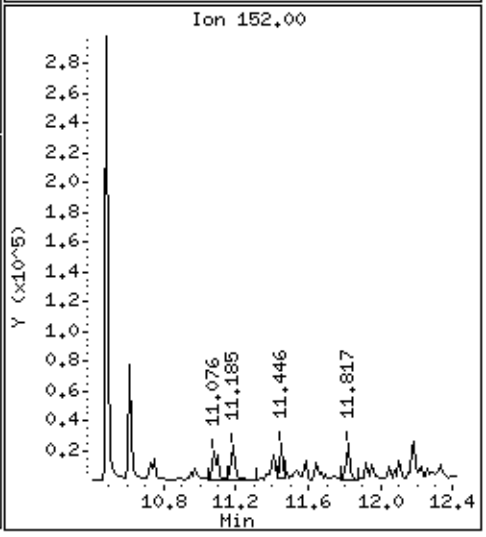


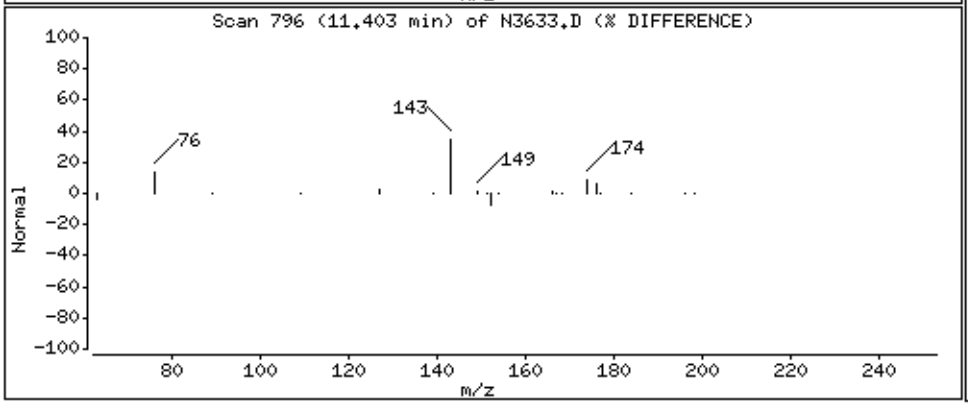












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Date : 29-JUL-2021 00:11

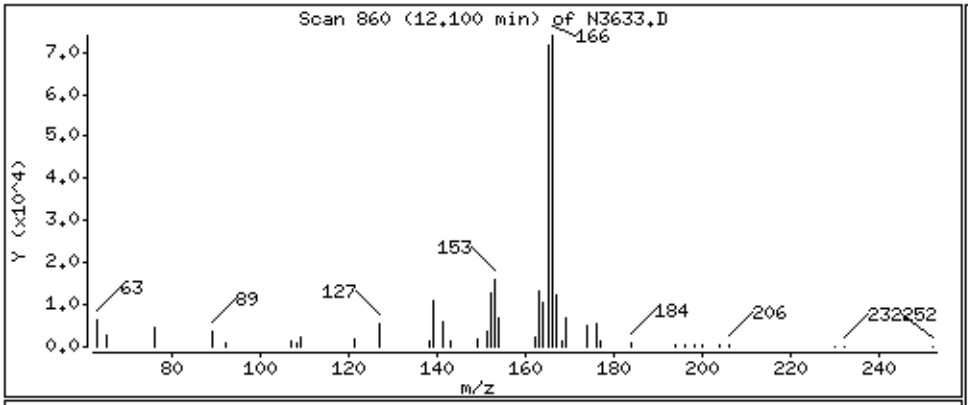
Client ID: MW-05-SUMMER2021 Instrument: gcms-n.i

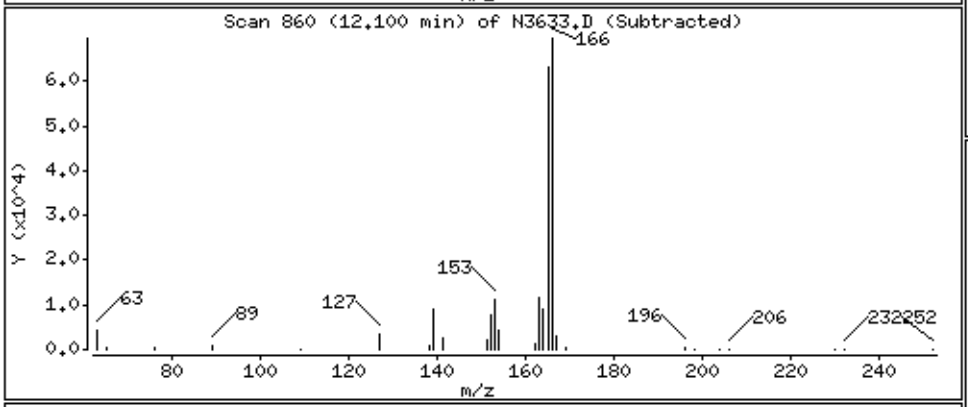
Sample Info: S04723-5

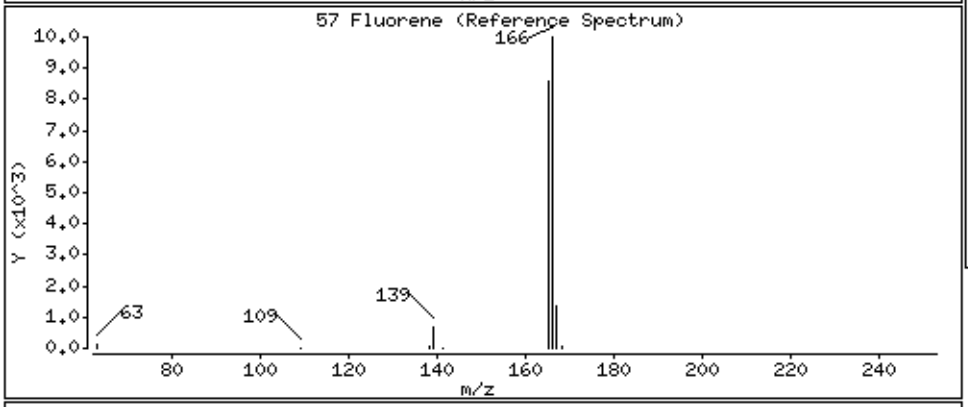
Volume Injected (uL): 1.0 Operator: JCG

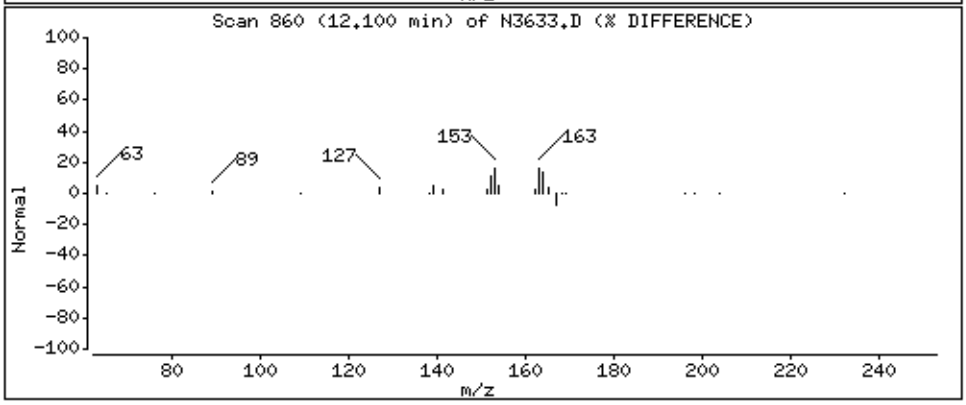
Column phase: ZB5-MS Column diameter: 0.25

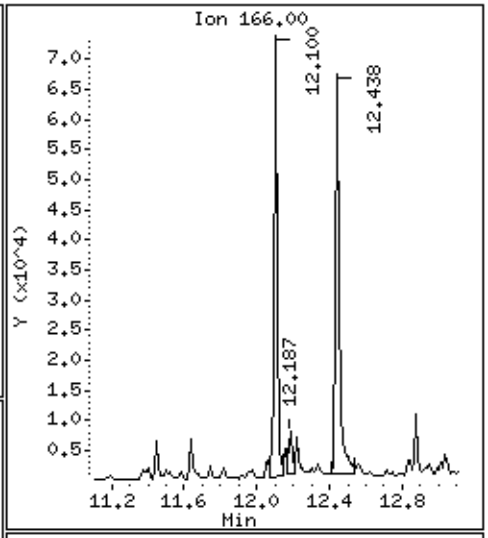
57 Fluorene Concentration: 0.445 ug/L

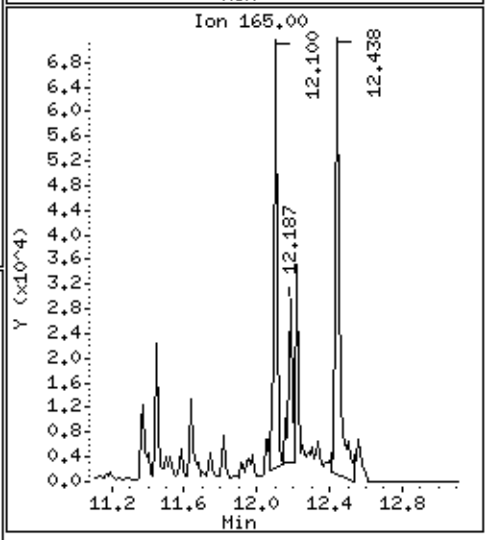












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Date : 29-JUL-2021 00:11

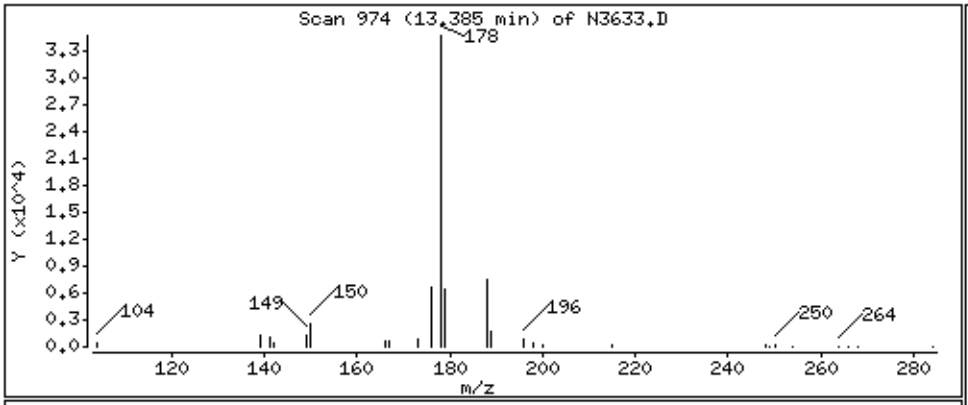
Client ID: MW-05-SUMMER2021 Instrument: gcms-n.i

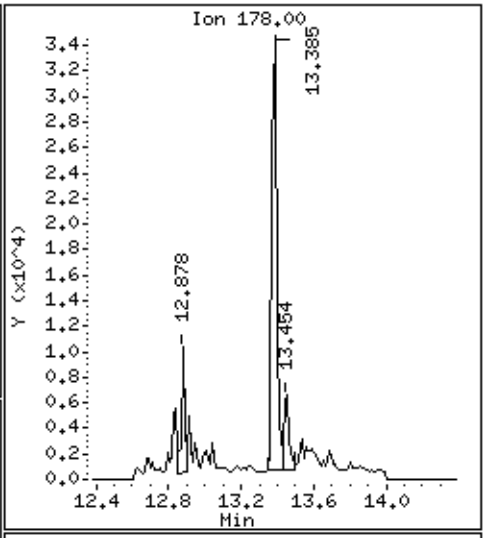
Sample Info: S04723-5

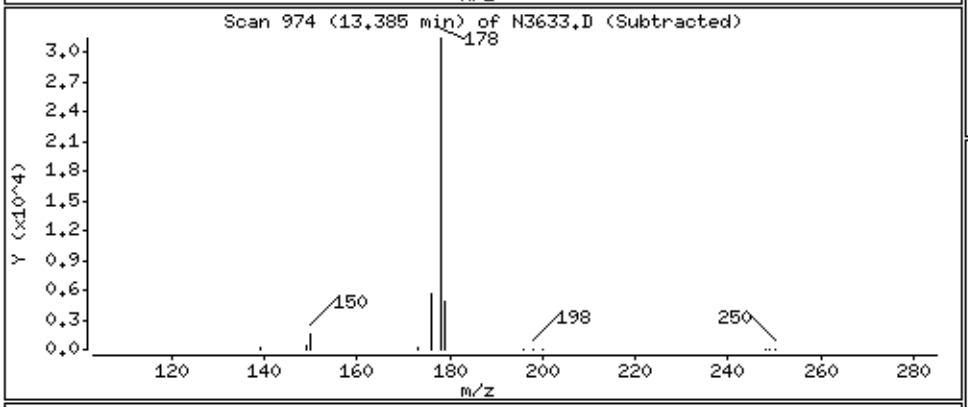
Volume Injected (uL): 1.0 Operator: JCG

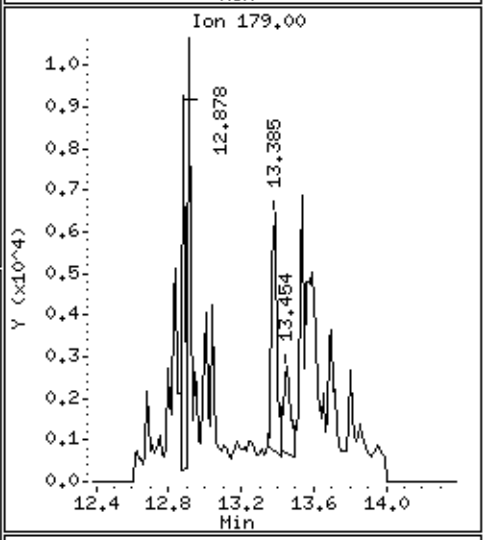
Column phase: ZB5-MS Column diameter: 0.25

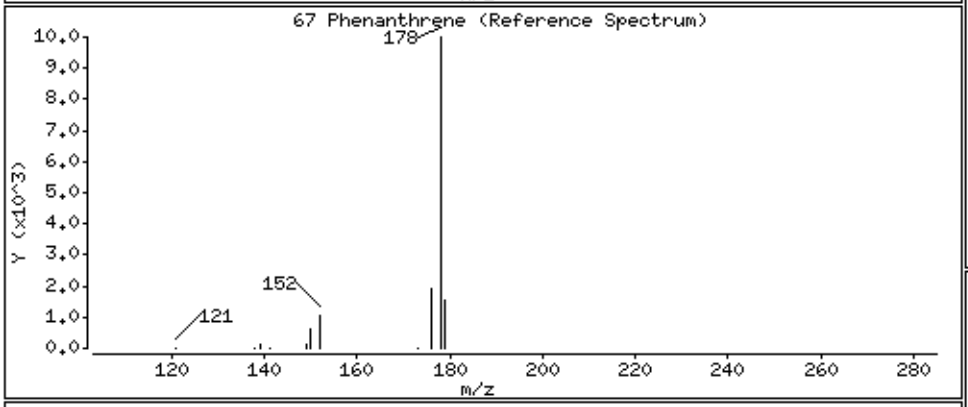
67 Phenanthrene Concentration: 0.240 ug/L

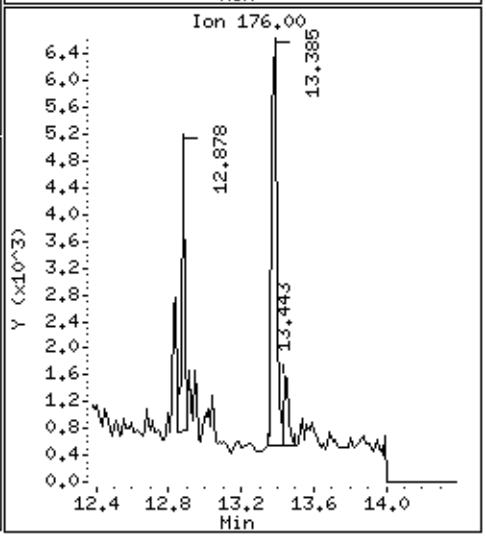


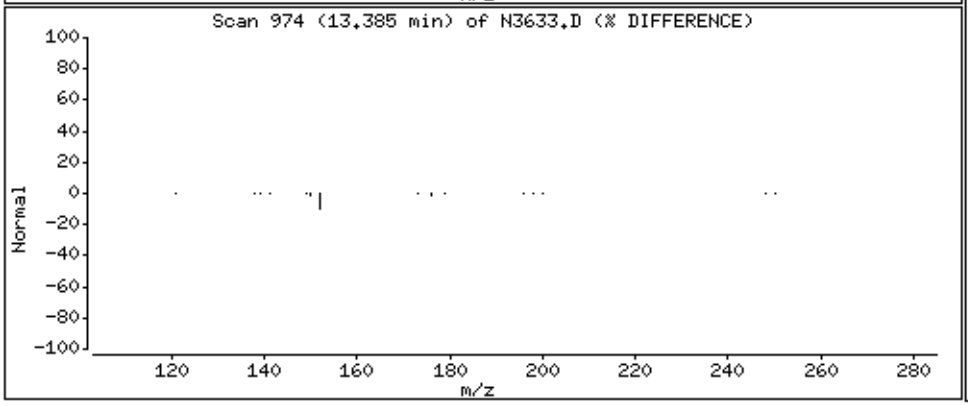












Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3633.D

Date : 29-JUL-2021 00:11

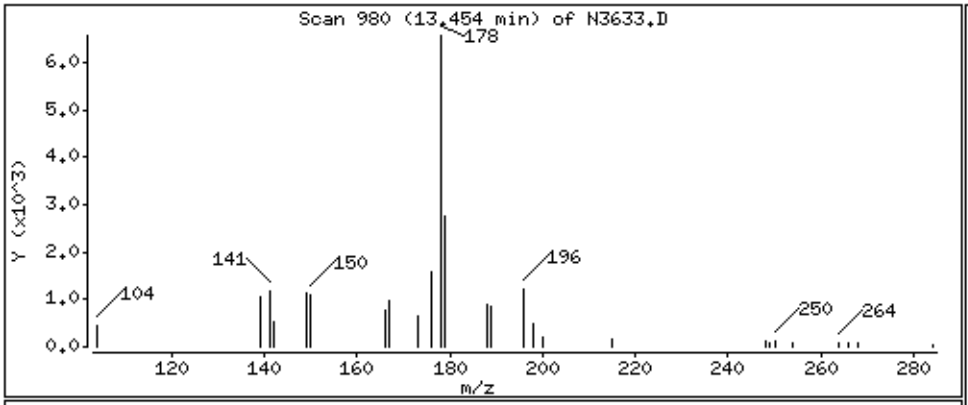
Client ID: MW-05-SUMMER2021 Instrument: gcms-n.i

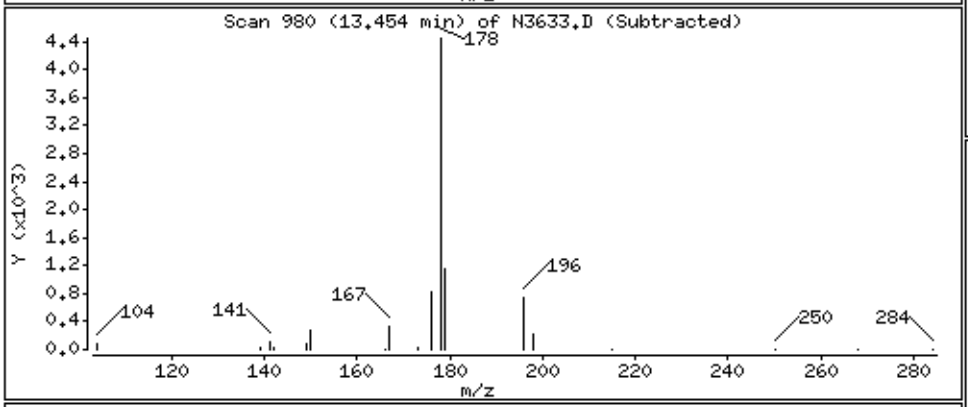
Sample Info: S04723-5

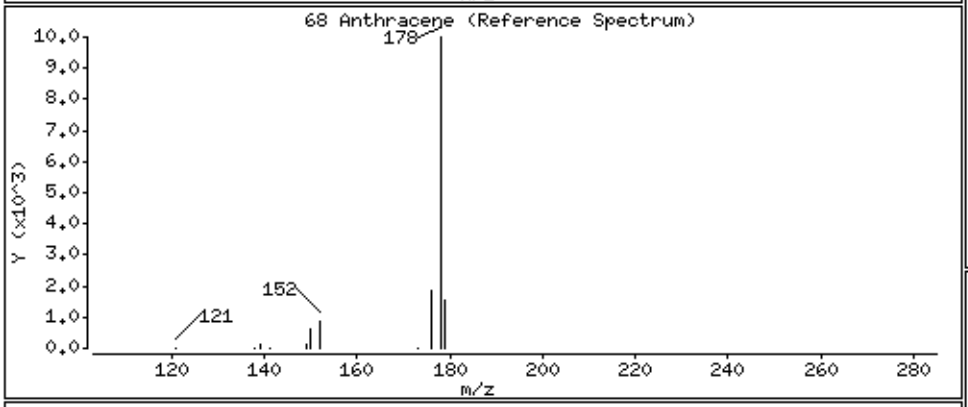
Volume Injected (uL): 1.0 Operator: JCG

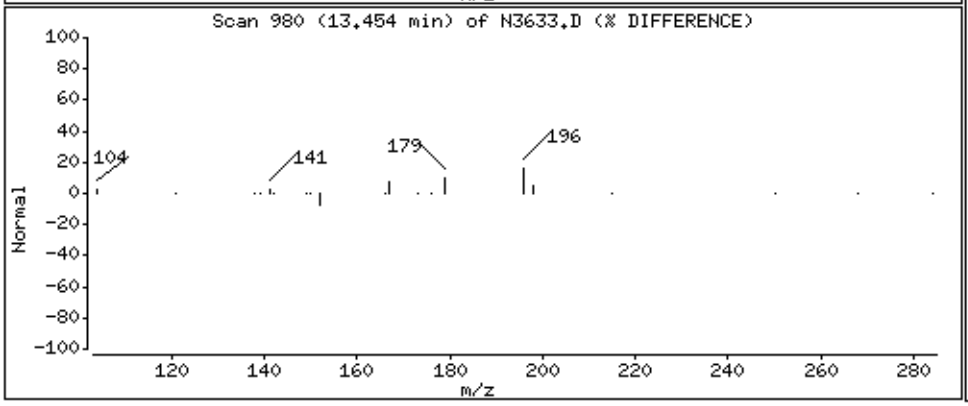
Column phase: ZB5-MS Column diameter: 0.25

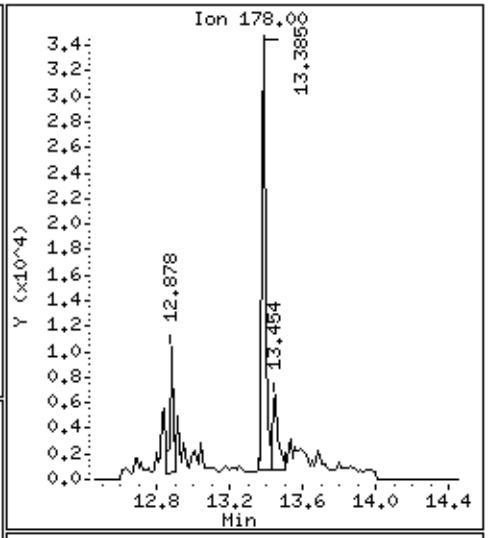
68 Anthracene Concentration: 0.0469 ug/L

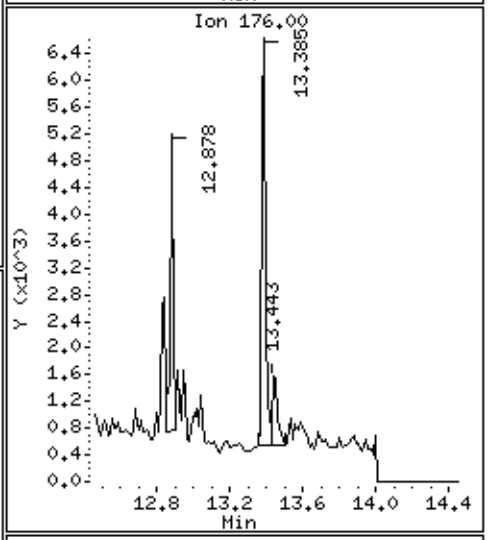


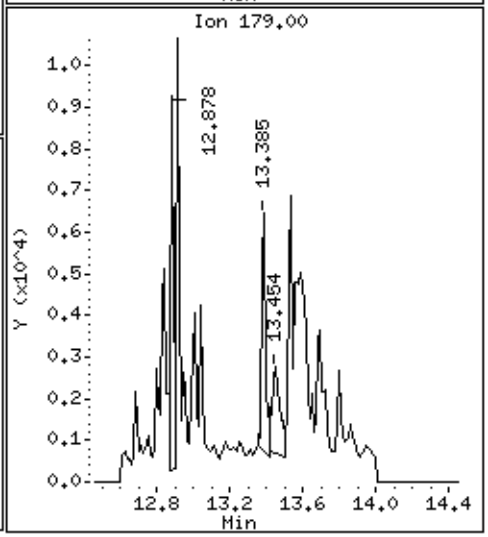












Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-6
Client ID: MW-FD-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: N3634.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 29-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 29-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.10	ug/L	1	.2	0.20	0.064	0.10
2-Methylnaphthalene	U	0.10	ug/L	1	.2	0.20	0.077	0.10
1-Methylnaphthalene	U	0.10	ug/L	1	.2	0.20	0.068	0.10
Acenaphthylene	U	0.10	ug/L	1	.2	0.20	0.054	0.10
Acenaphthene	U	0.10	ug/L	1	.2	0.20	0.064	0.10
Fluorene	U	0.10	ug/L	1	.2	0.20	0.061	0.10
Phenanthrene	U	0.10	ug/L	1	.2	0.20	0.051	0.10
Anthracene	U	0.10	ug/L	1	.2	0.20	0.044	0.10
Fluoranthene	U	0.10	ug/L	1	.2	0.20	0.073	0.10
Pyrene	U	0.10	ug/L	1	.2	0.20	0.059	0.10
Benzo(a)anthracene	U	0.10	ug/L	1	.2	0.20	0.046	0.10
Chrysene	U	0.10	ug/L	1	.2	0.20	0.036	0.10
Benzo(b)Fluoranthene	U	0.10	ug/L	1	.2	0.20	0.089	0.10
Benzo(k)fluoranthene	U	0.10	ug/L	1	.2	0.20	0.049	0.10
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.20	0.066	0.10
Indeno(1,2,3-cd)pyrene	U	0.10	ug/L	1	.2	0.20	0.052	0.10
Dibenzo(a,h)anthracene	U	0.10	ug/L	1	.2	0.20	0.070	0.10
Benzo(g,h,i)perylene	U	0.10	ug/L	1	.2	0.20	0.065	0.10
2-Methylnaphthalene-D10		70.4	%					
Fluorene-D10		64.9	%					
Pyrene-D10		75.3	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029
http://www.katahdinlab.com

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3634.D
Report Date: 29-Jul-2021 15:15

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3634.D
Lab Smp Id: SO4723-6 Client Smp ID: MW-FD-SUMMER2021
Inj Date : 29-JUL-2021 00:45
Operator : JCG Inst ID: gcms-n.i
Smp Info : SO4723-6
Misc Info : WG303306,WG303222,WG303306-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 09:00 cgomez Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27 Cal File: N3623.D
Als bottle: 18
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: sw8270sim+1mn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

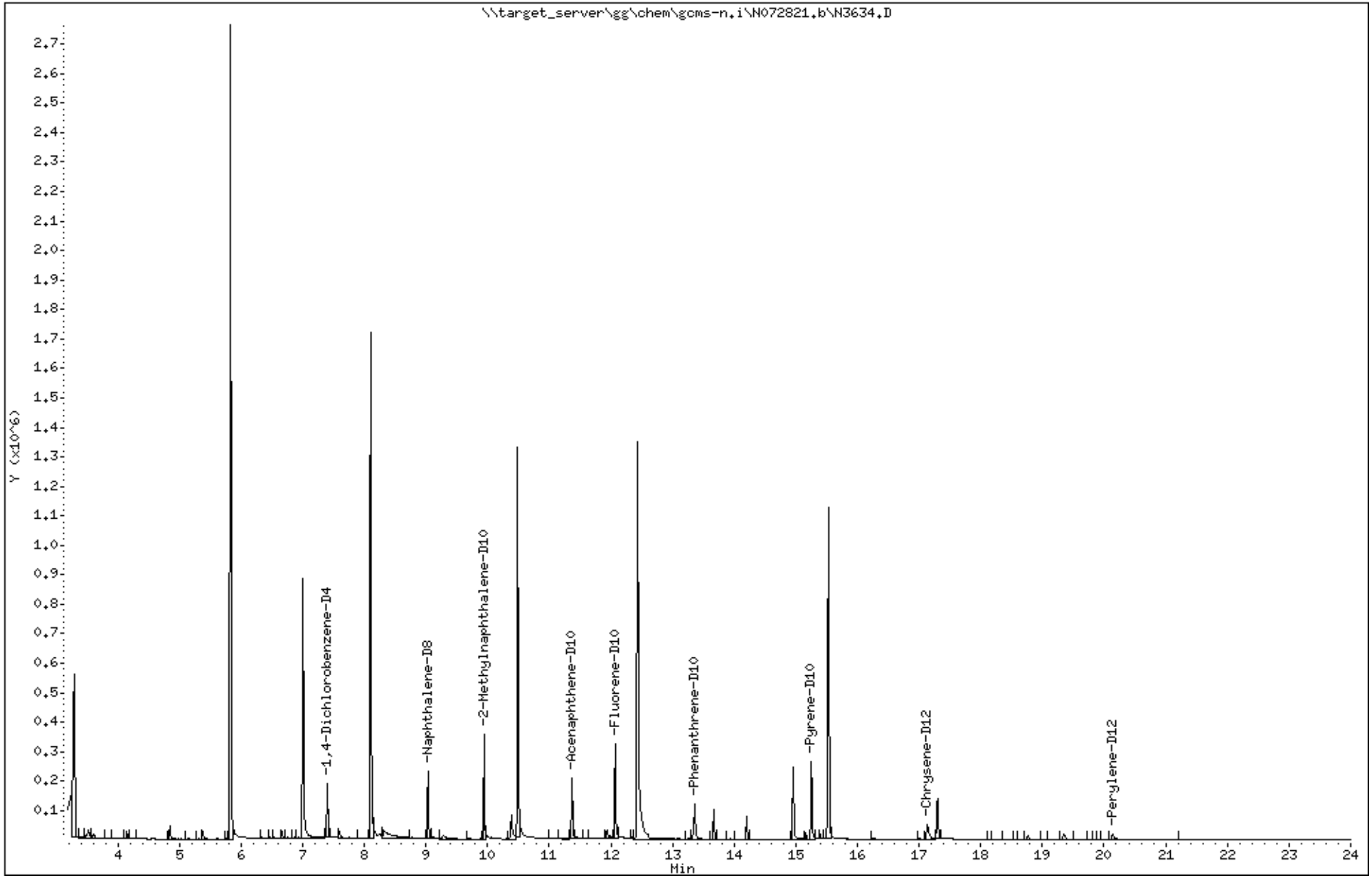
Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	7.400	7.390	(1.000)	60460	0.80000	(aQ)	
*	27 Naphthalene-D8	136	9.033	9.022	(1.000)	203861	0.80000	(a)	
$	33 2-Methylnaphthalene-D10	152	9.938	9.937	(1.100)	190954	1.40789	1.41	
*	48 Acenaphthene-D10	164	11.370	11.369	(1.000)	119203	0.80000	(a)	
$	56 Fluorene-D10	174	12.067	12.067	(1.061)	181795	1.29778	1.30	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	174126	0.80000	(a)	
$	73 Pyrene-D10	212	15.251	15.262	(0.890)	226399	1.50651	1.51	
*	78 Chrysene-D12	240	17.139	17.139	(1.000)	79288	0.80000	(a)	
*	85 Perylene-D12	264	20.139	20.139	(1.000)	49211	0.80000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3634.D
Date : 29-JUL-2021 00:45
Client ID: MW-FD-SUMMER2021
Instrument: gcms-n.i
Sample Info: S04723-6
Volume Injected (uL): 1.0
Operator: JCG
Column phase: ZB5-MS
Column diameter: 0.25



Katahdin Analytical Services 2000033

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-8
Client ID: GW-EB-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: N3635.D

Sample Date: 22-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 29-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 29-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.10	ug/L	1	.2	0.20	0.065	0.10
2-Methylnaphthalene	U	0.10	ug/L	1	.2	0.20	0.078	0.10
1-Methylnaphthalene	U	0.10	ug/L	1	.2	0.20	0.069	0.10
Acenaphthylene	U	0.10	ug/L	1	.2	0.20	0.055	0.10
Acenaphthene	U	0.10	ug/L	1	.2	0.20	0.065	0.10
Fluorene	U	0.10	ug/L	1	.2	0.20	0.062	0.10
Phenanthrene	U	0.10	ug/L	1	.2	0.20	0.052	0.10
Anthracene	U	0.10	ug/L	1	.2	0.20	0.045	0.10
Fluoranthene	U	0.10	ug/L	1	.2	0.20	0.074	0.10
Pyrene	U	0.10	ug/L	1	.2	0.20	0.060	0.10
Benzo(a)anthracene	U	0.10	ug/L	1	.2	0.20	0.047	0.10
Chrysene	U	0.10	ug/L	1	.2	0.20	0.037	0.10
Benzo(b)Fluoranthene	U	0.10	ug/L	1	.2	0.20	0.091	0.10
Benzo(k)fluoranthene	U	0.10	ug/L	1	.2	0.20	0.050	0.10
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.20	0.067	0.10
Indeno(1,2,3-cd)pyrene	U	0.10	ug/L	1	.2	0.20	0.053	0.10
Dibenzo(a,h)anthracene	U	0.10	ug/L	1	.2	0.20	0.071	0.10
Benzo(g,h,i)perylene	U	0.10	ug/L	1	.2	0.20	0.066	0.10
2-Methylnaphthalene-D10		54.8	%					
Fluorene-D10		53.9	%					
Pyrene-D10		74.0	%					

600 Technology Way
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Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3635.D
Report Date: 29-Jul-2021 15:15

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3635.D
Lab Smp Id: SO4723-8 Client Smp ID: GW-EB-SUMMER2021
Inj Date : 29-JUL-2021 01:19
Operator : JCG Inst ID: gcms-n.i
Smp Info : SO4723-8
Misc Info : WG303306,WG303222,WG303306-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 09:00 cgomez Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27 Cal File: N3623.D
Als bottle: 19
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: sw8270sim+1mn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

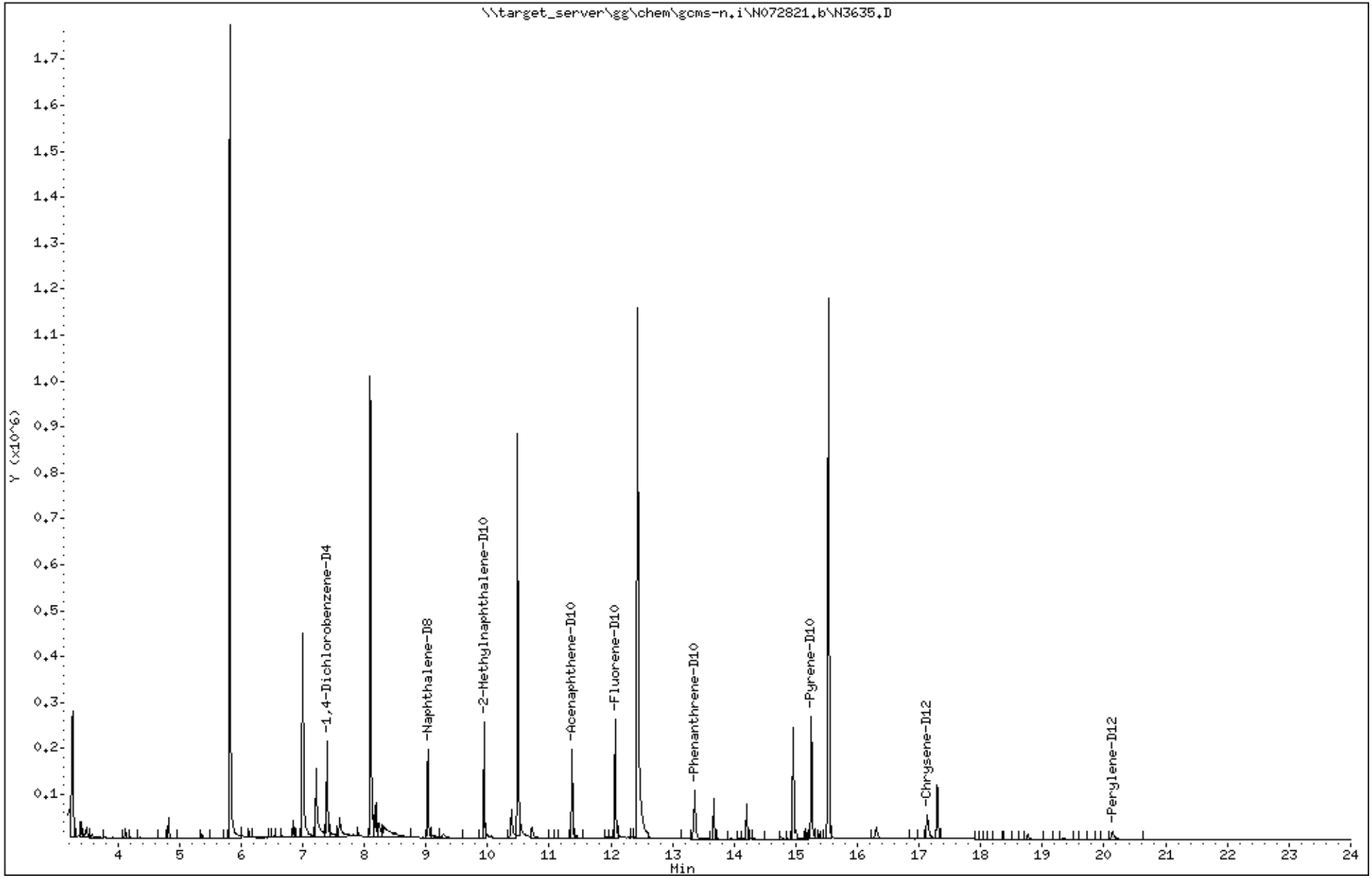
Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	0.98000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	7.390	7.390	(1.000)	56530	0.80000	(aQ)	
*	27 Naphthalene-D8	136	9.033	9.022	(1.000)	189703	0.80000	(a)	
$	33 2-Methylnaphthalene-D10	152	9.938	9.937	(1.100)	138228	1.09520	1.12	
*	48 Acenaphthene-D10	164	11.370	11.369	(1.000)	112201	0.80000	(a)	
$	56 Fluorene-D10	174	12.067	12.067	(1.061)	142226	1.07867	1.10	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	166481	0.80000	(a)	
$	73 Pyrene-D10	212	15.251	15.262	(0.890)	225600	1.48119	1.51	
*	78 Chrysene-D12	240	17.139	17.139	(1.000)	80359	0.80000	(a)	
*	85 Perylene-D12	264	20.139	20.139	(1.000)	45571	0.80000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3635.D
Date : 29-JUL-2021 01:19
Client ID: GW-EB-SUMMER2021
Instrument: gcms-n.i
Sample Info: S04723-8
Volume Injected (uL): 1.0
Operator: JCG
Column phase: ZB5-MS
Column diameter: 0.25



Katahdin Analytical Services 2000036

Standards Data Section

Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SO4723
Project : LO-58 Nike Missile Battery Launch Site
Instrument ID: GCMS-N
Lab File IDs : N3620.D N3619.D N3618.D N3621.D N3622.D N3623.D
Column ID:
Calibration Date(s): 28-JUL-21 15:35, 28-JUL-21 18:27

	Level 1 0.200000(	Level 2 0.500000(	Level 3 2.0000	Level 4 7.0000	Level 5 10.0000	Level 6 15.0000	Crv New	b	m1	m2	%RSD	Max %RSD	
Naphthalene	1.02355	0.94751	1.09469	1.11856	1.00950	1.03036	AVG		1.03736		5.93777	15.00000	O
2-Methylnaphthalene	0.90018	0.74933	0.77426	0.75785	0.67430	0.68498	AVG		0.75682		10.7153	15.00000	O
1-Methylnaphthalene	0.75290	0.64417	0.69734	0.70856	0.63161	0.64724	AVG		0.68030		6.93498	15.00000	O
Acenaphthylene	2.12770	1.94121	2.14214	2.18884	1.98367	2.00841	AVG		2.06533		4.85916	15.00000	O
Acenaphthene	1.32966	1.21069	1.28021	1.32810	1.18306	1.24902	AVG		1.26345		4.78815	15.00000	O
Fluorene	1.40044	1.26464	1.34501	1.40140	1.26852	1.35184	AVG		1.33864		4.52744	15.00000	O
Phenanthrene	1.04442	1.02259	1.12476	1.19588	1.10730	1.12736	AVG		1.10372		5.67363	15.00000	O
Anthracene	1.63108	1.30451	1.26975	1.29719	1.18323	1.13094	AVG		1.30278		13.4152	15.00000	O
Fluoranthene	1.13920	0.99642	1.05835	1.13206	1.01873	1.03162	AVG		1.06273		5.64165	15.00000	O
Pyrene	2.67166	2.40601	2.36732	2.63612	2.29363	2.07568	AVG		2.40840		9.22355	15.00000	O
Benzo(a)anthracene	1.28977	1.10884	1.31308	1.35810	1.27346	1.24544	AVG		1.26478		6.74911	15.00000	O
Chrysene	1.92218	1.68787	1.59403	1.55897	1.41197	1.34135	AVG		1.58606		13.0537	15.00000	O
Benzo(b)fluoranthene	1.14773	1.00338	1.10104	1.29337	1.25425	1.36514	AVG		1.19415		11.2294	15.00000	O
Benzo(k)fluoranthene	2.20861	1.87297	1.89924	2.01410	1.77215	1.83724	AVG		1.93405		8.08710	15.00000	O
Benzo(a)pyrene	1.24975	1.12246	1.19279	1.23475	1.14552	1.22427	AVG		1.19493		4.29173	15.00000	O
Indeno(1,2,3-cd)pyrene	9449	21307	60711	193930	268280	468012	LNR	0.000e+00	0.31440		0.99743	0.99000	O
Dibenzo(a,h)anthracene	0.61222	0.54574	0.66978	0.70599	0.62606	0.67280	AVG		0.63876		8.90016	15.00000	O
Benzo(g,h,i)perylene	0.90035	0.78844	0.84013	0.83848	0.74164	0.76017	AVG		0.81153		7.28750	15.00000	O
2-Methylnaphthalene-D10	0.52345	0.48991	0.58885	0.56694	0.50733	0.51704	AVG		0.53225		7.09490	15.00000	
Fluorene-D10	0.99900	0.88623	0.94993	0.99091	0.89092	0.92375	AVG		0.94012		5.15308	15.00000	
Pyrene-D10	1.68962	1.48498	1.49980	1.65890	1.44982	1.31465	AVG		1.51629		9.17222	15.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3624.D
Report Date: 29-Jul-2021 08:58

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: 021497
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: WG303306-8
Level: LOW Operator: JCG
Data Type: MS DATA SampleType: INDCHECK
SpikeList File: SIM_IND_CHK5.spk Quant Type: ISTD
Sublist File: all.sub
Method File: \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Misc Info: WG303306,WG303306,WG303306-4

SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
2	1,4-Dioxane	5.00	4.68	93.66	80-120
3	N-Nitrosodimethyla	5.00	4.44	88.81	80-120
4	Pyridine	5.00	5.19	103.81	80-120
5	Benzaldehyde	5.00	1.53	30.62*	80-120
7	Bis(2-Chloroethyl)	5.00	4.81	96.12	80-120
6	Phenol	5.00	5.15	103.04	80-120
8	2-Chlorophenol	5.00	4.80	96.12	80-120
9	1,3-Dichlorobenzen	5.00	4.70	93.92	80-120
11	1,4-Dichlorobenzen	5.00	4.80	96.04	80-120
12	1,2-Dichlorobenzen	5.00	4.74	94.85	80-120
14	2,2'-Oxybis(1-chlo	5.00	3.40	68.11*	80-120
13	2-Methylphenol	5.00	5.09	101.75	80-120
15	Acetophenone	5.00	4.82	96.42	80-120
16	N-Nitroso-di-n-pro	5.00	4.56	91.13	80-120
18	Hexachloroethane	5.00	4.80	95.92	80-120
17	3&4-Methylphenol	5.00	4.96	99.11	80-120
19	Nitrobenzene	5.00	5.10	102.01	80-120
20	Isophorone	5.00	4.87	97.35	80-120
21	2-Nitrophenol	5.00	4.76	95.32	80-120
22	2,4-Dimethylphenol	5.00	4.46	89.24	80-120
23	bis(2-Chloroethoxy	5.00	4.54	90.80	80-120
24	Benzoic acid	5.00	6.89	137.76*	80-120
25	2,4-Dichlorophenol	5.00	4.81	96.28	80-120
26	1,2,4-Trichloroben	5.00	5.04	100.81	80-120
28	Naphthalene	5.00	4.83	96.67	80-120
29	4-Chloroaniline	5.00	4.70	94.11	80-120
30	Hexachlorobutadien	5.00	4.81	96.17	80-120
31	Caprolactam	5.00	4.59	91.85	80-120
34	2-Methylnaphthalen	5.00	4.42	88.36	80-120
32	4-Chloro-3-Methylp	5.00	4.76	95.28	80-120
35	1-Methylnaphthalen	5.00	4.77	95.32	80-120
37	1,2,4,5-Tetrachlor	5.00	4.80	96.09	80-120
36	Hexachlorocyclopen	5.00	3.70	73.91*	80-120
39	2,4,6-Trichlorophe	5.00	4.77	95.44	80-120
40	2,4,5-Trichlorophe	5.00	4.76	95.30	80-120
42	2-Chloronaphthalen	5.00	5.00	100.09	80-120
41	1,1'-Biphenyl	5.00	4.83	96.56	80-120
43	2-Nitroaniline	5.00	4.70	94.08	80-120
44	Dimethyl Phthalate	5.00	5.06	101.22	80-120
46	Acenaphthylene	5.00	4.26	85.27	80-120

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3624.D
Report Date: 29-Jul-2021 08:58

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
45 2,6-Dinitrotoluene	5.00	4.93	98.59	80-120
49 Acenaphthene	5.00	4.77	95.50	80-120
47 3-Nitroaniline	5.00	3.92	78.36*	80-120
50 2,4-Dinitrophenol	5.00	5.04	100.75	80-120
52 Dibenzofuran	5.00	4.82	96.40	80-120
53 2,4-Dinitrotoluene	5.00	4.50	90.07	80-120
54 2,3,4,6-Tetrachlor	5.00	4.09	81.75	80-120
51 4-Nitrophenol	5.00	2.98	59.61*	80-120
55 Diethylphthalate	5.00	4.96	99.28	80-120
57 Fluorene	5.00	4.69	93.86	80-120
58 4-Chlorophenyl-phe	5.00	4.71	94.19	80-120
60 4,6-Dinitro-2-Meth	5.00	4.96	99.16	80-120
59 4-Nitroaniline	5.00	4.44	88.82	80-120
61 N-Nitrosodiphenyla	5.00	3.93	78.62*	80-120
62 4-Bromophenyl-phen	5.00	4.35	87.00	80-120
63 Hexachlorobenzene	5.00	4.27	85.38	80-120
64 Atrazine	5.00	4.62	92.39	80-120
65 Pentachlorophenol	5.00	5.03	100.64	80-120
67 Phenanthrene	5.00	4.82	96.39	80-120
68 Anthracene	5.00	4.59	91.83	80-120
69 Carbazole	5.00	5.18	103.51	80-120
70 Di-n-butylphthalat	5.00	4.99	99.77	80-120
72 Fluoranthene	5.00	4.90	97.95	80-120
74 Pyrene	5.00	4.32	86.50	80-120
75 Butylbenzylphthala	5.00	4.68	93.62	80-120
77 Benzo(a)anthracene	5.00	4.40	87.98	80-120
79 Chrysene	5.00	4.68	93.65	80-120
76 3,3'-Dichlorobenzi	5.00	2.98	59.56*	80-120
80 bis(2-Ethylhexyl)p	5.00	4.63	92.59	80-120
81 Di-n-octylphthalat	5.00	4.64	92.78	80-120
82 Benzo(b)fluoranthe	5.00	4.73	94.53	80-120
83 Benzo(k)fluoranthe	5.00	4.87	97.40	80-120
84 Benzo(a)pyrene	5.00	3.92	78.37*	80-120
86 Indeno(1,2,3-cd)py	5.00	4.49	89.83	80-120
87 Dibenzo(a,h)anthra	5.00	4.71	94.12	80-120
88 Benzo(g,h,i)peryle	5.00	4.42	88.34	80-120

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 1,4-Dioxane-d8	2.00	0.000	*	26-115
$ 33 2-Methylnaphthale	2.00	0.000	*	43-92
$ 38 2,4-Dibromophenol	4.00	0.000	*	10-130
$ 56 Fluorene-D10	2.00	0.000	*	29-101
$ 71 Flouranthene-d10	2.00	0.000	*	30-150
$ 73 Pyrene-D10	2.00	0.000	*	53-166

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3618.D
Report Date: 29-Jul-2021 10:25

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Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3618.D
Lab Smp Id: WG303306-4
Inj Date : 28-JUL-2021 15:35
Operator : JCG   Inst ID: gcms-n.i
Smp Info : WG303306-4
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 09:00 cgomez   Quant Type: ISTD
Cal Date : 28-JUL-2021 15:35   Cal File: N3618.D
Als bottle: 2   Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
$	1 1,4-Dioxane-d8	96	3.480	3.427	(0.471)	65098	2.00000	2.01	
	2 1,4-Dioxane	88	3.522	3.480	(0.477)	69646	2.00000	1.98	
	3 N-Nitrosodimethylamine	74	3.963	3.921	(0.536)	93379	2.00000	1.96	
	4 Pyridine	79	4.015	3.952	(0.543)	135853	2.00000	1.98	
	5 Benzaldehyde	77	6.837	6.826	(0.925)	102234	2.00000	2.33	
	6 Phenol	94	7.028	7.017	(0.951)	458516	4.50000	4.62	
	7 Bis(2-Chloroethyl)ether	93	7.068	7.068	(0.956)	173865	2.00000	1.99	
	8 2-Chlorophenol	128	7.149	7.138	(0.967)	440452	4.50000	4.40	
	9 1,3-Dichlorobenzene	146	7.320	7.319	(0.990)	211765	2.00000	2.01	
*	10 1,4-Dichlorobenzene-D4	152	7.390	7.390	(1.000)	56073	0.80000	(aQ)	
	11 1,4-Dichlorobenzene	146	7.410	7.410	(1.003)	213195	2.00000	2.01	
	12 1,2-Dichlorobenzene	146	7.601	7.601	(1.029)	203247	2.00000	2.03	
	13 2-Methylphenol	108	7.773	7.772	(1.052)	355166	4.50000	4.22	
	14 2,2'-Oxybis(1-chloropropane)	45	7.762	7.752	(1.050)	226641	2.00000	2.01(Q)	
	15 Acetophenone	105	7.913	7.903	(0.877)	216881	2.00000	2.16	
	16 N-Nitroso-di-n-propylamine	70	7.924	7.933	(1.072)	110591	2.00000	1.96	
	17 3&4-Methylphenol	108	7.974	7.984	(1.079)	377501	4.50000	4.48	
	18 Hexachloroethane	117	8.034	8.024	(1.087)	76020	2.00000	2.02	
	19 Nitrobenzene	77	8.115	8.115	(0.899)	173788	2.00000	2.12	
	20 Isophorone	82	8.434	8.445	(0.935)	330611	2.00000	2.24	
	21 2-Nitrophenol	139	8.541	8.541	(0.947)	220222	4.50000	4.67	

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3618.D
Report Date: 29-Jul-2021 10:25

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	22 2,4-Dimethylphenol	107	8.648	8.648	(0.959)	408094	4.50000	4.80	
	23 bis(2-Chloroethoxy)methane	93	8.744	8.744	(0.969)	201164	2.00000	2.10	
	24 Benzoic acid	105	8.787	8.851	(0.974)	151061	4.50000	5.44	
	25 2,4-Dichlorophenol	162	8.883	8.883	(0.985)	332867	4.50000	4.82	
	26 1,2,4-Trichlorobenzene	180	8.969	8.969	(0.994)	146232	2.00000	2.12	
*	27 Naphthalene-D8	136	9.022	9.022	(1.000)	190665	0.80000	(a)	
	28 Naphthalene	128	9.055	9.054	(1.004)	521800	2.00000	2.11	
	29 4-Chloroaniline	127	9.161	9.161	(1.015)	171853	2.00000	2.19	
	30 Hexachlorobutadiene	225	9.247	9.247	(1.025)	71403	2.00000	2.11	
	31 Caprolactam	113	9.613	9.652	(1.065)	46163	2.00000	1.88	
	32 4-Chloro-3-Methylphenol	107	9.849	9.859	(1.092)	341338	4.50000	4.82	
$	33 2-Methylnaphthalene-D10	152	9.938	9.937	(1.101)	280684	2.00000	2.21	
	34 2-Methylnaphthalene	142	9.977	9.977	(1.106)	369063	2.00000	2.05	
	35 1-Methylnaphthalene	142	10.105	10.105	(1.120)	332394	2.00000	2.05	
	36 Hexachlorocyclopentadiene	237	10.213	10.213	(0.898)	58021	2.00000	1.78	
	37 1,2,4,5-Tetrachlorobenzene	216	10.213	10.213	(0.898)	139567	2.00000	2.10	
$	38 2,4-Dibromophenol	252	10.371	10.371	(0.912)	67031	2.00000	2.01	
	39 2,4,6-Trichlorophenol	196	10.390	10.390	(0.914)	212915	4.50000	4.87	
	40 2,4,5-Trichlorophenol	196	10.449	10.459	(0.919)	266202	4.50000	4.61	
	41 1,1'-Biphenyl	154	10.607	10.607	(0.933)	403459	2.00000	2.13	
	42 2-Chloronaphthalene	164	10.618	10.629	(0.934)	106393	2.00000	2.06	
	43 2-Nitroaniline	65	10.781	10.792	(0.948)	75306	2.00000	1.86	
	44 Dimethyl Phthalate	163	11.043	11.053	(0.971)	794663	4.50000	4.41	
	45 2,6-Dinitrotoluene	165	11.108	11.119	(0.977)	87579	2.00000	2.09	
	46 Acenaphthylene	152	11.174	11.173	(0.983)	546395	2.00000	2.07	
	47 3-Nitroaniline	138	11.337	11.359	(0.997)	47117	2.00000	2.42(M)	M9
*	48 Acenaphthene-D10	164	11.370	11.369	(1.000)	102028	0.80000	(a)	
	49 Acenaphthene	153	11.402	11.413	(1.003)	326542	2.00000	2.03	
	50 2,4-Dinitrophenol	184	11.490	11.489	(1.011)	58308	4.50000	4.35	
	51 4-Nitrophenol	109	11.642	11.664	(1.024)	79125	4.50000	4.16(QMH)	
	52 Dibenzofuran	168	11.642	11.642	(1.024)	437511	2.00000	2.07	
	53 2,4-Dinitrotoluene	165	11.653	11.653	(1.025)	100982	2.00000	1.84	
	54 2,3,4,6-Tetrachlorophenol	232	11.849	11.849	(1.042)	169546	4.50000	4.52	
	55 Diethylphthalate	149	11.991	12.001	(1.055)	826831	4.50000	4.40	
$	56 Fluorene-D10	174	12.067	12.067	(1.061)	242299	2.00000	2.02	
	57 Fluorene	166	12.100	12.110	(1.064)	343071	2.00000	2.01	
	58 4-Chlorophenyl-phenylether	204	12.122	12.121	(1.066)	158260	2.00000	1.99	
	59 4-Nitroaniline	138	12.209	12.187	(1.074)	41972	2.00000	1.88	
	60 4,6-Dinitro-2-Methylphenol	198	12.209	12.208	(0.914)	93022	4.50000	4.36	
	61 N-Nitrosodiphenylamine	169	12.285	12.285	(0.920)	277946	2.00000	2.10	
	62 4-Bromophenyl-phenylether	248	12.773	12.773	(0.957)	79256	2.00000	1.92	
	63 Hexachlorobenzene	284	12.854	12.854	(0.963)	71372	2.00000	1.99	
	64 Atrazine	200	13.039	13.039	(0.977)	78580	2.00000	2.21	
	65 Pentachlorophenol	266	13.154	13.142	(0.985)	100004	4.50000	5.19	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	145626	0.80000	(a)	
	67 Phenanthrene	178	13.385	13.385	(1.003)	409485	2.00000	2.04	
	68 Anthracene	178	13.454	13.454	(1.008)	462271	2.00000	1.95	
	69 Carbazole	167	13.685	13.685	(1.025)	315739	2.00000	2.17	
	70 Di-n-butylphthalate	149	14.197	14.196	(1.063)	1388993	4.50000	4.51	
$	71 Flouranthene-d10	212	14.963	14.963	(1.121)	284004	2.00000	2.01	
	72 Fluoranthene	202	14.985	14.985	(1.122)	385310	2.00000	1.99	
$	73 Pyrene-D10	212	15.263	15.262	(0.891)	254471	2.00000	1.98	
	74 Pyrene	202	15.285	15.285	(0.892)	401663	2.00000	1.96	
	75 Butylbenzylphthalate	149	16.262	16.262	(0.949)	514310	4.50000	4.38	

3:29 pm, Jul 29, 2021

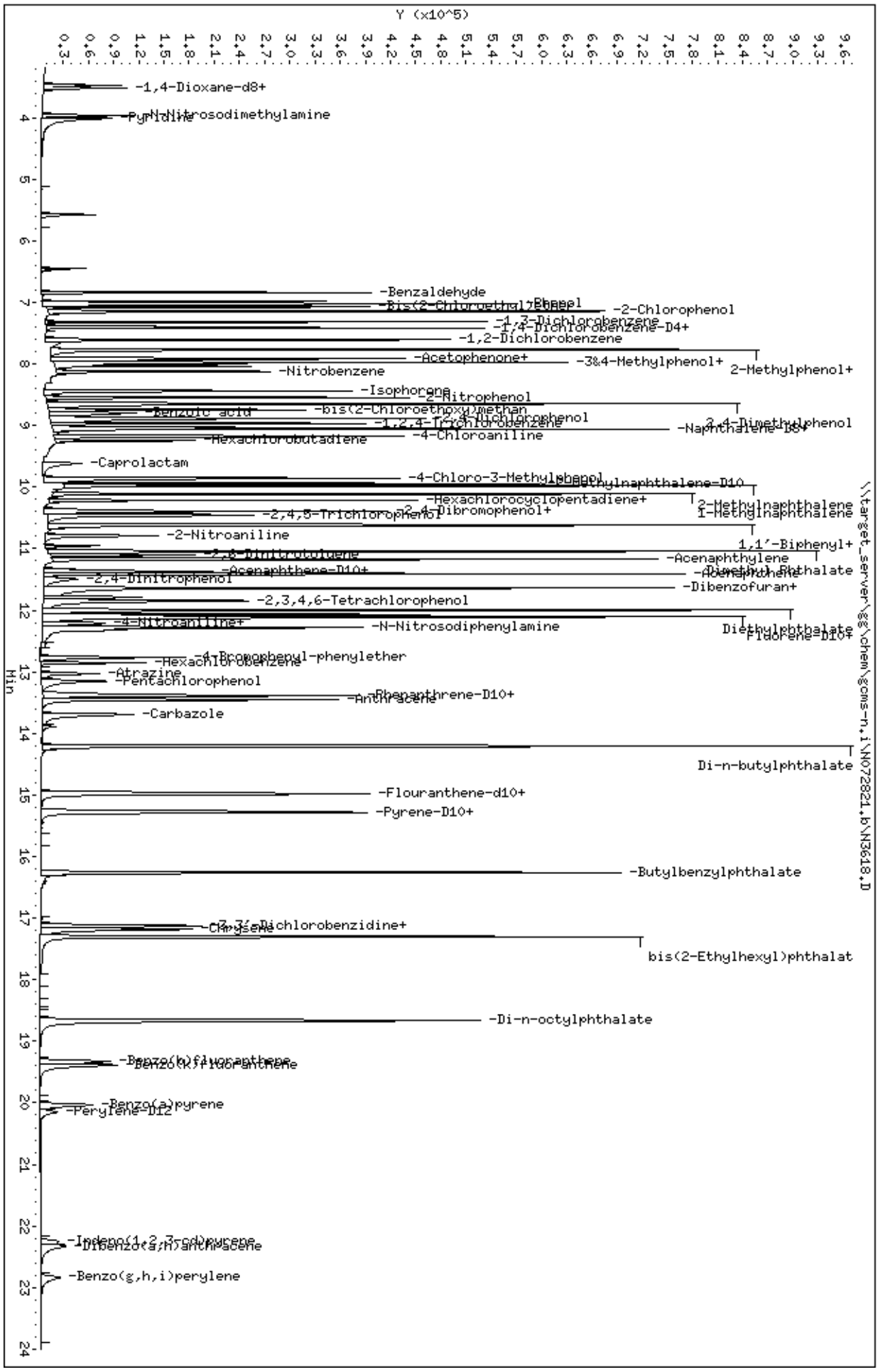
Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3618.D
Report Date: 29-Jul-2021 10:25

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	76 3,3'-Dichlorobenzidine	252	17.150	17.128	(1.001)	47369	2.00000	2.17	
	77 Benzo(a)anthracene	228	17.128	17.117	(0.999)	222791	2.00000	2.08	
*	78 Chrysene-D12	240	17.139	17.139	(1.000)	67868	0.80000	(a)	
	79 Chrysene	228	17.183	17.183	(1.003)	270459	2.00000	2.01	
	80 bis(2-Ethylhexyl)phthalate	149	17.306	17.305	(1.010)	785214	4.50000	4.60	
	81 Di-n-octylphthalate	149	18.669	18.657	(1.089)	1168758	4.50000	4.73	
	82 Benzo(b)fluoranthene	252	19.331	19.320	(0.959)	142070	2.00000	1.84	
	83 Benzo(k)fluoranthene	252	19.387	19.376	(0.962)	245064	2.00000	1.96(H)	
	84 Benzo(a)pyrene	252	20.027	20.016	(0.994)	153909	2.00000	2.00	
*	85 Perylene-D12	264	20.151	20.139	(1.000)	51613	0.80000	(a)	
	86 Indeno(1,2,3-cd)pyrene	276	22.250	22.227	(1.298)	60711	2.00000	2.28(M)	M3
	87 Dibenzo(a,h)anthracene	278	22.329	22.306	(1.108)	86423	2.00000	2.10	
	88 Benzo(g,h,i)perylene	276	22.834	22.811	(1.133)	108404	2.00000	2.07	
M	89 Total PAHs	100				5387825	36.0000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

3:29 pm, Jul 29, 2021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Client ID:
Sample Info: WG303306-4
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
Y (x10^5)
Min
\\target_server\gg\chem\gcms-n,i\N072821,b\N3618,D
-1,4-Dioxane-d8+
-Pyridine
-N-Nitrosodimethylamine
-Benzaldehyde
-Phenol
-2-Chlorophenol
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-Acetophenone+
-3&4-Methylphenol+
2-Methylphenol+
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-Benzoic acid
-bis(2-Chloroethoxy)methan
-2,4-Dichlorophenol
-1,2,4-Trichlorobenzene
2,4-Dimethylphenol
-Naphthalene-D8+
-Hexachlorobutadiene
-4-Chloroaniline
-Caprolactam
-4-Chloro-3-Methylphenol
-2-Methylnaphthalene-D10
-Hexachlorocyclopentadiene+
2-Methylnaphthalene
-2,4,6-Trichlorophenol
-2,4-Dibromophenol+
1-Methylnaphthalene
-2-Nitroaniline
1,1'-Biphenyl+
-2,6-Dinitrotoluene
-Acenaphthylene
-Acenaphthene-D10+
-Acenaphthene
-2,4-Dinitrophenol
-Dibenzofuran+
-2,3,4,6-Tetrachlorophenol
-4-Nitroaniline+
-N-Nitrosodiphenylamine
Diethylphthalate
Fluorene-D10+
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
Di-n-butylphthalate
-Flouranthene-d10+
-Pyrene-D10+
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-Chrysene
bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene
-Benzo(k)fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene
-Dibenzo(a,h)anthracene
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3619.D
Report Date: 29-Jul-2021 10:25

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Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3619.D
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Inj Date : 28-JUL-2021 16:07
Operator : JCG   Inst ID: gcms-n.i
Smp Info : WG303306-3
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 09:00 cgomez   Quant Type: ISTD
Cal Date : 28-JUL-2021 16:07   Cal File: N3619.D
Als bottle: 3   Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
$	1 1,4-Dioxane-d8	96	3.501	3.427	(0.474)	15912	0.50000	0.479(a)	
	2 1,4-Dioxane	88	3.543	3.480	(0.479)	17133	0.50000	0.475(a)	
	3 N-Nitrosodimethylamine	74	3.994	3.921	(0.541)	22915	0.50000	0.470	
	4 Pyridine	79	4.131	3.952	(0.559)	24435	0.50000	0.350	
	5 Benzaldehyde	77	6.836	6.826	(0.925)	27881	0.50000	0.616	
	6 Phenol	94	7.028	7.017	(0.951)	212560	2.00000	2.09	
	7 Bis(2-Chloroethyl)ether	93	7.078	7.068	(0.958)	42643	0.50000	0.476	
	8 2-Chlorophenol	128	7.148	7.138	(0.967)	212933	2.00000	2.08	
	9 1,3-Dichlorobenzene	146	7.319	7.319	(0.990)	51682	0.50000	0.480	
*	10 1,4-Dichlorobenzene-D4	152	7.390	7.390	(1.000)	57441	0.80000	(a)	
	11 1,4-Dichlorobenzene	146	7.410	7.410	(1.003)	51368	0.50000	0.474	
	12 1,2-Dichlorobenzene	146	7.611	7.601	(1.030)	49534	0.50000	0.484	
	13 2-Methylphenol	108	7.772	7.772	(1.052)	165807	2.00000	1.92	
	14 2,2'-Oxybis(1-chloropropane)	45	7.762	7.752	(1.050)	55026	0.50000	0.477(Q)	
	15 Acetophenone	105	7.913	7.903	(0.876)	49109	0.50000	0.430	
	16 N-Nitroso-di-n-propylamine	70	7.933	7.933	(1.074)	24622	0.50000	0.426	
	17 3&4-Methylphenol	108	7.974	7.984	(1.079)	169723	2.00000	1.97	
	18 Hexachloroethane	117	8.034	8.024	(1.087)	18581	0.50000	0.482	
	19 Nitrobenzene	77	8.125	8.115	(0.899)	45422	0.50000	0.486	
	20 Isophorone	82	8.445	8.445	(0.935)	69548	0.50000	0.414	
	21 2-Nitrophenol	139	8.541	8.541	(0.946)	102417	2.00000	1.91	

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3619.D
Report Date: 29-Jul-2021 10:25

							AMOUNTS		
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	22 2,4-Dimethylphenol	107	8.648	8.648	(0.957)	181926	2.00000	1.88	
	23 bis(2-Chloroethoxy)methane	93	8.744	8.744	(0.968)	39680	0.50000	0.364	
	24 Benzoic acid	105	8.873	8.851	(0.982)	29597	2.00000	0.935(a)	
	25 2,4-Dichlorophenol	162	8.883	8.883	(0.983)	149039	2.00000	1.90	
	26 1,2,4-Trichlorobenzene	180	8.969	8.969	(0.993)	37723	0.50000	0.479	
*	27 Naphthalene-D8	136	9.033	9.022	(1.000)	217184	0.80000	(a)	
	28 Naphthalene	128	9.054	9.054	(1.002)	128615	0.50000	0.457	
	29 4-Chloroaniline	127	9.172	9.161	(1.015)	43071	0.50000	0.481(a)	
	30 Hexachlorobutadiene	225	9.258	9.247	(1.025)	17112	0.50000	0.443	
	31 Caprolactam	113	9.632	9.652	(1.066)	8919	0.50000	0.320	
	32 4-Chloro-3-Methylphenol	107	9.849	9.859	(1.090)	155133	2.00000	1.92	
$	33 2-Methylnaphthalene-D10	152	9.937	9.937	(1.100)	66500	0.50000	0.460(a)	
	34 2-Methylnaphthalene	142	9.977	9.977	(1.104)	101714	0.50000	0.495	
	35 1-Methylnaphthalene	142	10.105	10.105	(1.119)	87439	0.50000	0.473	
	36 Hexachlorocyclopentadiene	237	10.213	10.213	(0.898)	12633	0.50000	0.369	
	37 1,2,4,5-Tetrachlorobenzene	216	10.213	10.213	(0.898)	33921	0.50000	0.488	
$	38 2,4-Dibromophenol	252	10.371	10.371	(0.912)	16339	0.50000	0.468(aQ)	
	39 2,4,6-Trichlorophenol	196	10.390	10.390	(0.914)	82128	2.00000	1.79	
	40 2,4,5-Trichlorophenol	196	10.449	10.459	(0.919)	134647	2.00000	2.22	
	41 1,1'-Biphenyl	154	10.607	10.607	(0.933)	98734	0.50000	0.497	
	42 2-Chloronaphthalene	164	10.629	10.629	(0.935)	26154	0.50000	0.482	
	43 2-Nitroaniline	65	10.781	10.792	(0.948)	16857	0.50000	0.398	
	44 Dimethyl Phthalate	163	11.043	11.053	(0.971)	350419	2.00000	1.85	
	45 2,6-Dinitrotoluene	165	11.108	11.119	(0.977)	19467	0.50000	0.444	
	46 Acenaphthylene	152	11.173	11.173	(0.983)	129742	0.50000	0.470	
	47 3-Nitroaniline	138	11.337	11.359	(0.997)	12223	0.50000	0.599(M)	M9
*	48 Acenaphthene-D10	164	11.369	11.369	(1.000)	106937	0.80000	(a)	
	49 Acenaphthene	153	11.402	11.413	(1.003)	80917	0.50000	0.479	
	50 2,4-Dinitrophenol	184	11.489	11.489	(1.011)	17778	2.00000	1.33	
	51 4-Nitrophenol	109	11.642	11.664	(1.024)	30462	2.00000	1.58(QM)	M6
	52 Dibenzofuran	168	11.642	11.642	(1.024)	106340	0.50000	0.480	
	53 2,4-Dinitrotoluene	165	11.653	11.653	(1.025)	21632	0.50000	0.377(Q)	
	54 2,3,4,6-Tetrachlorophenol	232	11.849	11.849	(1.042)	70891	2.00000	1.80	
	55 Diethylphthalate	149	11.991	12.001	(1.055)	367925	2.00000	1.87	
$	56 Fluorene-D10	174	12.067	12.067	(1.061)	59232	0.50000	0.471(a)	
	57 Fluorene	166	12.100	12.110	(1.064)	84523	0.50000	0.472	
	58 4-Chlorophenyl-phenylether	204	12.121	12.121	(1.066)	39431	0.50000	0.473	
	59 4-Nitroaniline	138	12.230	12.187	(1.076)	11124	0.50000	0.475	
	60 4,6-Dinitro-2-Methylphenol	198	12.198	12.208	(0.914)	32248	2.00000	1.57(Q)	
	61 N-Nitrosodiphenylamine	169	12.285	12.285	(0.920)	65012	0.50000	0.490	
	62 4-Bromophenyl-phenylether	248	12.773	12.773	(0.957)	20598	0.50000	0.500	
	63 Hexachlorobenzene	284	12.854	12.854	(0.963)	17530	0.50000	0.489	
	64 Atrazine	200	13.027	13.039	(0.976)	16485	0.50000	0.463	
	65 Pentachlorophenol	266	13.142	13.142	(0.984)	35691	2.00000	1.85(M)	M9
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	145729	0.80000	(a)	
	67 Phenanthrene	178	13.373	13.385	(1.002)	93138	0.50000	0.463	
	68 Anthracene	178	13.442	13.454	(1.007)	118816	0.50000	0.501	
	69 Carbazole	167	13.685	13.685	(1.025)	78289	0.50000	0.537(M)	M9
	70 Di-n-butylphthalate	149	14.196	14.196	(1.063)	588740	2.00000	1.91	
$	71 Flouranthene-d10	212	14.951	14.963	(1.120)	66811	0.50000	0.472(a)	
	72 Fluoranthene	202	14.974	14.985	(1.122)	90755	0.50000	0.469	
$	73 Pyrene-D10	212	15.251	15.262	(0.889)	59389	0.50000	0.490(a)	
	74 Pyrene	202	15.285	15.285	(0.891)	96224	0.50000	0.500	
	75 Butylbenzylphthalate	149	16.262	16.262	(0.948)	215176	2.00000	1.94	

3:29 pm, Jul 29, 2021

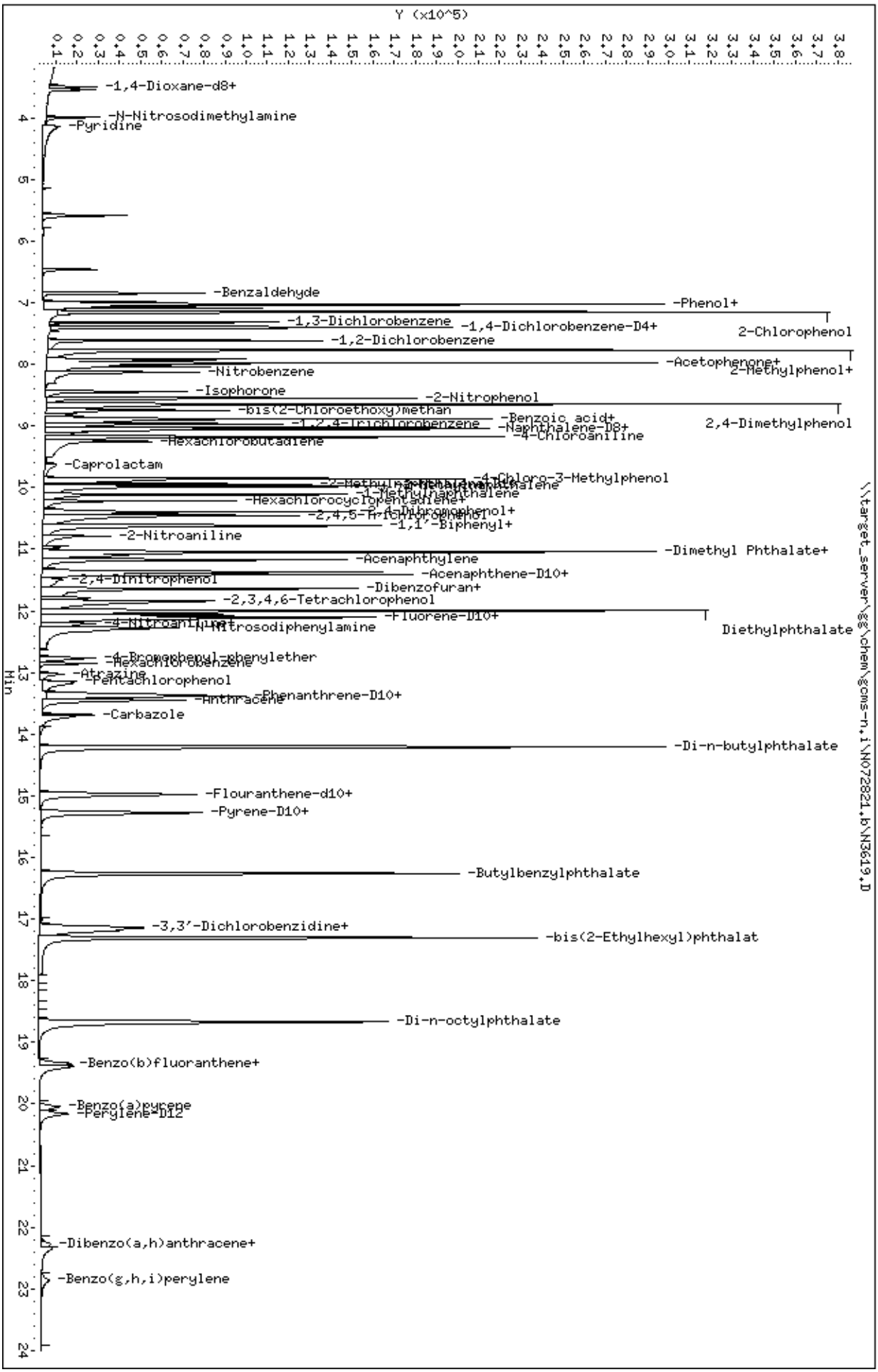
Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3619.D
Report Date: 29-Jul-2021 10:25

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	76	3,3'-Dichlorobenzidine	252	17.161	17.128	(1.001)	10480	0.50000	0.459(Q)	
	77	Benzo(a)anthracene	228	17.128	17.117	(0.999)	44346	0.50000	0.438	
*	78	Chrysene-D12	240	17.150	17.139	(1.000)	63989	0.80000	(a)	
	79	Chrysene	228	17.194	17.183	(1.003)	67503	0.50000	0.532	
	80	bis(2-Ethylhexyl)phthalate	149	17.305	17.305	(1.009)	316747	2.00000	1.97	
	81	Di-n-octylphthalate	149	18.668	18.657	(1.089)	463594	2.00000	1.99	
	82	Benzo(b)fluoranthene	252	19.342	19.320	(0.959)	29204	0.50000	0.420	
	83	Benzo(k)fluoranthene	252	19.398	19.376	(0.962)	54514	0.50000	0.484(M)	M6
	84	Benzo(a)pyrene	252	20.038	20.016	(0.994)	32670	0.50000	0.470	
*	85	Perylene-D12	264	20.162	20.139	(1.000)	46569	0.80000	(a)	
	86	Indeno(1,2,3-cd)pyrene	276	22.272	22.227	(1.299)	21307	0.50000	0.847(H)	
	87	Dibenzo(a,h)anthracene	278	22.340	22.306	(1.108)	15884	0.50000	0.427	
	88	Benzo(g,h,i)perylene	276	22.856	22.811	(1.134)	22948	0.50000	0.486	
M	89	Total PAHs	100				1300259	9.00000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

3:29 pm, Jul 29, 2021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Operator: JCG
Column diameter: 0.25
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Y (x10^5)
Min
-1,4-Dioxane-d8+
-N-Nitrosodimethylamine
-Pyridine
-Benzaldehyde
-Phenol+
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
2-Chlorophenol
-1,2-Dichlorobenzene
-Acetophenone+
2-Methylphenol+
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-bis(2-Chloroethoxy)methan
-Benzoic acid+
-Naphthalene-D8+
2,4-Dimethylphenol
-1,2,4-Trichlorobenzene
-4-Chloroaniline
-Hexachlorobutadiene
-Caprolactam
-4-Chloro-3-Methylphenol
-2-Methylnaphthalene
-1-Methylnaphthalene
-Hexachlorocyclopentadiene+
-2,4,5-Trichlorophenol
-1,1'-Biphenyl+
-2-Nitroaniline
-Dimethyl Phthalate+
-Acenaphthylene
-Acenaphthene-D10+
-2,4-Dinitrophenol
-Dibenzofuran+
-2,3,4,6-Tetrachlorophenol
-Fluorene-D10+
-4-Nitroaniline
-N-Nitrosodiphenylamine
Diethylphthalate
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
-Di-n-butylphthalate
-Flouranthene-d10+
-Pyrene-D10+
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene+
-Benzo(a)pyrene
-Perylene-D12
-Dibenzo(a,h)anthracene+
-Benzo(g,h,i)perylene

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Report Date: 29-Jul-2021 10:25

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3620.D
Lab Smp Id: WG303306-2
Inj Date : 28-JUL-2021 16:39
Operator : JCG   Inst ID: gcms-n.i
Smp Info : WG303306-2
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 09:00 cgomez   Quant Type: ISTD
Cal Date : 28-JUL-2021 16:39   Cal File: N3620.D
Als bottle: 4   Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
$	1 1,4-Dioxane-d8	96	3.511	3.427	(0.475)	6779	0.20000	0.215(a)	
	2 1,4-Dioxane	88	3.553	3.480	(0.480)	7761	0.20000	0.227(a)	
	3 N-Nitrosodimethylamine	74	4.005	3.921	(0.541)	9958	0.20000	0.216	
	4 Pyridine	79	4.288	3.952	(0.579)	8863	0.20000	0.134(a)	
	5 Benzaldehyde	77	6.846	6.826	(0.925)	11386	0.20000	0.265	
	6 Phenol	94	7.028	7.017	(0.950)	101665	1.00000	1.06	
	7 Bis(2-Chloroethyl)ether	93	7.078	7.068	(0.956)	17375	0.20000	0.205	
	8 2-Chlorophenol	128	7.158	7.138	(0.967)	104556	1.00000	1.08	
	9 1,3-Dichlorobenzene	146	7.330	7.319	(0.990)	21237	0.20000	0.208	
*	10 1,4-Dichlorobenzene-D4	152	7.400	7.390	(1.000)	54379	0.80000	(a)	
	11 1,4-Dichlorobenzene	146	7.420	7.410	(1.003)	21097	0.20000	0.206	
	12 1,2-Dichlorobenzene	146	7.611	7.601	(1.029)	20062	0.20000	0.207	
	13 2-Methylphenol	108	7.772	7.772	(1.050)	79454	1.00000	0.974(a)	
	14 2,2'-Oxybis(1-chloropropane)	45	7.772	7.752	(1.050)	22413	0.20000	0.205	
	15 Acetophenone	105	7.923	7.903	(0.877)	18929	0.20000	0.167(a)	
	16 N-Nitroso-di-n-propylamine	70	7.944	7.933	(1.073)	10785	0.20000	0.197(a)	
	17 3&4-Methylphenol	108	7.974	7.984	(1.078)	68759	1.00000	0.842(a)	
	18 Hexachloroethane	117	8.034	8.024	(1.086)	7627	0.20000	0.209	
	19 Nitrobenzene	77	8.135	8.115	(0.901)	21180	0.20000	0.228	
	20 Isophorone	82	8.445	8.445	(0.935)	29343	0.20000	0.176(a)	
	21 2-Nitrophenol	139	8.552	8.541	(0.947)	48083	1.00000	0.901(a)	

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3620.D
Report Date: 29-Jul-2021 10:25

							AMOUNTS		
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	22 2,4-Dimethylphenol	107	8.648	8.648	(0.957)	91052	1.00000	0.946	
	23 bis(2-Chloroethoxy)methane	93	8.744	8.744	(0.968)	14476	0.20000	0.134(a)	
	24 Benzoic acid	105	9.001	8.851	(0.996)	3206	1.00000	0.102(aQ)	
	25 2,4-Dichlorophenol	162	8.894	8.883	(0.985)	73008	1.00000	0.935	
	26 1,2,4-Trichlorobenzene	180	8.969	8.969	(0.993)	14257	0.20000	0.182(a)	
*	27 Naphthalene-D8	136	9.033	9.022	(1.000)	215731	0.80000	(a)	
	28 Naphthalene	128	9.054	9.054	(1.002)	55203	0.20000	0.197(a)	
	29 4-Chloroaniline	127	9.172	9.161	(1.015)	16007	0.20000	0.180(a)	
	30 Hexachlorobutadiene	225	9.258	9.247	(1.025)	8608	0.20000	0.224	
	31 Caprolactam	113	9.641	9.652	(1.067)	2698	0.20000	0.0973(aQ)	
	32 4-Chloro-3-Methylphenol	107	9.848	9.859	(1.090)	75758	1.00000	0.945(a)	
$	33 2-Methylnaphthalene-D10	152	9.937	9.937	(1.100)	28231	0.20000	0.197(a)	
	34 2-Methylnaphthalene	142	9.976	9.977	(1.104)	48549	0.20000	0.238	
	35 1-Methylnaphthalene	142	10.114	10.105	(1.120)	40606	0.20000	0.221	
	36 Hexachlorocyclopentadiene	237	10.212	10.213	(0.898)	4005	0.20000	0.117(aQ)	
	37 1,2,4,5-Tetrachlorobenzene	216	10.212	10.213	(0.898)	14784	0.20000	0.213	
$	38 2,4-Dibromophenol	252	10.370	10.371	(0.912)	6623	0.20000	0.190(a)	
	39 2,4,6-Trichlorophenol	196	10.389	10.390	(0.914)	34754	1.00000	0.760(a)	
	40 2,4,5-Trichlorophenol	196	10.448	10.459	(0.919)	72447	1.00000	1.20	
	41 1,1'-Biphenyl	154	10.606	10.607	(0.933)	42917	0.20000	0.217	
	42 2-Chloronaphthalene	164	10.628	10.629	(0.935)	11530	0.20000	0.213	
	43 2-Nitroaniline	65	10.780	10.792	(0.948)	3837	0.20000	0.0909(a)	
	44 Dimethyl Phthalate	163	11.042	11.053	(0.971)	178890	1.00000	0.950(a)	
	45 2,6-Dinitrotoluene	165	11.107	11.119	(0.977)	7740	0.20000	0.177(a)	
	46 Acenaphthylene	152	11.173	11.173	(0.983)	56690	0.20000	0.206	
	47 3-Nitroaniline	138	11.336	11.359	(0.997)	5319	0.20000	0.262(QM)	M9
*	48 Acenaphthene-D10	164	11.369	11.369	(1.000)	106575	0.80000	(a)	
	49 Acenaphthene	153	11.401	11.413	(1.003)	35427	0.20000	0.210	
	50 2,4-Dinitrophenol	184	11.499	11.489	(1.012)	6683	1.00000	0.509(aM)	M9
	51 4-Nitrophenol	109	11.652	11.664	(1.025)	14374	1.00000	0.756(aM)	M9
	52 Dibenzofuran	168	11.641	11.642	(1.024)	46115	0.20000	0.209	
	53 2,4-Dinitrotoluene	165	11.652	11.653	(1.025)	7329	0.20000	0.128(aMH)	M9
	54 2,3,4,6-Tetrachlorophenol	232	11.848	11.849	(1.042)	34611	1.00000	0.884(aM)	M9
	55 Diethylphthalate	149	11.990	12.001	(1.055)	188080	1.00000	0.959(a)	
$	56 Fluorene-D10	174	12.066	12.067	(1.061)	26617	0.20000	0.212(a)	
	57 Fluorene	166	12.099	12.110	(1.064)	37313	0.20000	0.209	
	58 4-Chlorophenyl-phenylether	204	12.121	12.121	(1.066)	17376	0.20000	0.209	
	59 4-Nitroaniline	138	12.273	12.187	(1.080)	5814	0.20000	0.249(Q)	
	60 4,6-Dinitro-2-Methylphenol	198	12.208	12.208	(0.914)	13450	1.00000	0.629(aQ)	
	61 N-Nitrosodiphenylamine	169	12.284	12.285	(0.920)	27407	0.20000	0.197(aQM)	M9
	62 4-Bromophenyl-phenylether	248	12.772	12.773	(0.957)	10388	0.20000	0.240	
	63 Hexachlorobenzene	284	12.853	12.854	(0.963)	9293	0.20000	0.247	
	64 Atrazine	200	13.026	13.039	(0.976)	6812	0.20000	0.182(aM)	M9
	65 Pentachlorophenol	266	13.153	13.142	(0.985)	17052	1.00000	0.842(aM)	M9
*	66 Phenanthrene-D10	188	13.349	13.350	(1.000)	153023	0.80000	(a)	
	67 Phenanthrene	178	13.372	13.385	(1.002)	39955	0.20000	0.189(a)	
	68 Anthracene	178	13.442	13.454	(1.007)	62398	0.20000	0.250	
	69 Carbazole	167	13.684	13.685	(1.025)	35968	0.20000	0.235(M)	M9
	70 Di-n-butylphthalate	149	14.196	14.196	(1.063)	305806	1.00000	0.946(a)	
$	71 Flouranthene-d10	212	14.951	14.963	(1.120)	31786	0.20000	0.214(a)	
	72 Fluoranthene	202	14.973	14.985	(1.122)	43581	0.20000	0.214	
$	73 Pyrene-D10	212	15.250	15.262	(0.889)	28996	0.20000	0.223(a)	
	74 Pyrene	202	15.273	15.285	(0.891)	45849	0.20000	0.222	
	75 Butylbenzylphthalate	149	16.272	16.262	(0.949)	115233	1.00000	0.970(a)	

3:29 pm, Jul 29, 2021

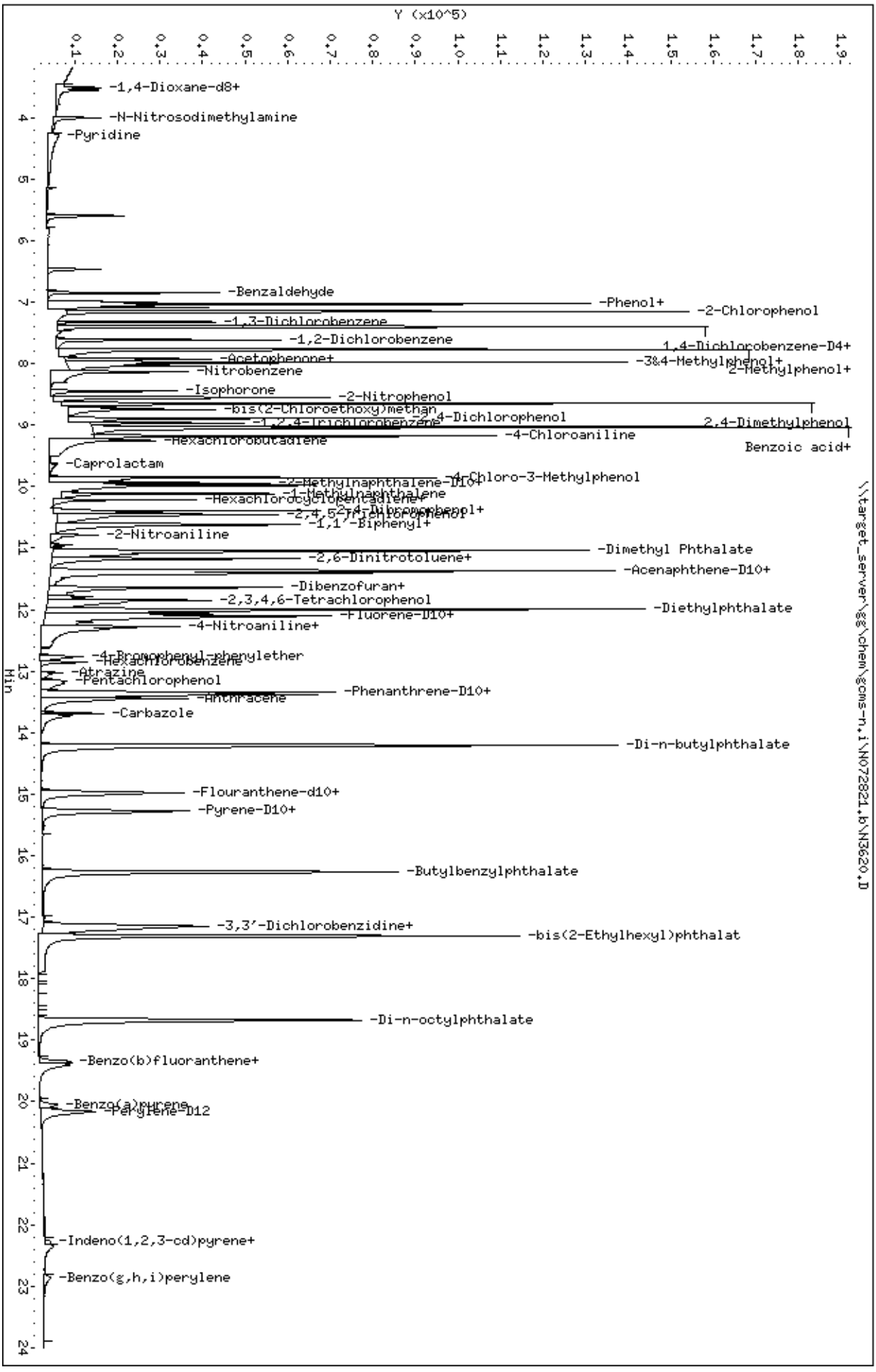
Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3620.D
Report Date: 29-Jul-2021 10:25

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	76	3,3'-Dichlorobenzidine	252	17.171	17.128	(1.001)	3187	0.20000	0.127(aQ)	
	77	Benzo(a)anthracene	228	17.138	17.117	(0.999)	22134	0.20000	0.204	
*	78	Chrysene-D12	240	17.149	17.139	(1.000)	68645	0.80000	(a)	
	79	Chrysene	228	17.194	17.183	(1.003)	32987	0.20000	0.242	
	80	bis(2-Ethylhexyl)phthalate	149	17.305	17.305	(1.009)	167316	1.00000	0.968(a)	
	81	Di-n-octylphthalate	149	18.679	18.657	(1.089)	238601	1.00000	0.955(a)	
	82	Benzo(b)fluoranthene	252	19.341	19.320	(0.959)	13691	0.20000	0.192(a)	
	83	Benzo(k)fluoranthene	252	19.397	19.376	(0.962)	26346	0.20000	0.228(M)	M6
	84	Benzo(a)pyrene	252	20.049	20.016	(0.994)	14908	0.20000	0.209	
*	85	Perylene-D12	264	20.161	20.139	(1.000)	47715	0.80000	(a)	
	86	Indeno(1,2,3-cd)pyrene	276	22.272	22.227	(1.299)	9449	0.20000	0.350	
	87	Dibenzo(a,h)anthracene	278	22.350	22.306	(1.109)	7303	0.20000	0.192(a)	
	88	Benzo(g,h,i)perylene	276	22.867	22.811	(1.134)	10740	0.20000	0.222	
M	89	Total PAHs	100				603129	3.60000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

3:29 pm, Jul 29, 2021


Data File: \\target_server\gg\chem\gcms-n,i\N072821,b\N3620.D
Date : 28-JUL-2021 16:39
Client ID:
Sample Info: WG303306-2
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N072821,b\N3620.D
Y (x10^5)
Min
-1,4-Dioxane-d8+
-N-Nitrosodimethylamine
-Pyridine
-Benzaldehyde
-Phenol+
-2-Chlorophenol
-1,3-Dichlorobenzene
-1,2-Dichlorobenzene
1,4-Dichlorobenzene-D4+
-Acetophenone+
-3&4-Methylphenol+
2-Methylphenol+
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-bis(2-Chloroethoxy)methan
-2,4-Dichlorophenol
2,4-Dimethylphenol
-1,2,4-Trichlorobenzene
-4-Chloroaniline
-Hexachlorobutadiene
Benzoic acid+
-Caprolactam
-4-Chloro-3-Methylphenol
-2-Methylnaphthalene-D10+
-1-Methylnaphthalene
-Hexachlorocyclopentadiene+
2,4,6-Trichlorophenol
-1,1'-Biphenyl+
-2-Nitroaniline
-Dimethyl Phthalate
-2,6-Dinitrotoluene+
-Acenaphthene-D10+
-Dibenzofuran+
-2,3,4,6-Tetrachlorophenol
-Diethylphthalate
-Fluorene-D10+
-4-Nitroaniline+
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
-Di-n-butylphthalate
-Flouranthene-d10+
-Pyrene-D10+
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene+
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene+
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3621.D
Report Date: 29-Jul-2021 10:25

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3621.D
Lab Smp Id: WG303306-5
Inj Date : 28-JUL-2021 17:15
Operator : JCG   Inst ID: gcms-n.i
Smp Info : WG303306-5
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 09:00 cgomez   Quant Type: ISTD
Cal Date : 28-JUL-2021 17:15   Cal File: N3621.D
Als bottle: 5   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
$	1 1,4-Dioxane-d8	96	3.448	3.427	(0.467)	222352	7.00000	7.22	
	2 1,4-Dioxane	88	3.490	3.480	(0.472)	237737	7.00000	7.11	
	3 N-Nitrosodimethylamine	74	3.942	3.921	(0.533)	328985	7.00000	7.28	
	4 Pyridine	79	3.973	3.952	(0.538)	516338	7.00000	7.74(Q)	
	5 Benzaldehyde	77	6.826	6.826	(0.924)	304868	7.00000	7.53	
	6 Phenol	94	7.017	7.017	(0.950)	643359	7.00000	6.83	
	7 Bis(2-Chloroethyl)ether	93	7.068	7.068	(0.956)	597644	7.00000	7.20	
	8 2-Chlorophenol	128	7.148	7.138	(0.967)	688742	7.00000	7.24	
	9 1,3-Dichlorobenzene	146	7.319	7.319	(0.990)	723041	7.00000	7.24	
*	10 1,4-Dichlorobenzene-D4	152	7.390	7.390	(1.000)	53222	0.80000	(aQ)	
	11 1,4-Dichlorobenzene	146	7.410	7.410	(1.003)	730928	7.00000	7.28	
	12 1,2-Dichlorobenzene	146	7.601	7.601	(1.029)	689391	7.00000	7.26	
	13 2-Methylphenol	108	7.772	7.772	(1.052)	602999	7.00000	7.55	
	14 2,2'-Oxybis(1-chloropropane)	45	7.752	7.752	(1.049)	770638	7.00000	7.21(Q)	
	15 Acetophenone	105	7.903	7.903	(0.876)	783746	7.00000	7.77	
	16 N-Nitroso-di-n-propylamine	70	7.923	7.933	(1.072)	409962	7.00000	7.66	
	17 3&4-Methylphenol	108	7.984	7.984	(1.080)	614432	7.00000	7.69	
	18 Hexachloroethane	117	8.024	8.024	(1.086)	259487	7.00000	7.27	
	19 Nitrobenzene	77	8.114	8.115	(0.899)	616917	7.00000	7.48	
	20 Isophorone	82	8.434	8.445	(0.935)	1156009	7.00000	7.79	
	21 2-Nitrophenol	139	8.541	8.541	(0.947)	356632	7.00000	7.52	

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	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
	22 2,4-Dimethylphenol	107	8.648	8.648	(0.959)	645617	7.00000	7.55	
	23 bis(2-Chloroethoxy)methane	93	8.744	8.744	(0.969)	706386	7.00000	7.35	
	24 Benzoic acid	105	8.808	8.851	(0.976)	346291	7.00000	12.4(Q)	
	25 2,4-Dichlorophenol	162	8.883	8.883	(0.985)	519469	7.00000	7.49	
	26 1,2,4-Trichlorobenzene	180	8.969	8.969	(0.994)	527889	7.00000	7.60	
*	27 Naphthalene-D8	136	9.022	9.022	(1.000)	191638	0.80000	(a)	
	28 Naphthalene	128	9.054	9.054	(1.004)	1875646	7.00000	7.55	
	29 4-Chloroaniline	127	9.161	9.161	(1.015)	643584	7.00000	8.15	
	30 Hexachlorobutadiene	225	9.247	9.247	(1.025)	248867	7.00000	7.31	
	31 Caprolactam	113	9.622	9.652	(1.067)	182209	7.00000	7.40(Q)	
	32 4-Chloro-3-Methylphenol	107	9.859	9.859	(1.093)	527295	7.00000	7.40	
$	33 2-Methylnaphthalene-D10	152	9.937	9.937	(1.101)	950660	7.00000	7.46	
	34 2-Methylnaphthalene	142	9.977	9.977	(1.106)	1270788	7.00000	7.01	
	35 1-Methylnaphthalene	142	10.105	10.105	(1.120)	1188130	7.00000	7.29	
	36 Hexachlorocyclopentadiene	237	10.213	10.213	(0.898)	229896	7.00000	7.13(Q)	
	37 1,2,4,5-Tetrachlorobenzene	216	10.213	10.213	(0.898)	469321	7.00000	7.16	
$	38 2,4-Dibromophenol	252	10.370	10.371	(0.912)	245599	7.00000	7.47(Q)	
	39 2,4,6-Trichlorophenol	196	10.390	10.390	(0.914)	338788	7.00000	7.84	
	40 2,4,5-Trichlorophenol	196	10.459	10.459	(0.920)	365616	7.00000	6.41	
	41 1,1'-Biphenyl	154	10.607	10.607	(0.933)	1323389	7.00000	7.06	
	42 2-Chloronaphthalene	164	10.618	10.629	(0.934)	370017	7.00000	7.24	
	43 2-Nitroaniline	65	10.781	10.792	(0.948)	286369	7.00000	7.18	
	44 Dimethyl Phthalate	163	11.053	11.053	(0.972)	1369649	7.00000	7.69	
	45 2,6-Dinitrotoluene	165	11.108	11.119	(0.977)	313261	7.00000	7.57	
	46 Acenaphthylene	152	11.173	11.173	(0.983)	1930326	7.00000	7.42	
	47 3-Nitroaniline	138	11.348	11.359	(0.998)	139161	7.00000	7.24(Q)	
*	48 Acenaphthene-D10	164	11.369	11.369	(1.000)	100788	0.80000	(a)	
	49 Acenaphthene	153	11.413	11.413	(1.004)	1171249	7.00000	7.36	
	50 2,4-Dinitrophenol	184	11.489	11.489	(1.011)	103428	7.00000	7.34	
	51 4-Nitrophenol	109	11.664	11.664	(1.026)	150426	7.00000	7.61(QM)	M6
	52 Dibenzofuran	168	11.642	11.642	(1.024)	1519001	7.00000	7.28	
	53 2,4-Dinitrotoluene	165	11.653	11.653	(1.025)	388925	7.00000	7.19(Q)	
	54 2,3,4,6-Tetrachlorophenol	232	11.849	11.849	(1.042)	291510	7.00000	7.87	
	55 Diethylphthalate	149	11.991	12.001	(1.055)	1419394	7.00000	7.66	
$	56 Fluorene-D10	174	12.067	12.067	(1.061)	873875	7.00000	7.38	
	57 Fluorene	166	12.099	12.110	(1.064)	1235885	7.00000	7.33	
	58 4-Chlorophenyl-phenylether	204	12.121	12.121	(1.066)	585905	7.00000	7.46	
	59 4-Nitroaniline	138	12.176	12.187	(1.071)	146245	7.00000	6.63(QM)	M9
	60 4,6-Dinitro-2-Methylphenol	198	12.208	12.208	(0.914)	166131	7.00000	7.26	
	61 N-Nitrosodiphenylamine	169	12.285	12.285	(0.920)	1016502	7.00000	7.45(Q)	
	62 4-Bromophenyl-phenylether	248	12.773	12.773	(0.957)	295097	7.00000	6.96	
	63 Hexachlorobenzene	284	12.854	12.854	(0.963)	251681	7.00000	6.82	
	64 Atrazine	200	13.039	13.039	(0.977)	277917	7.00000	7.59	
	65 Pentachlorophenol	266	13.142	13.142	(0.984)	141209	7.00000	7.12	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	150007	0.80000	(a)	
	67 Phenanthrene	178	13.385	13.385	(1.003)	1569665	7.00000	7.58	
	68 Anthracene	178	13.454	13.454	(1.008)	1702644	7.00000	6.97	
	69 Carbazole	167	13.685	13.685	(1.025)	1214454	7.00000	8.10	
	70 Di-n-butylphthalate	149	14.196	14.196	(1.063)	2498355	7.00000	7.88	
$	71 Flouranthene-d10	212	14.963	14.963	(1.121)	1072640	7.00000	7.37	
	72 Fluoranthene	202	14.985	14.985	(1.122)	1485894	7.00000	7.46	
$	73 Pyrene-D10	212	15.262	15.262	(0.891)	969107	7.00000	7.66	
	74 Pyrene	202	15.285	15.285	(0.892)	1539984	7.00000	7.66	
	75 Butylbenzylphthalate	149	16.262	16.262	(0.949)	929750	7.00000	8.05	

YCG

3:29 pm, Jul 29, 2021

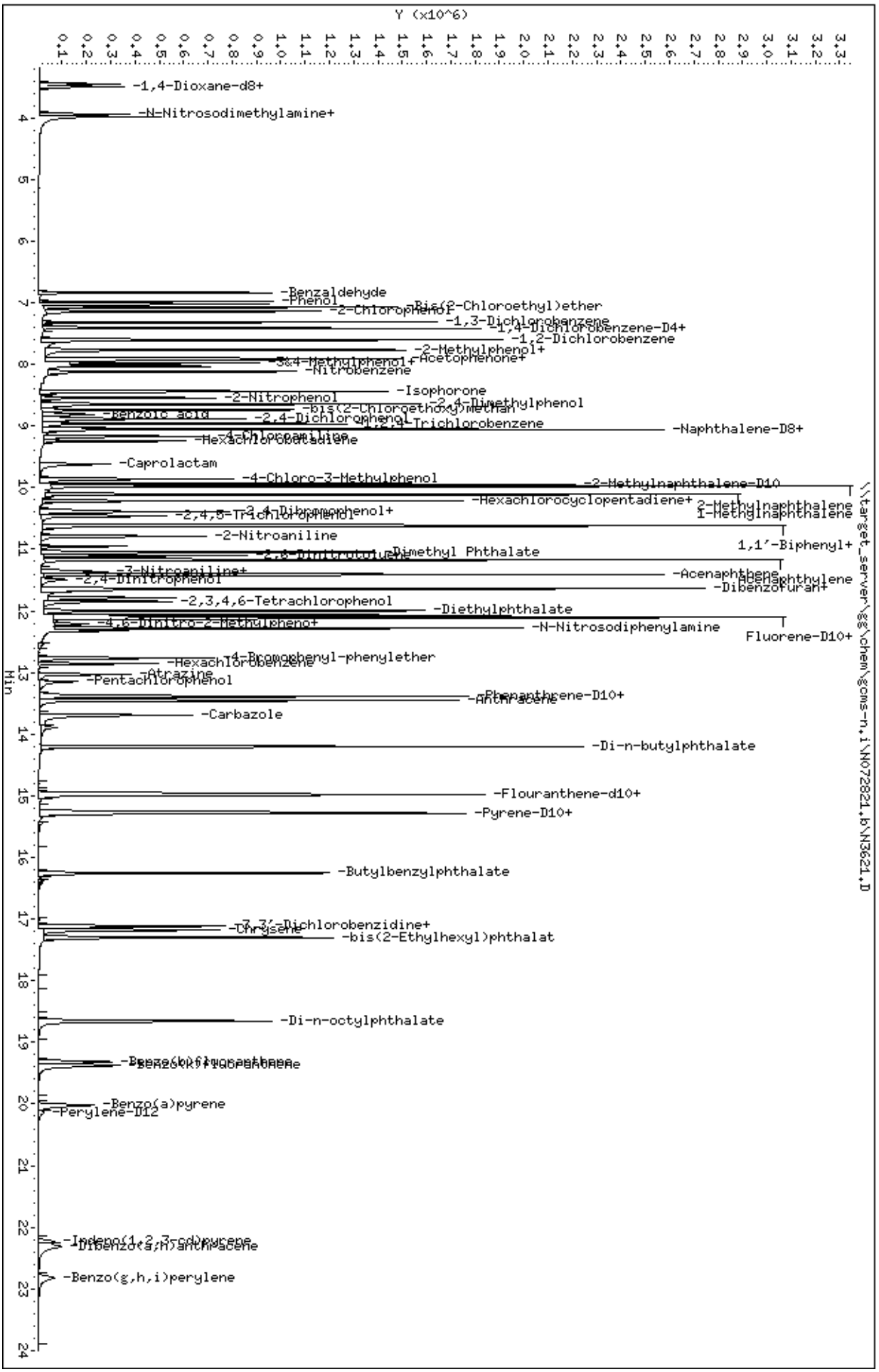
Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3621.D
Report Date: 29-Jul-2021 10:25

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	76	3,3'-Dichlorobenzidine	252	17.139	17.128	(1.000)	130935	7.00000	7.50(Q)	
	77	Benzo(a)anthracene	228	17.117	17.117	(0.999)	793382	7.00000	7.52	
*	78	Chrysene-D12	240	17.139	17.139	(1.000)	66764	0.80000	(a)	
	79	Chrysene	228	17.183	17.183	(1.003)	910728	7.00000	6.88	
	80	bis(2-Ethylhexyl)phthalate	149	17.305	17.305	(1.010)	1339280	7.00000	7.97	
	81	Di-n-octylphthalate	149	18.657	18.657	(1.089)	1831302	7.00000	7.54	
	82	Benzo(b)fluoranthene	252	19.320	19.320	(0.959)	475052	7.00000	7.58	
	83	Benzo(k)fluoranthene	252	19.376	19.376	(0.962)	739778	7.00000	7.29(H)	
	84	Benzo(a)pyrene	252	20.016	20.016	(0.994)	453523	7.00000	7.23	
*	85	Perylene-D12	264	20.139	20.139	(1.000)	41977	0.80000	(a)	
	86	Indeno(1,2,3-cd)pyrene	276	22.239	22.227	(1.298)	193930	7.00000	7.39(M)	M3
	87	Dibenzo(a,h)anthracene	278	22.306	22.306	(1.108)	259311	7.00000	7.74	
	88	Benzo(g,h,i)perylene	276	22.822	22.811	(1.133)	307972	7.00000	7.23	
M	89	Total PAHs	100				19103887	119.000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

3:29 pm, Jul 29, 2021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Client ID:
Sample Info: WG303306-5
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N072821,b\N3621.D
Y (x10^6)
Min
-1,4-Dioxane-d8+
-N-Nitrosodimethylamine+
-Benzaldehyde
-Phenol
-2-Chlorophenol
-Bis(2-Chloroethyl)ether
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-2-Methylphenol+
-3&4-Methylphenol+
-Acetophenone+
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-2,4-Dimethylphenol
-bis(2-Chloroethoxy)methan
-Benzoic acid
-2,4-Dichlorophenol
-1,2,4-Trichlorobenzene
-Naphthalene-D8+
-4-Chloroaniline
-Hexachlorobutadiene
-Caprolactam
-4-Chloro-3-Methylphenol
-2-Methylnaphthalene-D10
-Hexachlorocyclopentadiene+
-2,4,6-Trichlorophenol+
-2,4,5-Trichlorophenol
2-Methylnaphthalene
1-Methylnaphthalene
-2-Nitroaniline
1,1'-Biphenyl+
-2,6-Dinitrotoluene
-Dimethyl Phthalate
-3-Nitroaniline+
-Acenaphthene
-2,4-Dinitrophenol
Acenaphthylene
-Dibenzofuran+
-2,3,4,6-Tetrachlorophenol
-Diethylphthalate
-4,6-Dinitro-2-Methylphenol+
-N-Nitrosodiphenylamine
Fluorene-D10+
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
-Di-n-butylphthalate
-Flouranthene-d10+
-Pyrene-D10+
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-Chrysene
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene
-Benzo(k)fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene
-Dibenzo(a,h)anthracene
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3622.D
Report Date: 29-Jul-2021 10:25

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Inj Date : 28-JUL-2021 17:52
Operator : JCG   Inst ID: gcms-n.i
Smp Info : WG303306-6
Misc Info :
Comment   :
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Meth Date : 29-Jul-2021 09:00 cgomez   Quant Type: ISTD
Cal Date : 28-JUL-2021 17:52   Cal File: N3622.D
Als bottle: 6   Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
$	1 1,4-Dioxane-d8	96	3.459	3.427	(0.468)	310224	10.0000	9.46	
	2 1,4-Dioxane	88	3.501	3.480	(0.474)	333234	10.0000	9.36	
	3 N-Nitrosodimethylamine	74	3.942	3.921	(0.533)	463227	10.0000	9.63	
	4 Pyridine	79	3.973	3.952	(0.538)	662104	10.0000	9.26	
	5 Benzaldehyde	77	6.826	6.826	(0.924)	394233	10.0000	9.22	
	6 Phenol	94	7.017	7.017	(0.950)	911278	10.0000	9.08	
	7 Bis(2-Chloroethyl)ether	93	7.068	7.068	(0.956)	852276	10.0000	9.64	
	8 2-Chlorophenol	128	7.138	7.138	(0.966)	958396	10.0000	9.47	
	9 1,3-Dichlorobenzene	146	7.319	7.319	(0.990)	1014925	10.0000	9.55	
*	10 1,4-Dichlorobenzene-D4	152	7.390	7.390	(1.000)	56651	0.80000	(aQ)	
	11 1,4-Dichlorobenzene	146	7.410	7.410	(1.003)	1027686	10.0000	9.61	
	12 1,2-Dichlorobenzene	146	7.601	7.601	(1.029)	957786	10.0000	9.48	
	13 2-Methylphenol	108	7.772	7.772	(1.052)	845033	10.0000	9.94	
	14 2,2'-Oxybis(1-chloropropane)	45	7.752	7.752	(1.049)	1105416	10.0000	9.72	
	15 Acetophenone	105	7.903	7.903	(0.876)	1124126	10.0000	10.3	
	16 N-Nitroso-di-n-propylamine	70	7.923	7.933	(1.072)	567283	10.0000	9.95	
	17 3&4-Methylphenol	108	7.984	7.984	(1.080)	849307	10.0000	9.99	
	18 Hexachloroethane	117	8.024	8.024	(1.086)	359384	10.0000	9.46	
	19 Nitrobenzene	77	8.115	8.115	(0.899)	761767	10.0000	8.56	
	20 Isophorone	82	8.434	8.445	(0.935)	1605022	10.0000	10.0	
	21 2-Nitrophenol	139	8.541	8.541	(0.947)	514110	10.0000	10.0	

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3622.D
Report Date: 29-Jul-2021 10:25

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	22 2,4-Dimethylphenol	107	8.648	8.648	(0.959)	893306	10.0000	9.67	
	23 bis(2-Chloroethoxy)methane	93	8.734	8.744	(0.968)	997501	10.0000	9.61	
	24 Benzoic acid	105	8.830	8.851	(0.979)	320760	10.0000	10.6	
	25 2,4-Dichlorophenol	162	8.883	8.883	(0.985)	726022	10.0000	9.69	
	26 1,2,4-Trichlorobenzene	180	8.969	8.969	(0.994)	727002	10.0000	9.69	
*	27 Naphthalene-D8	136	9.022	9.022	(1.000)	207016	0.80000	(a)	
	28 Naphthalene	128	9.054	9.054	(1.004)	2612279	10.0000	9.73	
	29 4-Chloroaniline	127	9.161	9.161	(1.015)	813230	10.0000	9.53	
	30 Hexachlorobutadiene	225	9.247	9.247	(1.025)	344519	10.0000	9.36	
	31 Caprolactam	113	9.632	9.652	(1.068)	250977	10.0000	9.44	
	32 4-Chloro-3-Methylphenol	107	9.849	9.859	(1.092)	737256	10.0000	9.58	
$	33 2-Methylnaphthalene-D10	152	9.937	9.937	(1.101)	1312809	10.0000	9.53	
	34 2-Methylnaphthalene	142	9.977	9.977	(1.106)	1744896	10.0000	8.91	
	35 1-Methylnaphthalene	142	10.105	10.105	(1.120)	1634413	10.0000	9.28	
	36 Hexachlorocyclopentadiene	237	10.213	10.213	(0.899)	333470	10.0000	9.78	
	37 1,2,4,5-Tetrachlorobenzene	216	10.213	10.213	(0.899)	648909	10.0000	9.36	
$	38 2,4-Dibromophenol	252	10.371	10.371	(0.913)	344923	10.0000	9.92	
	39 2,4,6-Trichlorophenol	196	10.390	10.390	(0.915)	478265	10.0000	10.5	
	40 2,4,5-Trichlorophenol	196	10.459	10.459	(0.921)	509716	10.0000	8.45	
	41 1,1'-Biphenyl	154	10.607	10.607	(0.934)	1816383	10.0000	9.17	
	42 2-Chloronaphthalene	164	10.618	10.629	(0.935)	503073	10.0000	9.30	
	43 2-Nitroaniline	65	10.781	10.792	(0.949)	399195	10.0000	9.46	
	44 Dimethyl Phthalate	163	11.053	11.053	(0.973)	1903442	10.0000	10.1	
	45 2,6-Dinitrotoluene	165	11.108	11.119	(0.978)	431414	10.0000	9.86	
	46 Acenaphthylene	152	11.173	11.173	(0.984)	2643140	10.0000	9.60	
	47 3-Nitroaniline	138	11.348	11.359	(0.999)	142754	10.0000	7.02	
*	48 Acenaphthene-D10	164	11.359	11.369	(1.000)	106596	0.80000	(a)	
	49 Acenaphthene	153	11.402	11.413	(1.004)	1576369	10.0000	9.36	
	50 2,4-Dinitrophenol	184	11.489	11.489	(1.012)	158695	10.0000	9.97	
	51 4-Nitrophenol	109	11.664	11.664	(1.027)	212345	10.0000	9.79(M)	M6
	52 Dibenzofuran	168	11.642	11.642	(1.025)	2078792	10.0000	9.41	
	53 2,4-Dinitrotoluene	165	11.653	11.653	(1.026)	535051	10.0000	9.35	
	54 2,3,4,6-Tetrachlorophenol	232	11.849	11.849	(1.043)	394232	10.0000	10.1	
	55 Diethylphthalate	149	11.991	12.001	(1.056)	1903915	10.0000	9.71	
$	56 Fluorene-D10	174	12.067	12.067	(1.062)	1187100	10.0000	9.48	
	57 Fluorene	166	12.100	12.110	(1.065)	1690238	10.0000	9.48	
	58 4-Chlorophenyl-phenylether	204	12.121	12.121	(1.067)	796690	10.0000	9.59	
	59 4-Nitroaniline	138	12.176	12.187	(1.072)	196511	10.0000	8.42(M)	M9
	60 4,6-Dinitro-2-Methylphenol	198	12.208	12.208	(0.914)	247444	10.0000	10.0	
	61 N-Nitrosodiphenylamine	169	12.285	12.285	(0.920)	1369091	10.0000	9.73	
	62 4-Bromophenyl-phenylether	248	12.773	12.773	(0.957)	405842	10.0000	9.28	
	63 Hexachlorobenzene	284	12.854	12.854	(0.963)	342524	10.0000	9.00	
	64 Atrazine	200	13.039	13.039	(0.977)	373430	10.0000	9.89	
	65 Pentachlorophenol	266	13.142	13.142	(0.984)	200499	10.0000	9.80	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	154667	0.80000	(a)	
	67 Phenanthrene	178	13.385	13.385	(1.003)	2140791	10.0000	10.0	
	68 Anthracene	178	13.454	13.454	(1.008)	2287574	10.0000	9.08	
	69 Carbazole	167	13.685	13.685	(1.025)	1237332	10.0000	8.00	
	70 Di-n-butylphthalate	149	14.196	14.196	(1.063)	3134415	10.0000	9.59	
$	71 Flouranthene-d10	212	14.963	14.963	(1.121)	1409954	10.0000	9.40	
	72 Fluoranthene	202	14.985	14.985	(1.122)	1969545	10.0000	9.58	
$	73 Pyrene-D10	212	15.262	15.262	(0.891)	1272866	10.0000	9.56	
	74 Pyrene	202	15.285	15.285	(0.892)	2013694	10.0000	9.52	
	75 Butylbenzylphthalate	149	16.251	16.262	(0.948)	1192850	10.0000	9.81	

3:29 pm, Jul 29, 2021

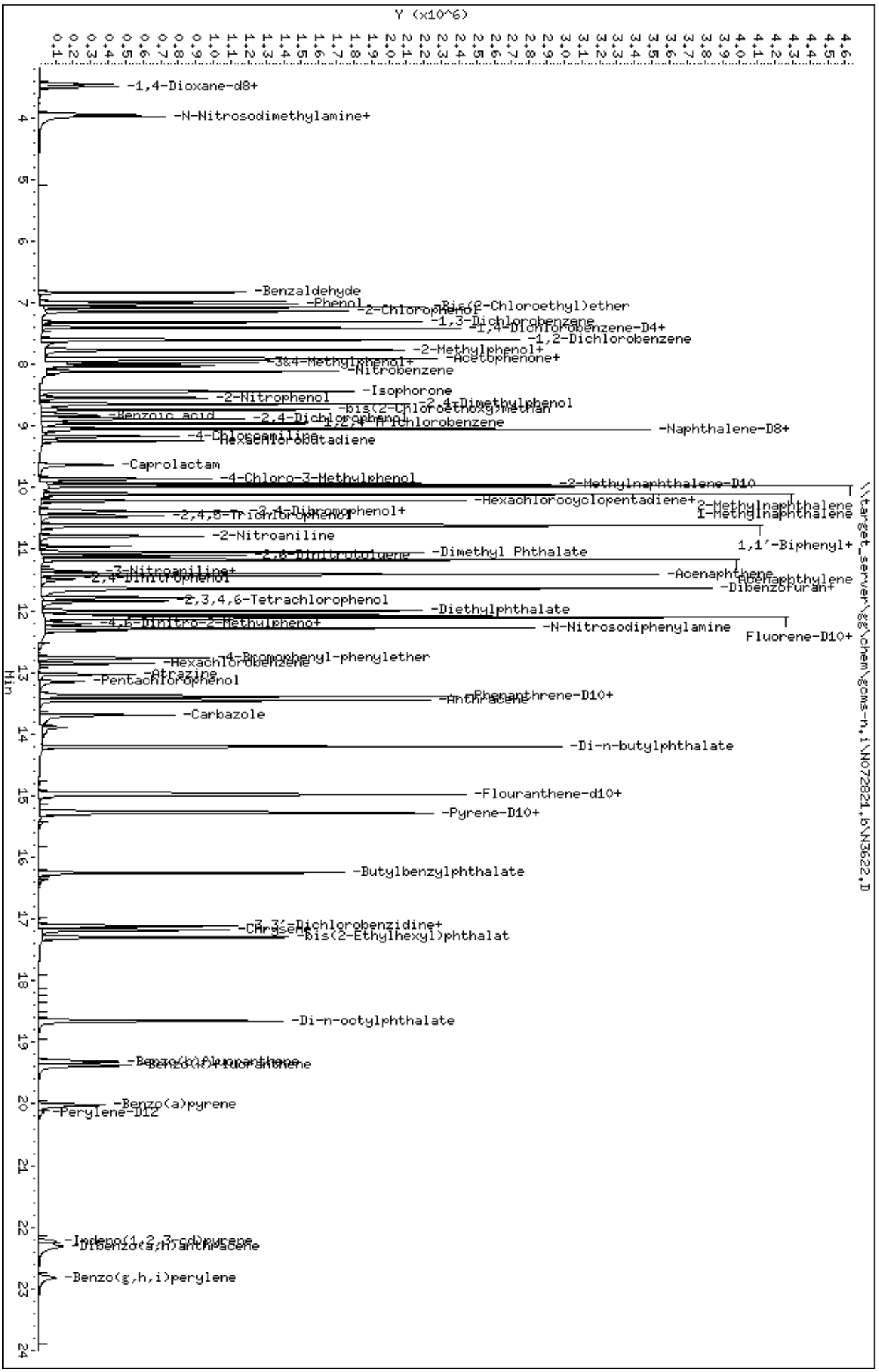
Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3622.D
Report Date: 29-Jul-2021 10:25

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	76	3,3'-Dichlorobenzidine	252	17.139	17.128	(1.000)	162559	10.0000	9.31	
	77	Benzo(a)anthracene	228	17.117	17.117	(0.999)	1118035	10.0000	10.1	
*	78	Chrysene-D12	240	17.139	17.139	(1.000)	70236	0.80000	(a)	
	79	Chrysene	228	17.183	17.183	(1.003)	1239640	10.0000	8.90	
	80	bis(2-Ethylhexyl)phthalate	149	17.294	17.305	(1.009)	1694391	10.0000	9.58	
	81	Di-n-octylphthalate	149	18.657	18.657	(1.089)	2455148	10.0000	9.61	
	82	Benzo(b)fluoranthene	252	19.320	19.320	(0.959)	734693	10.0000	10.5	
	83	Benzo(k)fluoranthene	252	19.376	19.376	(0.962)	1038060	10.0000	9.16(H)	
	84	Benzo(a)pyrene	252	20.016	20.016	(0.994)	671003	10.0000	9.59	
*	85	Perylene-D12	264	20.139	20.139	(1.000)	46861	0.80000	(a)	
	86	Indeno(1,2,3-cd)pyrene	276	22.227	22.227	(1.297)	268280	10.0000	9.72(M)	M3
	87	Dibenzo(a,h)anthracene	278	22.306	22.306	(1.108)	366721	10.0000	9.80	
	88	Benzo(g,h,i)perylene	276	22.822	22.811	(1.133)	434427	10.0000	9.14	
M	89	Total PAHs	100				26183798	180.000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

3:29 pm, Jul 29, 2021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Operator: JCG
Column diameter: 0.25
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Y (x10^6)
Min
-1,4-Dioxane-d8+
-N-Nitrosodimethylamine+
-Benzaldehyde
-Phenol
-2-Chlorophenol
-Bis(2-Chloroethyl)ether
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-2-Methylphenol+
-3&4-Methylphenol+
-Acetophenone+
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-2,4-Dimethylphenol
-Benzoic acid
-2,4-Dichlorophenol
-bis(2-Chloroethoxy)Methan
-1,2,4-Trichlorobenzene
-Naphthalene-D8+
-4-Chloroaniline
-Hexachlorobutadiene
-Caprolactam
-4-Chloro-3-Methylphenol
-2-Methylnaphthalene-D10
-Hexachlorocyclopentadiene+
-2-Methylnaphthalene
-2,4,6-Trichlorophenol
-2,4-Dinitrophenol+
1-Methylnaphthalene
-2-Nitroaniline
1,1'-Biphenyl+
-2,6-Dinitrotoluene
-Dimethyl Phthalate
-3-Nitroaniline+
-2,4-Dinitrophenol
-Acenaphthene
-Acenaphthylene
-Dibenzofuran+
-2,3,4,6-Tetrachlorophenol
-Diethylphthalate
-4,6-Dinitro-2-Methylphenol+
-N-Nitrosodiphenylamine
Fluorene-D10+
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
-Di-n-butylphthalate
-Flouranthene-d10+
-Pyrene-D10+
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-Chrysene
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene
-Benzo(k)fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene
-Dibenzo(a,h)anthracene
-Benzo(g,h,i)perylene

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Report Date: 29-Jul-2021 10:25

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Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3623.D
Lab Smp Id: WG303306-7
Inj Date : 28-JUL-2021 18:27
Operator : JCG   Inst ID: gcms-n.i
Smp Info : WG303306-7
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 09:00 cgomez   Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27   Cal File: N3623.D
Als bottle: 7   Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
$	1 1,4-Dioxane-d8	96	3.427	3.427	(0.464)	437722	15.0000	14.8	
	2 1,4-Dioxane	88	3.480	3.480	(0.471)	470574	15.0000	14.6	
	3 N-Nitrosodimethylamine	74	3.921	3.921	(0.531)	650358	15.0000	15.0	
	4 Pyridine	79	3.952	3.952	(0.535)	1004381	15.0000	15.1(A)	
	5 Benzaldehyde	77	6.826	6.826	(0.924)	570705	15.0000	15.2(A)	
	6 Phenol	94	7.017	7.017	(0.950)	1346313	15.0000	14.8	
	7 Bis(2-Chloroethyl)ether	93	7.068	7.068	(0.956)	1242953	15.0000	15.6(A)	
	8 2-Chlorophenol	128	7.138	7.138	(0.966)	1271325	15.0000	13.9	
	9 1,3-Dichlorobenzene	146	7.319	7.319	(0.990)	1449250	15.0000	15.1(A)	
*	10 1,4-Dichlorobenzene-D4	152	7.390	7.390	(1.000)	51237	0.80000	(aQ)	
	11 1,4-Dichlorobenzene	146	7.410	7.410	(1.003)	1472930	15.0000	15.2(A)	
	12 1,2-Dichlorobenzene	146	7.601	7.601	(1.029)	1364406	15.0000	14.9	
	13 2-Methylphenol	108	7.772	7.772	(1.052)	1213963	15.0000	15.8(A)	
	14 2,2'-Oxybis(1-chloropropane)	45	7.752	7.752	(1.049)	1559934	15.0000	15.2(A)	
	15 Acetophenone	105	7.903	7.903	(0.876)	1662613	15.0000	16.2(A)	
	16 N-Nitroso-di-n-propylamine	70	7.933	7.933	(1.074)	845427	15.0000	16.4(A)	
	17 3&4-Methylphenol	108	7.984	7.984	(1.080)	1245627	15.0000	16.2(A)	
	18 Hexachloroethane	117	8.024	8.024	(1.086)	511532	15.0000	14.9	
	19 Nitrobenzene	77	8.115	8.115	(0.899)	1131082	15.0000	13.5	
	20 Isophorone	82	8.445	8.445	(0.936)	2390577	15.0000	15.9(A)	
	21 2-Nitrophenol	139	8.541	8.541	(0.947)	743504	15.0000	15.4(A)	

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3623.D
Report Date: 29-Jul-2021 10:25

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	22 2,4-Dimethylphenol	107	8.648	8.648	(0.959)	1309243	15.0000	15.1(A)	
	23 bis(2-Chloroethoxy)methane	93	8.744	8.744	(0.969)	1469740	15.0000	15.1(A)	
	24 Benzoic acid	105	8.851	8.851	(0.981)	590592	15.0000	20.8(A)	
	25 2,4-Dichlorophenol	162	8.883	8.883	(0.985)	1062672	15.0000	15.1(A)	
	26 1,2,4-Trichlorobenzene	180	8.969	8.969	(0.994)	1077016	15.0000	15.3(A)	
*	27 Naphthalene-D8	136	9.022	9.022	(1.000)	194535	0.80000	(a)	
	28 Naphthalene	128	9.054	9.054	(1.004)	3758263	15.0000	14.9	
	29 4-Chloroaniline	127	9.161	9.161	(1.015)	1115751	15.0000	13.9	
	30 Hexachlorobutadiene	225	9.247	9.247	(1.025)	496192	15.0000	14.4	
	31 Caprolactam	113	9.652	9.652	(1.070)	379204	15.0000	15.2(A)	
	32 4-Chloro-3-Methylphenol	107	9.859	9.859	(1.093)	1094188	15.0000	15.1(A)	
$	33 2-Methylnaphthalene-D10	152	9.937	9.937	(1.101)	1885910	15.0000	14.6	
	34 2-Methylnaphthalene	142	9.977	9.977	(1.106)	2498487	15.0000	13.6	
	35 1-Methylnaphthalene	142	10.105	10.105	(1.120)	2360822	15.0000	14.3	
	36 Hexachlorocyclopentadiene	237	10.213	10.213	(1.000)	485404	15.0000	15.1(A)	
	37 1,2,4,5-Tetrachlorobenzene	216	10.213	10.213	(1.000)	928304	15.0000	14.2	
$	38 2,4-Dibromophenol	252	10.371	10.371	(1.000)	513225	15.0000	15.7	
	39 2,4,6-Trichlorophenol	196	10.390	10.390	(1.000)	707235	15.0000	16.4(A)	
	40 2,4,5-Trichlorophenol	196	10.459	10.459	(1.000)	766318	15.0000	13.5	
	41 1,1'-Biphenyl	154	10.607	10.607	(1.000)	2611592	15.0000	14.0	
	42 2-Chloronaphthalene	164	10.629	10.629	(1.000)	746143	15.0000	14.6	
	43 2-Nitroaniline	65	10.792	10.792	(1.000)	606884	15.0000	15.3(A)	
	44 Dimethyl Phthalate	163	11.053	11.053	(1.000)	2752373	15.0000	15.5(A)	
	45 2,6-Dinitrotoluene	165	11.119	11.119	(1.000)	687912	15.0000	16.7(A)	
	46 Acenaphthylene	152	11.173	11.173	(1.000)	3779288	15.0000	14.6	
	47 3-Nitroaniline	138	11.359	11.359	(1.000)	157739	15.0000	8.24	
*	48 Acenaphthene-D10	164	11.369	11.369	(1.000)	100359	0.80000	(aM)	M6
	49 Acenaphthene	153	11.413	11.413	(1.000)	2350312	15.0000	14.8	
	50 2,4-Dinitrophenol	184	11.489	11.489	(1.000)	276382	15.0000	15.0	
	51 4-Nitrophenol	109	11.664	11.664	(1.026)	342003	15.0000	15.0(QM)	M9
	52 Dibenzofuran	168	11.642	11.642	(1.000)	3055330	15.0000	14.7	
	53 2,4-Dinitrotoluene	165	11.653	11.653	(1.000)	825554	15.0000	15.3(A)	
	54 2,3,4,6-Tetrachlorophenol	232	11.849	11.849	(1.000)	596953	15.0000	16.2(A)	
	55 Diethylphthalate	149	12.001	12.001	(1.000)	2938884	15.0000	15.9(A)	
$	56 Fluorene-D10	174	12.067	12.067	(1.000)	1738247	15.0000	14.7(A)	
	57 Fluorene	166	12.110	12.110	(1.000)	2543795	15.0000	15.1(A)	
	58 4-Chlorophenyl-phenylether	204	12.121	12.121	(1.000)	1159941	15.0000	14.8	
	59 4-Nitroaniline	138	12.187	12.187	(1.000)	353803	15.0000	16.1(A)	
	60 4,6-Dinitro-2-Methylphenol	198	12.208	12.208	(0.914)	407060	15.0000	15.0	
	61 N-Nitrosodiphenylamine	169	12.285	12.285	(0.920)	1987844	15.0000	14.2	
	62 4-Bromophenyl-phenylether	248	12.773	12.773	(0.957)	595592	15.0000	13.7	
	63 Hexachlorobenzene	284	12.854	12.854	(0.963)	522554	15.0000	13.8	
	64 Atrazine	200	13.039	13.039	(0.977)	554495	15.0000	14.8	
	65 Pentachlorophenol	266	13.142	13.142	(0.984)	330138	15.0000	16.2(A)	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	153838	0.80000	(a)	
	67 Phenanthrene	178	13.385	13.385	(1.003)	3251841	15.0000	15.3(A)	
	68 Anthracene	178	13.454	13.454	(1.008)	3262146	15.0000	13.0	
	69 Carbazole	167	13.685	13.685	(1.025)	1634501	15.0000	10.6	
	70 Di-n-butylphthalate	149	14.196	14.196	(1.063)	4931983	15.0000	15.2(A)	
$	71 Flouranthene-d10	212	14.963	14.963	(1.121)	2208223	15.0000	14.8	
	72 Fluoranthene	202	14.985	14.985	(1.122)	2975679	15.0000	14.6	
$	73 Pyrene-D10	212	15.262	15.262	(0.891)	1966991	15.0000	13.0(A)	
	74 Pyrene	202	15.285	15.285	(0.892)	3105657	15.0000	12.9	
	75 Butylbenzylphthalate	149	16.262	16.262	(0.949)	1976271	15.0000	14.3	

3:29 pm, Jul 29, 2021

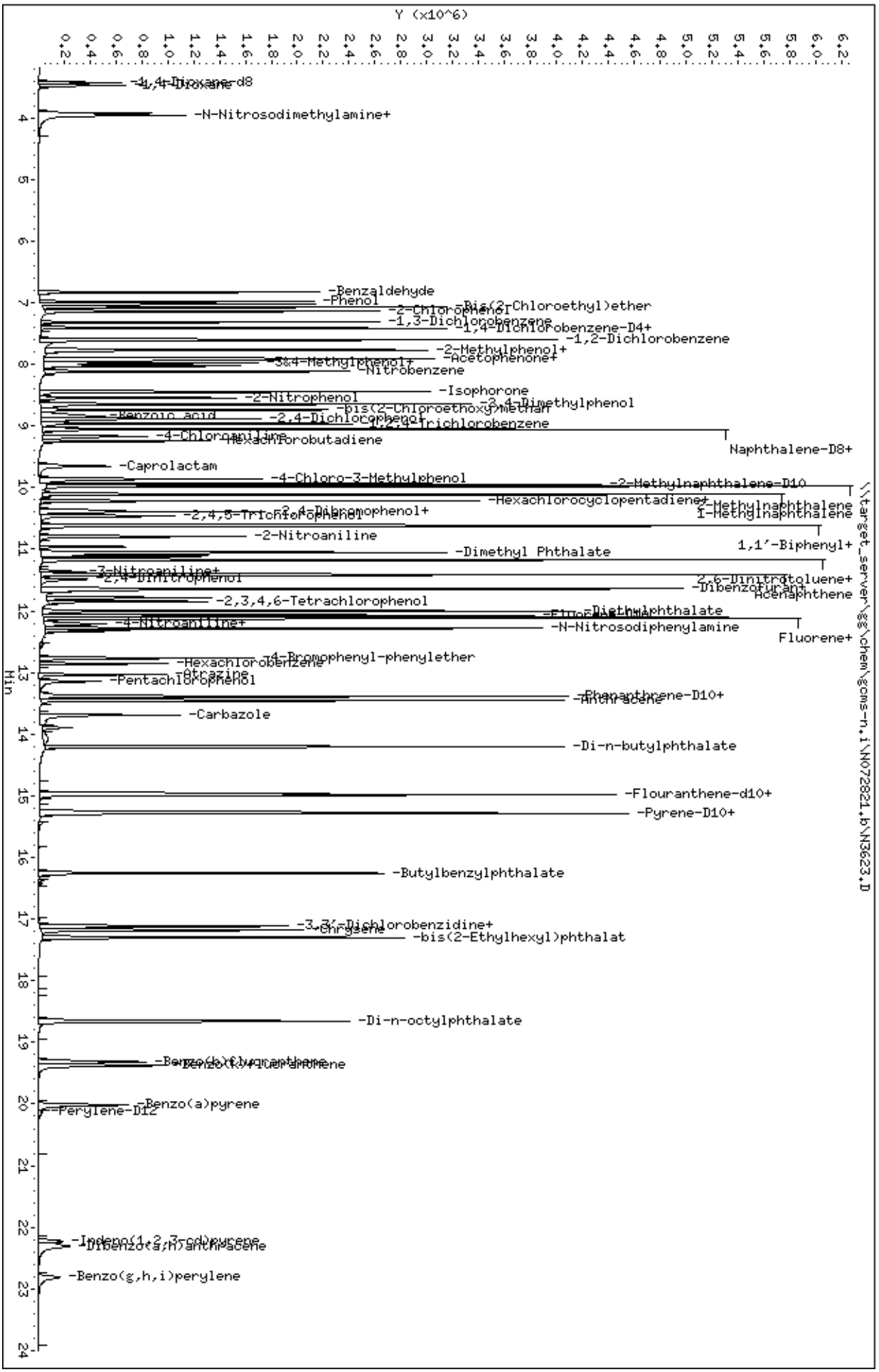
Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3623.D
Report Date: 29-Jul-2021 10:25

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	76	3,3'-Dichlorobenzidine	252	17.128	17.128	(0.999)	263828	15.0000	15.2(A)	
	77	Benzo(a)anthracene	228	17.117	17.117	(0.999)	1863440	15.0000	14.8	
*	78	Chrysene-D12	240	17.139	17.139	(1.000)	79798	0.80000	(a)	
	79	Chrysene	228	17.183	17.183	(1.003)	2006945	15.0000	12.7	
	80	bis(2-Ethylhexyl)phthalate	149	17.305	17.305	(1.010)	2804566	15.0000	14.0	
	81	Di-n-octylphthalate	149	18.657	18.657	(1.089)	4181684	15.0000	14.4	
	82	Benzo(b)fluoranthene	252	19.320	19.320	(0.959)	1228596	15.0000	17.1(A)	
	83	Benzo(k)fluoranthene	252	19.376	19.376	(0.962)	1653484	15.0000	14.2(H)	
	84	Benzo(a)pyrene	252	20.016	20.016	(0.994)	1101823	15.0000	15.4(A)	
*	85	Perylene-D12	264	20.139	20.139	(1.000)	47999	0.80000	(a)	
	86	Indeno(1,2,3-cd)pyrene	276	22.227	22.227	(1.297)	468012	15.0000	14.9(M)	M3
	87	Dibenzo(a,h)anthracene	278	22.306	22.306	(1.108)	605503	15.0000	15.8(A)	
	88	Benzo(g,h,i)perylene	276	22.811	22.811	(1.133)	684135	15.0000	14.0	
M	89	Total PAHs	100				39498228	270.000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount
exceeded maximum amount.
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

3:29 pm, Jul 29, 2021


Data File: \\target_server\gg\chem\gcms-n,i\N072821,b\N3623.D
Date : 28-JUL-2021 18:27
Client ID:
Sample Info: WG303306-7
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N072821,b\N3623.D
Y (x10^6)
Min
-1,4-Dioxane-d8
-N-Nitrosodimethylamine+
-Benzaldehyde
-Phenol
-2-Chlorophenol
-Bis(2-Chloroethyl)ether
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-2-Methylphenol+
-3&4-Methylphenol+
-Acetophenone+
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-2,4-Dimethylphenol
-bis(2-Chloroethoxy)methan
-Benzoic acid
-2,4-Dichlorophenol
-1,2,4-Trichlorobenzene
-4-Chloroaniline
-Hexachlorobutadiene
Naphthalene-D8+
-Caprolactam
-4-Chloro-3-Methylphenol
-2-Methylnaphthalene-D10
-Hexachlorocyclopentadiene+
2-Methylnaphthalene
1-Methylnaphthalene
-2,4-Dibromophenol+
-2,4,6-Trichlorophenol
-2-Nitroaniline
1,1'-Biphenyl+
-Dimethyl Phthalate
-3-Nitroaniline+
-2,4-Dinitrophenol
2,6-Dinitrotoluene+
-Dibenzofuran+
Acenaphthene
-2,3,4,6-Tetrachlorophenol
-Diethylphthalate
-4-Nitroaniline+
-N-Nitrosodiphenylamine
Fluorene+
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
-Di-n-butylphthalate
-Flouranthene-d10+
-Pyrene-D10+
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-Chrysene
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene
-Benzo(k)fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene
-Dibenzo(a,h)anthracene
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3624.D
Report Date: 29-Jul-2021 08:58

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3624.D
Lab Smp Id: WG303306-8
Inj Date : 28-JUL-2021 19:02
Operator : JCG Inst ID: gcms-n.i
Smp Info : WG303306-8
Misc Info : WG303306,WG303306,WG303306-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 08:33 gcms-n.i Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27 Cal File: N3623.D
Als bottle: 8 QC Sample: INDCHECK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
2	1,4-Dioxane	88	3.501	3.480	(0.474)	160313	4.68291	4.68	
3	N-Nitrosodimethylamine	74	3.942	3.921	(0.533)	205377	4.44056	4.44	
4	Pyridine	79	3.984	3.952	(0.539)	350481	5.19071	5.19	
5	Benzaldehyde	77	6.836	6.826	(0.925)	65439	1.53110	1.53(R)	
6	Phenol	94	7.017	7.017	(0.950)	497078	5.15224	5.15	
7	Bis(2-Chloroethyl)ether	93	7.068	7.068	(0.956)	408444	4.80607	4.81	
8	2-Chlorophenol	128	7.138	7.138	(0.966)	467675	4.80575	4.80	
9	1,3-Dichlorobenzene	146	7.319	7.319	(0.990)	480101	4.69592	4.70	
* 10	1,4-Dichlorobenzene-D4	152	7.390	7.390	(1.000)	54486	0.80000	(a)	
11	1,4-Dichlorobenzene	146	7.410	7.410	(1.003)	493724	4.80210	4.80	
12	1,2-Dichlorobenzene	146	7.601	7.601	(1.029)	460730	4.74249	4.74	
13	2-Methylphenol	108	7.772	7.772	(1.052)	415889	5.08768	5.09	
14	2,2'-Oxybis(1-chloropropane)	45	7.752	7.752	(1.049)	372546	3.40535	3.40(R)	
15	Acetophenone	105	7.903	7.903	(0.876)	492933	4.82087	4.82	
16	N-Nitroso-di-n-propylamine	70	7.923	7.933	(1.072)	249790	4.55647	4.56	
17	3&4-Methylphenol	108	7.974	7.984	(1.079)	405345	4.95574	4.96	
18	Hexachloroethane	117	8.024	8.024	(1.086)	175185	4.79578	4.80	
19	Nitrobenzene	77	8.115	8.115	(0.899)	426313	5.10057	5.10	
20	Isophorone	82	8.434	8.445	(0.935)	732141	4.86736	4.87	
21	2-Nitrophenol	139	8.541	8.541	(0.947)	229142	4.76595	4.76	

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3624.D
Report Date: 29-Jul-2021 08:58

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
	22 2,4-Dimethylphenol	107	8.648	8.648	(0.959)	387045	4.46197	4.46	
	23 bis(2-Chloroethoxy)methane	93	8.733	8.744	(0.968)	442408	4.53979	4.54	
	24 Benzoic acid	105	8.808	8.851	(0.976)	195120	6.88803	6.89(QR)	
	25 2,4-Dichlorophenol	162	8.883	8.883	(0.985)	338625	4.81405	4.81	
	26 1,2,4-Trichlorobenzene	180	8.958	8.969	(0.993)	355115	5.04044	5.04	
*	27 Naphthalene-D8	136	9.022	9.022	(1.000)	194346	0.80000	(a)	
	28 Naphthalene	128	9.054	9.054	(1.004)	1218037	4.83330	4.83	
	29 4-Chloroaniline	127	9.161	9.161	(1.015)	376982	4.70573	4.70	
	30 Hexachlorobutadiene	225	9.247	9.247	(1.025)	166074	4.80828	4.81	
	31 Caprolactam	113	9.613	9.652	(1.065)	114657	4.59230	4.59	
	32 4-Chloro-3-Methylphenol	107	9.859	9.859	(1.093)	344158	4.76391	4.76	
	34 2-Methylnaphthalene	142	9.977	9.977	(1.106)	812248	4.41786	4.42	
	35 1-Methylnaphthalene	142	10.105	10.105	(1.120)	787701	4.76623	4.77	
	36 Hexachlorocyclopentadiene	237	10.213	10.213	(0.899)	121844	3.69530	3.70(R)	
	37 1,2,4,5-Tetrachlorobenzene	216	10.213	10.213	(0.899)	322008	4.80466	4.80	
	39 2,4,6-Trichlorophenol	196	10.390	10.390	(0.915)	210818	4.77199	4.77	
	40 2,4,5-Trichlorophenol	196	10.459	10.459	(0.921)	277788	4.76514	4.76	
	41 1,1'-Biphenyl	154	10.607	10.607	(0.934)	924597	4.82787	4.83	
	42 2-Chloronaphthalene	164	10.618	10.629	(0.935)	261571	5.00451	5.00	
	43 2-Nitroaniline	65	10.781	10.792	(0.949)	191911	4.70397	4.70	
	44 Dimethyl Phthalate	163	11.043	11.053	(0.972)	921531	5.06087	5.06	
	45 2,6-Dinitrotoluene	165	11.108	11.119	(0.978)	208420	4.92927	4.93	
	46 Acenaphthylene	152	11.173	11.173	(0.984)	1134076	4.26326	4.26	
	47 3-Nitroaniline	138	11.337	11.359	(0.998)	77039	3.91792	3.92(R)	
*	48 Acenaphthene-D10	164	11.359	11.369	(1.000)	103039	0.80000	(a)	
	49 Acenaphthene	153	11.402	11.413	(1.004)	777014	4.77483	4.77	
	50 2,4-Dinitrophenol	184	11.489	11.489	(1.012)	69087	5.03733	5.04	
	51 4-Nitrophenol	109	11.685	11.664	(1.029)	56344	2.98031	2.98(QR)	
	52 Dibenzofuran	168	11.642	11.642	(1.025)	1028815	4.81996	4.82	
	53 2,4-Dinitrotoluene	165	11.653	11.653	(1.026)	249020	4.50325	4.50	
	54 2,3,4,6-Tetrachlorophenol	232	11.849	11.849	(1.043)	154778	4.08730	4.09	
	55 Diethylphthalate	149	11.991	12.001	(1.056)	940848	4.96423	4.96	
	57 Fluorene	166	12.100	12.110	(1.065)	809184	4.69323	4.69	
	58 4-Chlorophenyl-phenylether	204	12.121	12.121	(1.067)	378237	4.70958	4.71	
	59 4-Nitroaniline	138	12.154	12.187	(1.070)	100152	4.44109	4.44(QM)	M9
	60 4,6-Dinitro-2-Methylphenol	198	12.208	12.208	(0.914)	115185	4.95777	4.96	
	61 N-Nitrosodiphenylamine	169	12.285	12.285	(0.920)	562986	3.93113	3.93(R)	
	62 4-Bromophenyl-phenylether	248	12.773	12.773	(0.957)	193590	4.34980	4.35	
	63 Hexachlorobenzene	284	12.854	12.854	(0.963)	165467	4.26894	4.27	
	64 Atrazine	200	13.027	13.039	(0.976)	177618	4.61949	4.62	
	65 Pentachlorophenol	266	13.142	13.142	(0.984)	104821	5.03222	5.03	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	157470	0.80000	(a)	
	67 Phenanthrene	178	13.385	13.385	(1.003)	1047008	4.81930	4.82	
	68 Anthracene	178	13.442	13.454	(1.007)	1177473	4.59168	4.59	
	69 Carbazole	167	13.685	13.685	(1.025)	814788	5.17540	5.18	
	70 Di-n-butylphthalate	149	14.196	14.196	(1.063)	1660320	4.98870	4.99	
	72 Fluoranthene	202	14.985	14.985	(1.122)	1024532	4.89772	4.90	
	74 Pyrene	202	15.285	15.285	(0.892)	1032726	4.32515	4.32	
	75 Butylbenzylphthalate	149	16.251	16.262	(0.948)	642452	4.68091	4.68	
	76 3,3'-Dichlorobenzidine	252	17.139	17.128	(1.000)	73052	2.97807	2.98(R)	
	77 Benzo(a)anthracene	228	17.117	17.117	(0.999)	551596	4.39897	4.40	
*	78 Chrysene-D12	240	17.139	17.139	(1.000)	79313	0.80000	(a)	
	79 Chrysene	228	17.183	17.183	(1.003)	736280	4.68240	4.68	
	80 bis(2-Ethylhexyl)phthalate	149	17.305	17.305	(1.010)	924381	4.62964	4.63	

3:29 pm, Jul 29, 2021

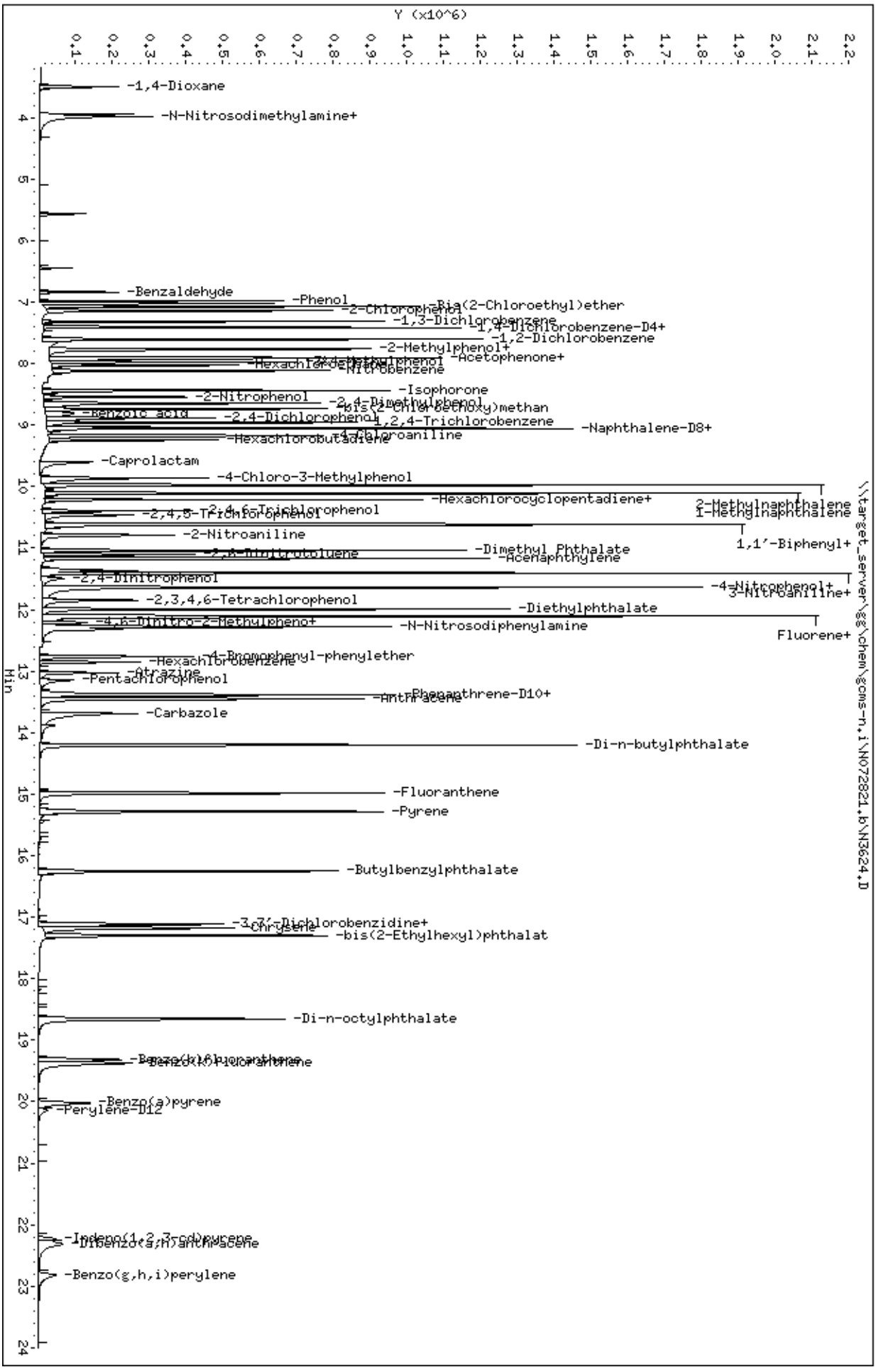
Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3624.D
Report Date: 29-Jul-2021 08:58

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
	81 Di-n-octylphthalate	149	18.657	18.657	(1.089)	1338883	4.63916	4.64	
	82 Benzo(b)fluoranthene	252	19.320	19.320	(0.959)	365518	4.72663	4.73	
	83 Benzo(k)fluoranthene	252	19.376	19.376	(0.962)	609964	4.87009	4.87(H)	
	84 Benzo(a)pyrene	252	20.016	20.016	(0.994)	303234	3.91867	3.92(R)	
*	85 Perylene-D12	264	20.139	20.139	(1.000)	51807	0.80000	(a)	
	86 Indeno(1,2,3-cd)pyrene	276	22.239	22.227	(1.298)	139995	4.49137	4.49(M)	M3
	87 Dibenzo(a,h)anthracene	278	22.317	22.306	(1.108)	194676	4.70624	4.71	
	88 Benzo(g,h,i)perylene	276	22.822	22.811	(1.133)	232137	4.41712	4.42	
M	89 Total PAHs	100				12953399	82.5940	82.6	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

3:29 pm, Jul 29, 2021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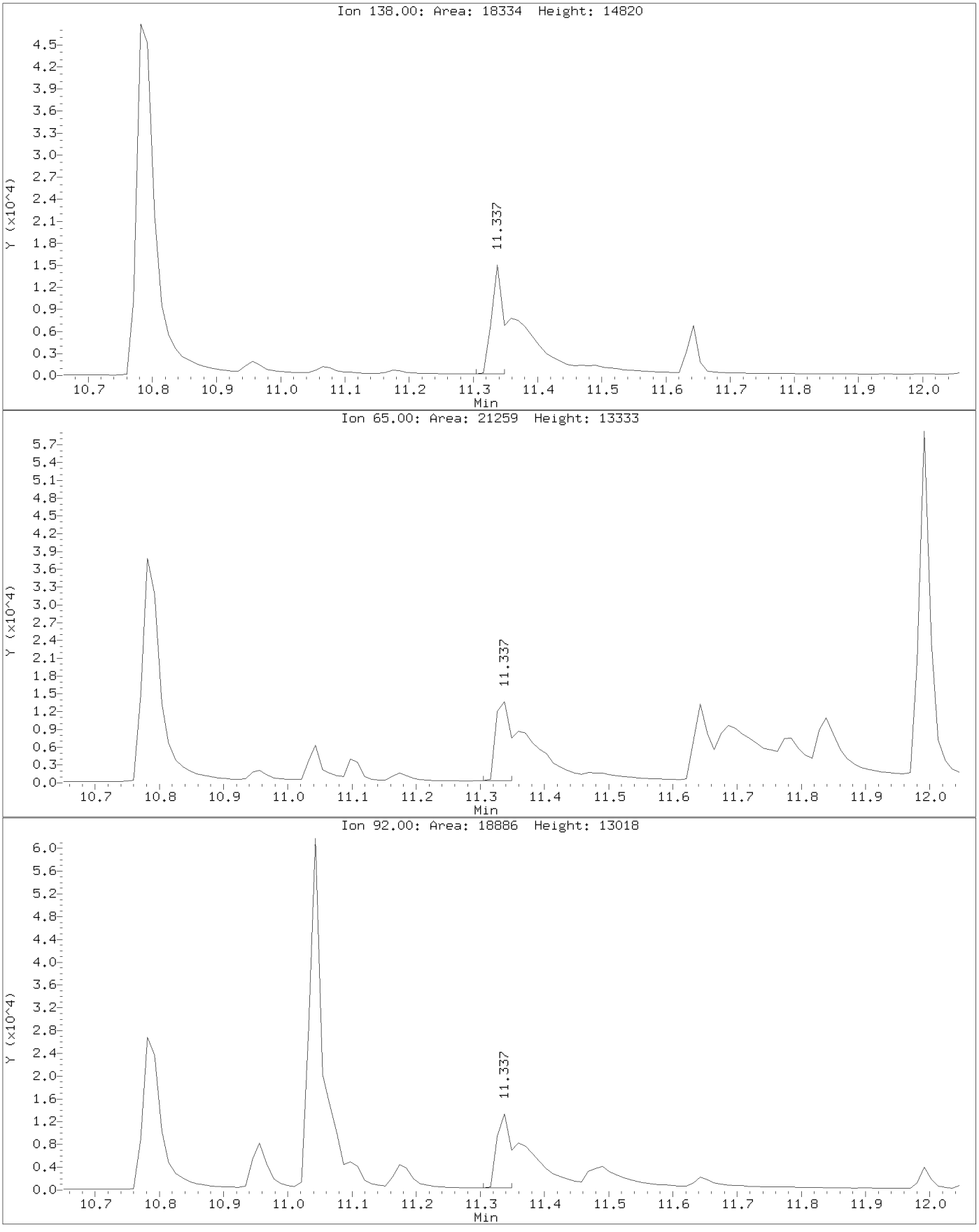
Date : 28-JUL-2021 19:02
Client ID:
Sample Info: WG303306-8
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N072821,b\N3624.D
Y (x10^6)
Min
-1,4-Dioxane
-N-Nitrosodimethylamine+
-Benzaldehyde
-Phenol
-2-Chlorophenol
-Bis(2-Chloroethyl)ether
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-2-Methylphenol+
-Acetophenone+
-Hexachloroethane
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-2,4-Dimethylphenol
-bis(2-Chloroethoxy)methan
-Benzoic acid
-2,4-Dichlorophenol
-1,2,4-Trichlorobenzene
-Naphthalene-D8+
-4-Chloroaniline
-Hexachlorobutadiene
-Caprolactam
-4-Chloro-3-Methylphenol
-Hexachlorocyclopentadiene+
2-Methylnaphthalene
1-Methylnaphthalene
-2,4,6-Trichlorophenol
-2,4,5-Trichlorophenol
-2-Nitroaniline
1,1'-Biphenyl+
-Dimethyl Phthalate
-2,6-Dinitrotoluene
-Acenaphthylene
-2,4-Dinitrophenol
-4-Nitrophenol+
3-Nitroaniline+
-2,3,4,6-Tetrachlorophenol
-Diethylphthalate
-4,6-Dinitro-2-Methylphenol+
-N-Nitrosodiphenylamine
Fluorene+
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
-Di-n-butylphthalate
-Fluoranthene
-Pyrene
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-Chrysene
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene
-Benzo(k)fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene
-Dibenzo(a,h)anthracene
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3618.D
Injection Date: 28-JUL-2021 15:35
Instrument: gcms-n.i
Client Sample ID:

Compound: 3-Nitroaniline
CAS Number: 99-09-2

BEFORE MANUAL INTEGRATION



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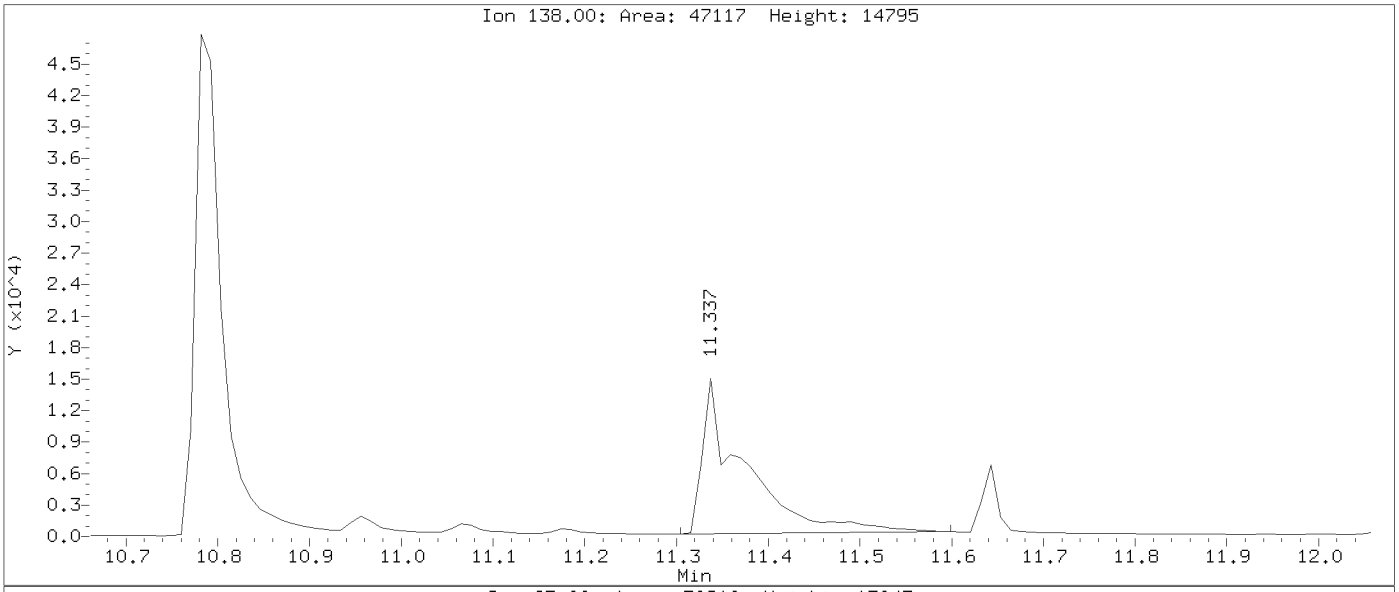
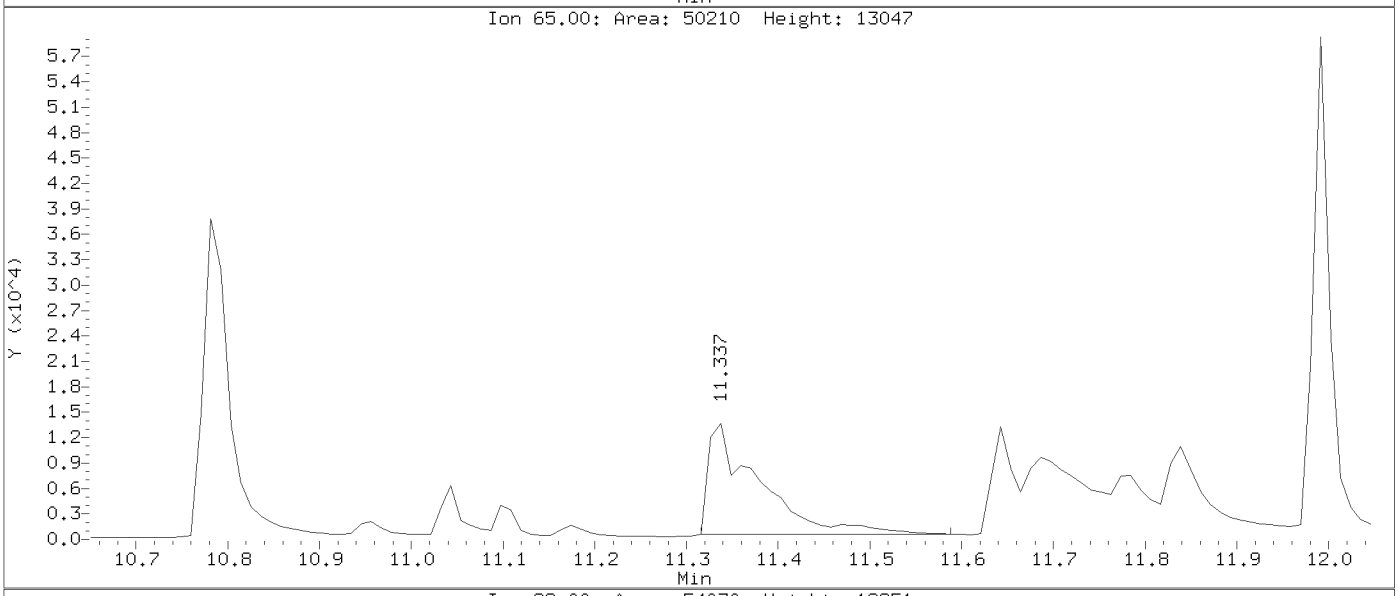
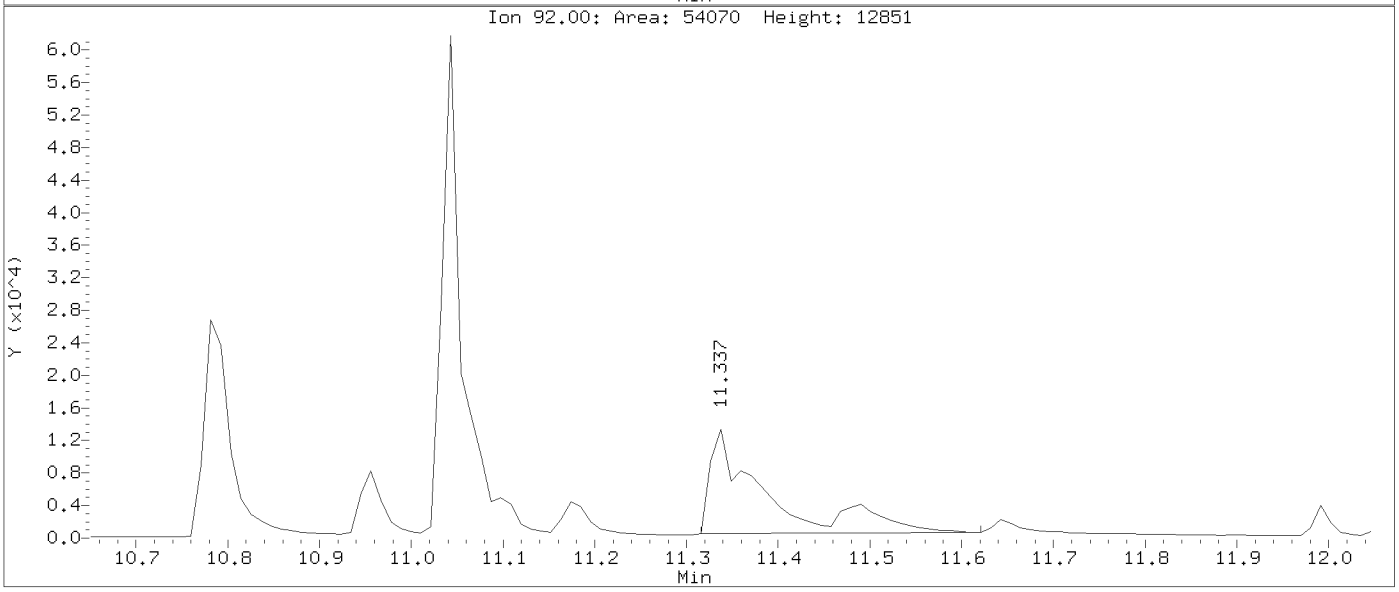
Injection Date: 28-JUL-2021 15:35
Instrument: gcms-n.i
Client Sample ID:

Compound: 3-Nitroaniline
CAS Number: 99-09-2

AFTER MANUAL INTEGRATION







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Injection Date: 28-JUL-2021 15:35
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

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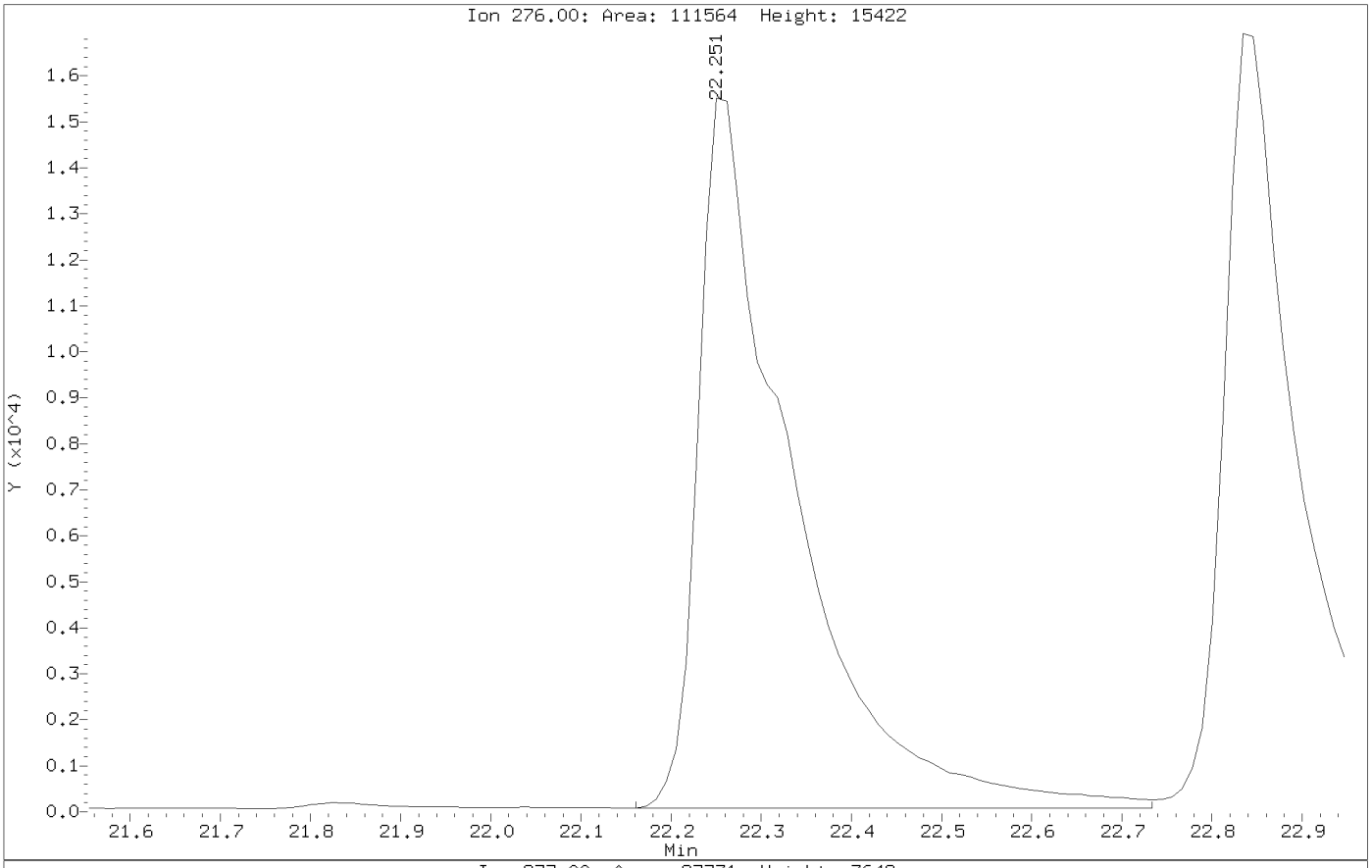

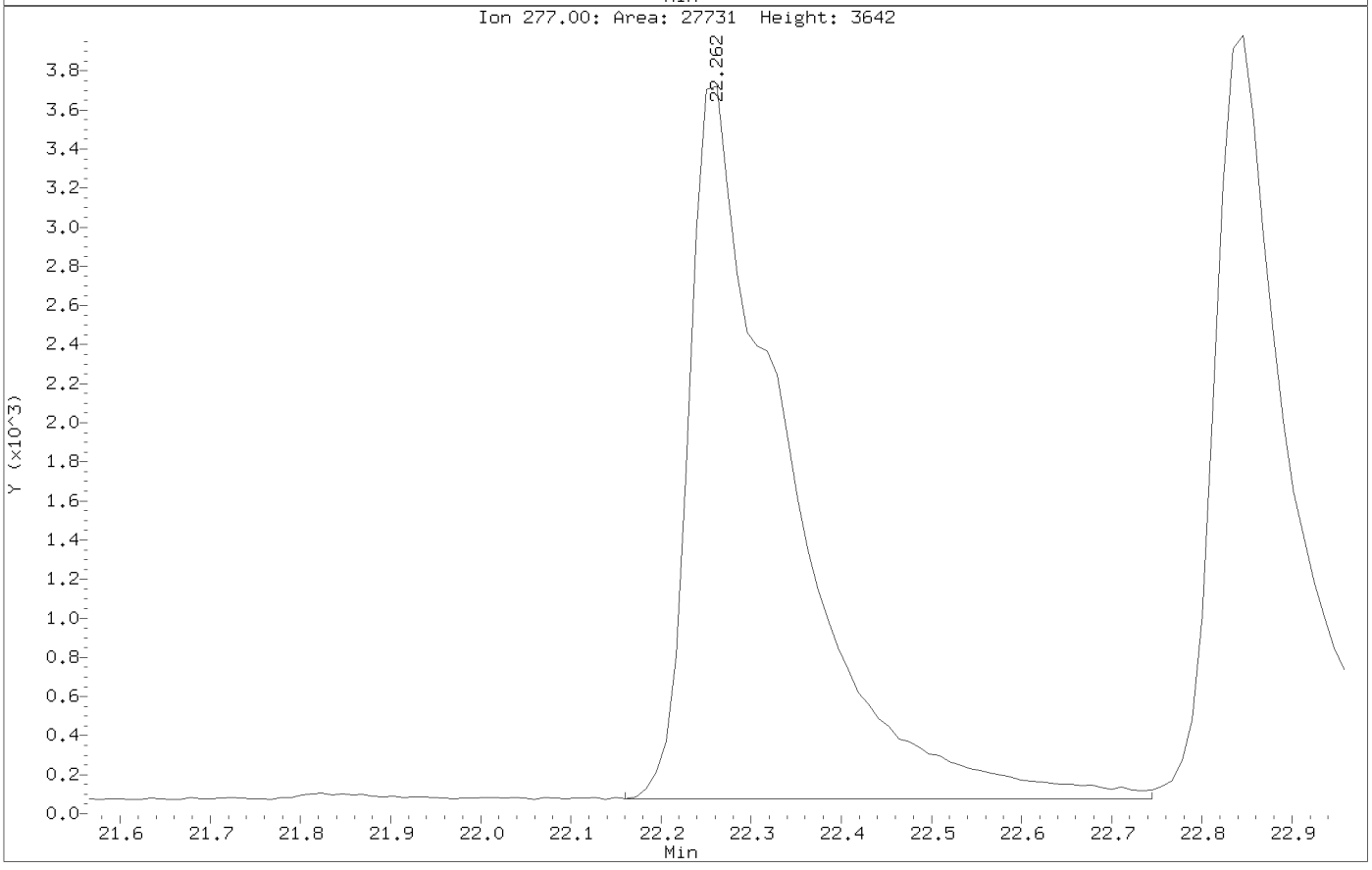

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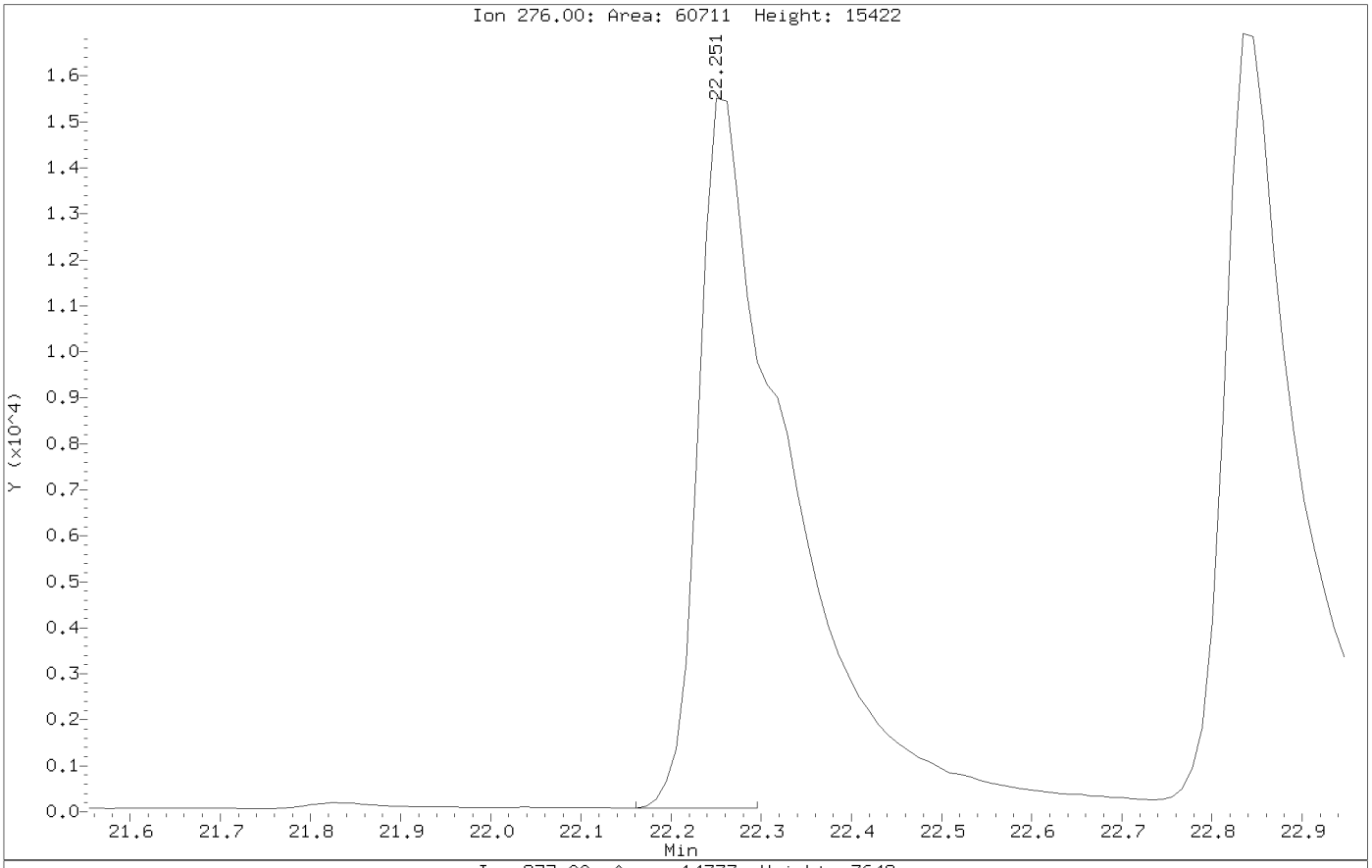
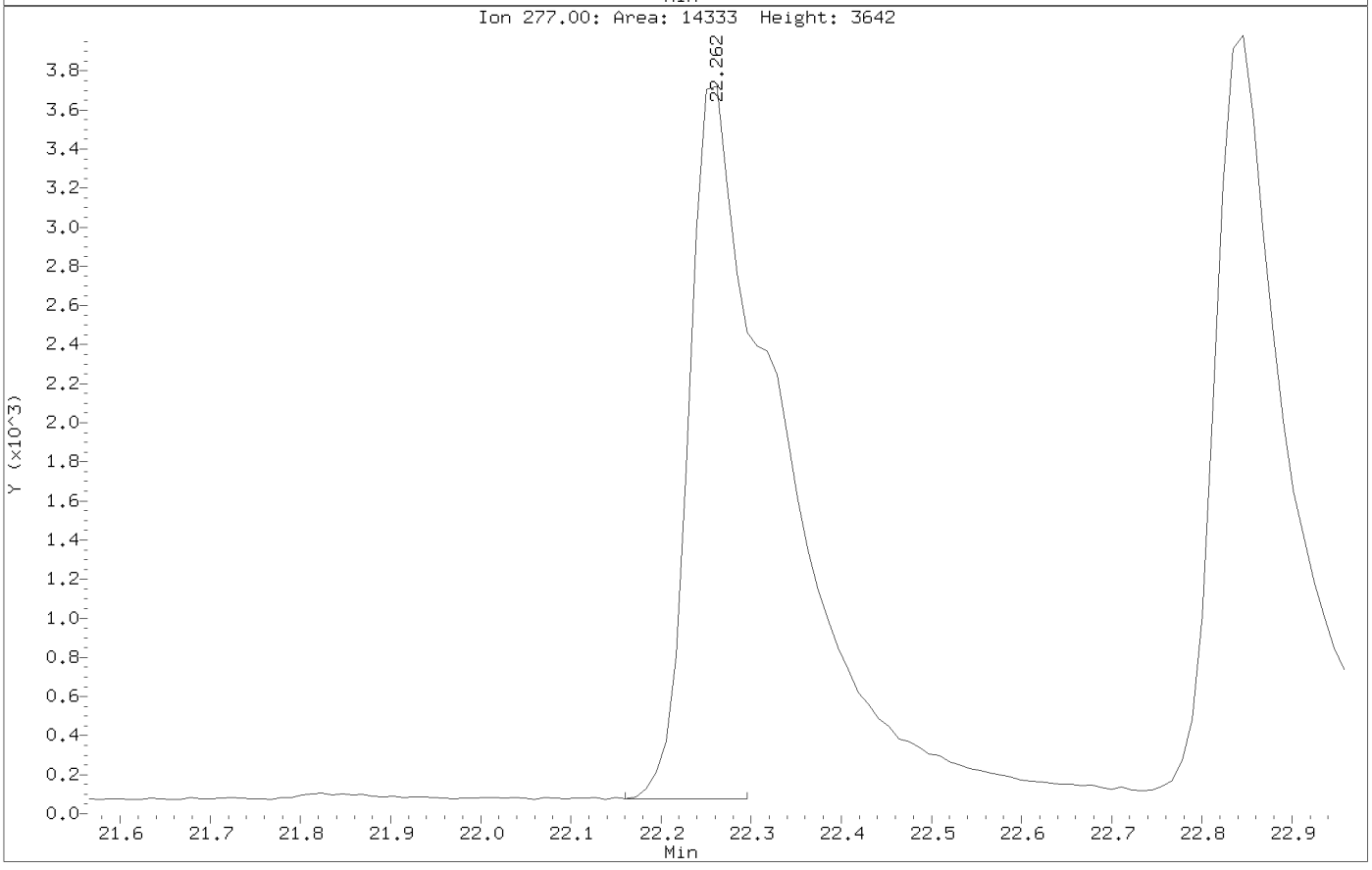
Injection Date: 28-JUL-2021 15:35
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

AFTER MANUAL INTEGRATION





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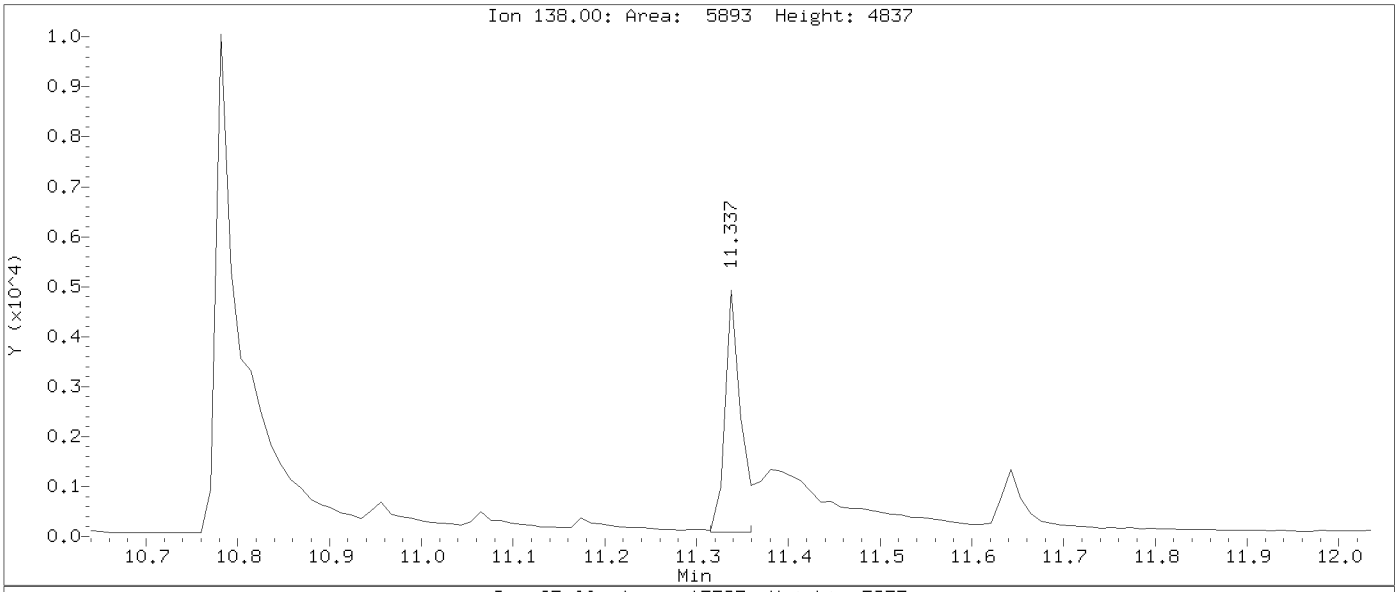
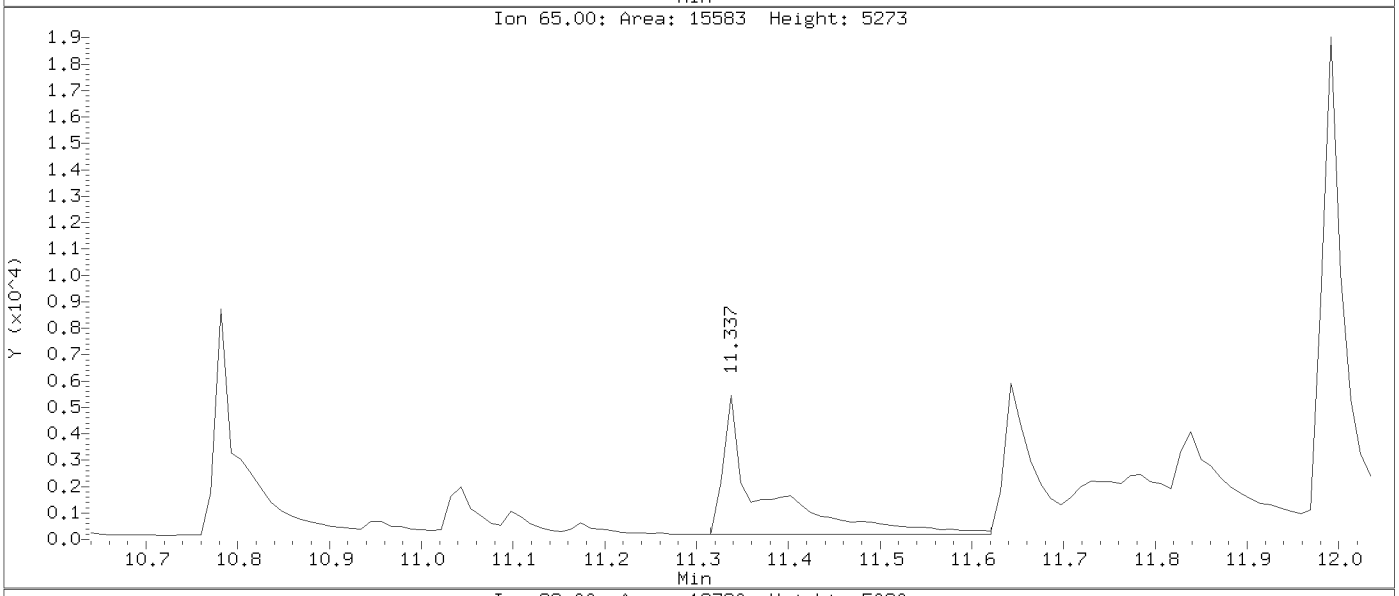
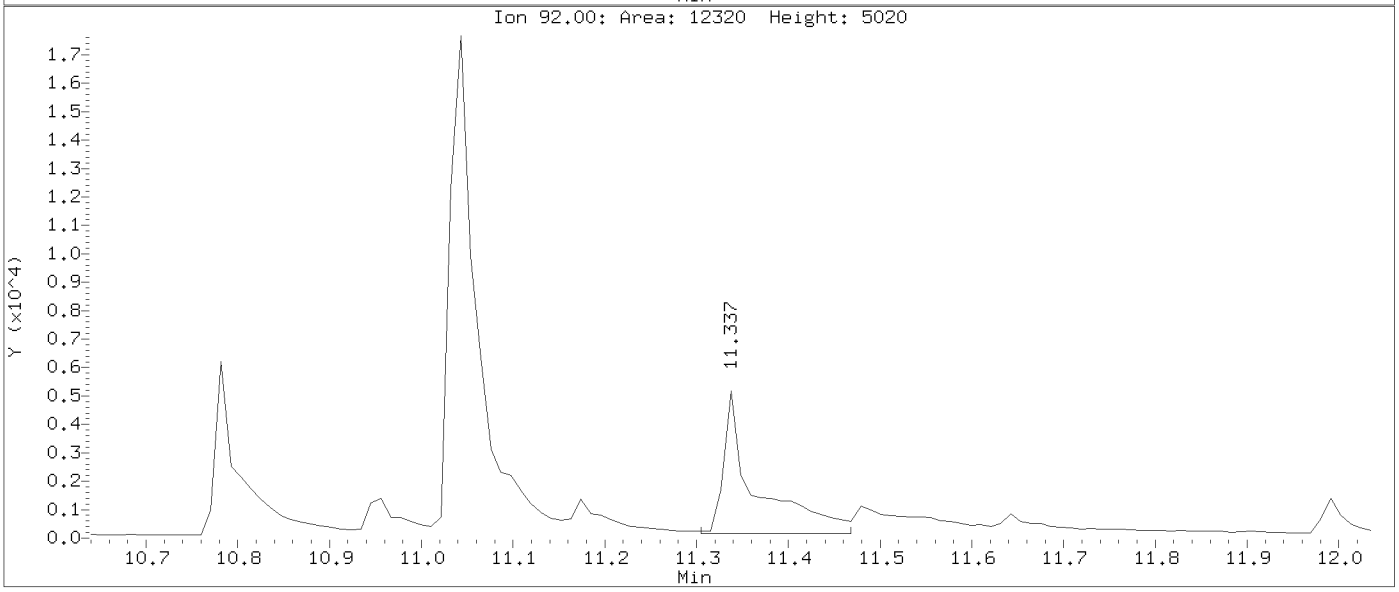
Injection Date: 28-JUL-2021 16:07
Instrument: gcms-n.i
Client Sample ID:

Compound: 3-Nitroaniline
CAS Number: 99-09-2

BEFORE MANUAL INTEGRATION







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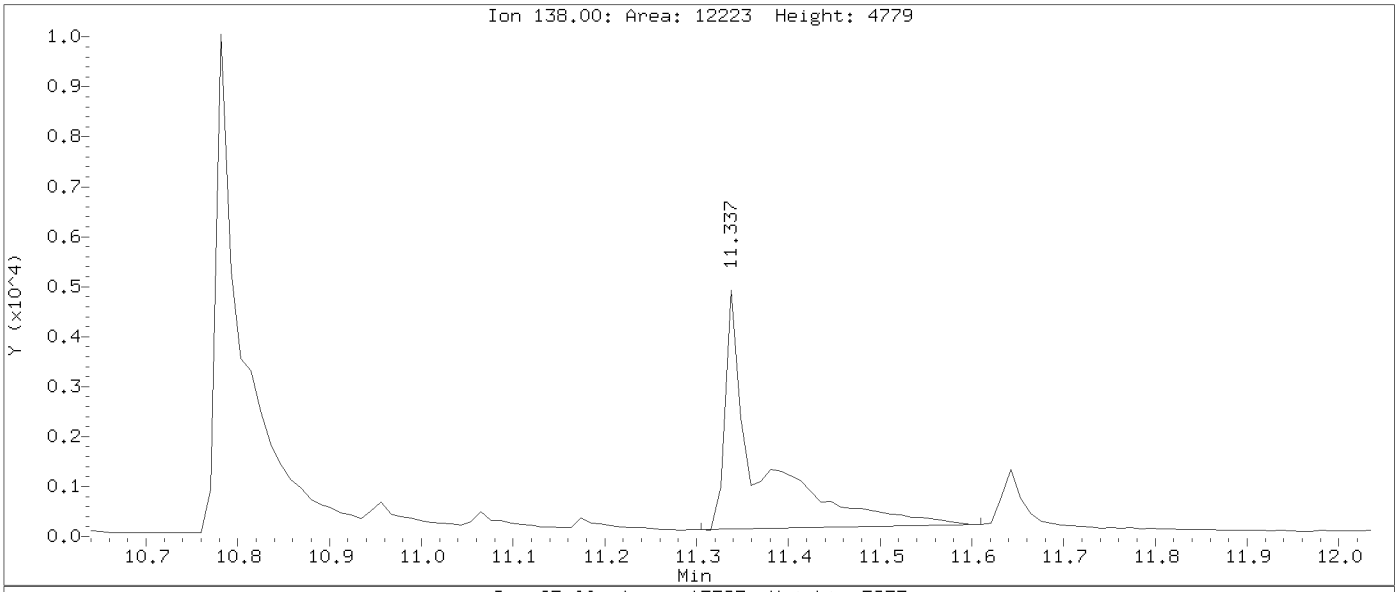
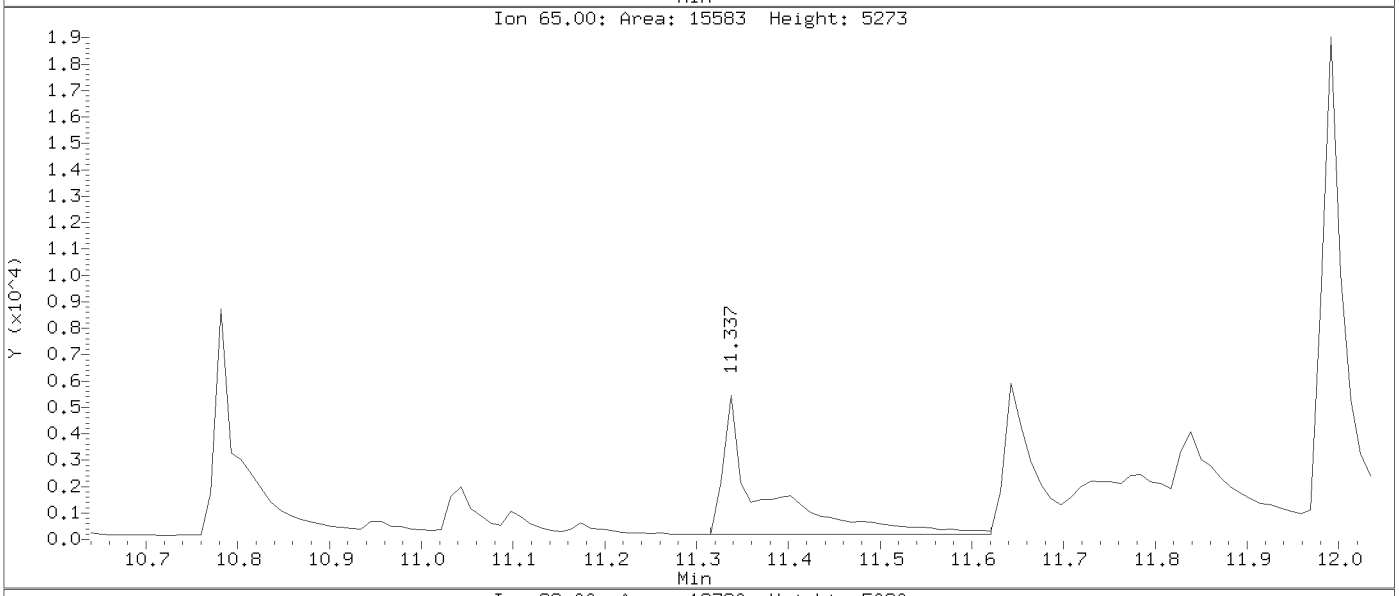
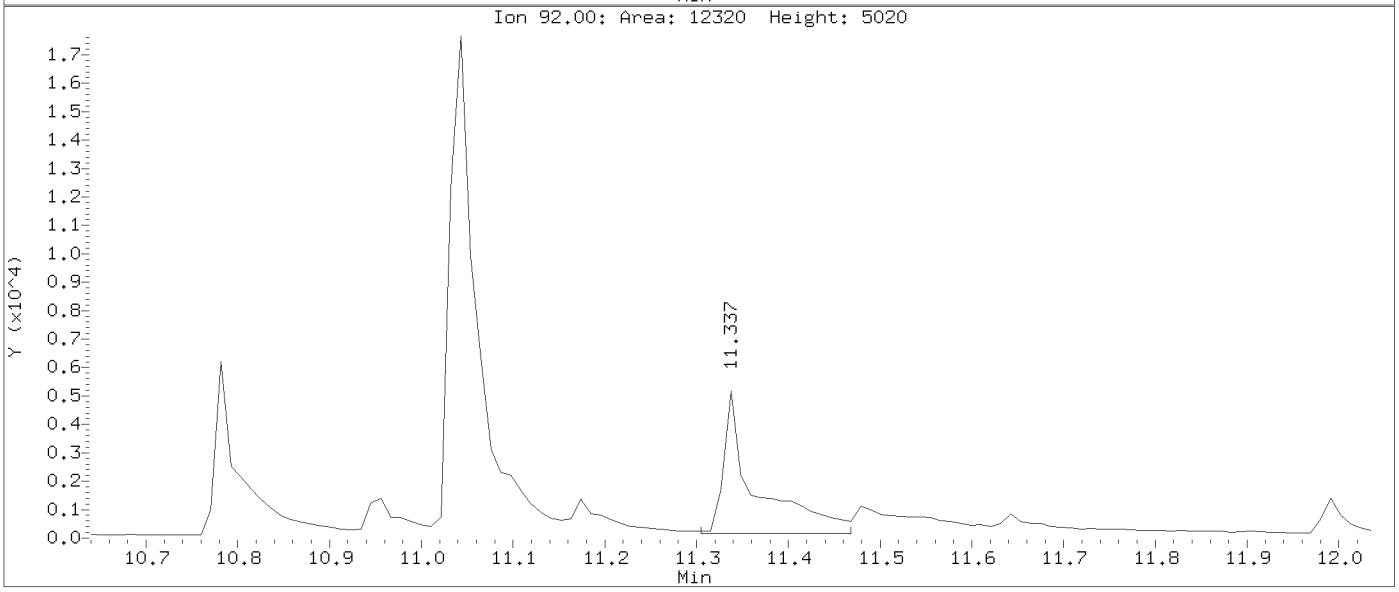
Injection Date: 28-JUL-2021 16:07
Instrument: gcms-n.i
Client Sample ID:

Compound: 3-Nitroaniline
CAS Number: 99-09-2

AFTER MANUAL INTEGRATION







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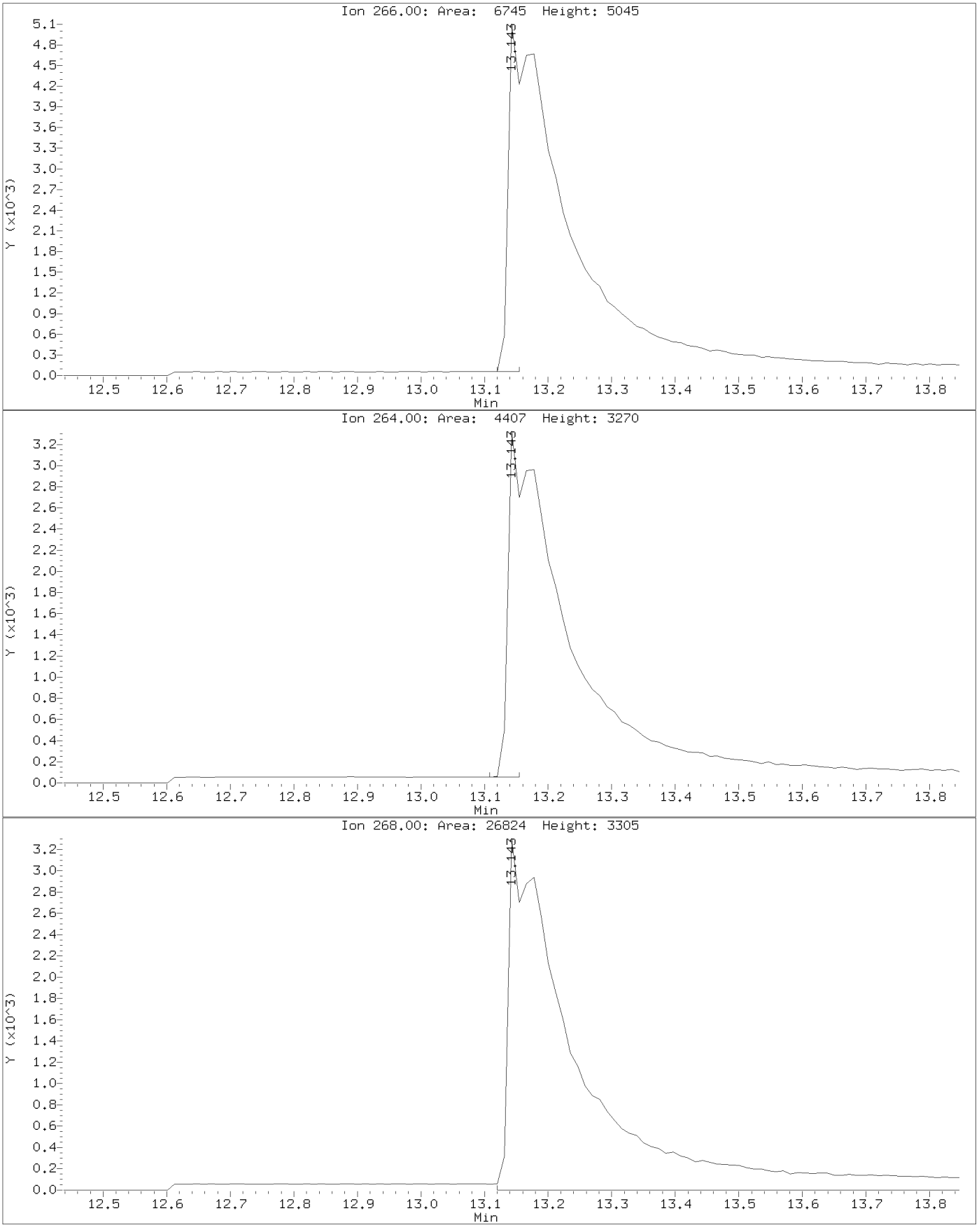
Injection Date: 28-JUL-2021 16:07
Instrument: gcms-n.i
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5

BEFORE MANUAL INTEGRATION



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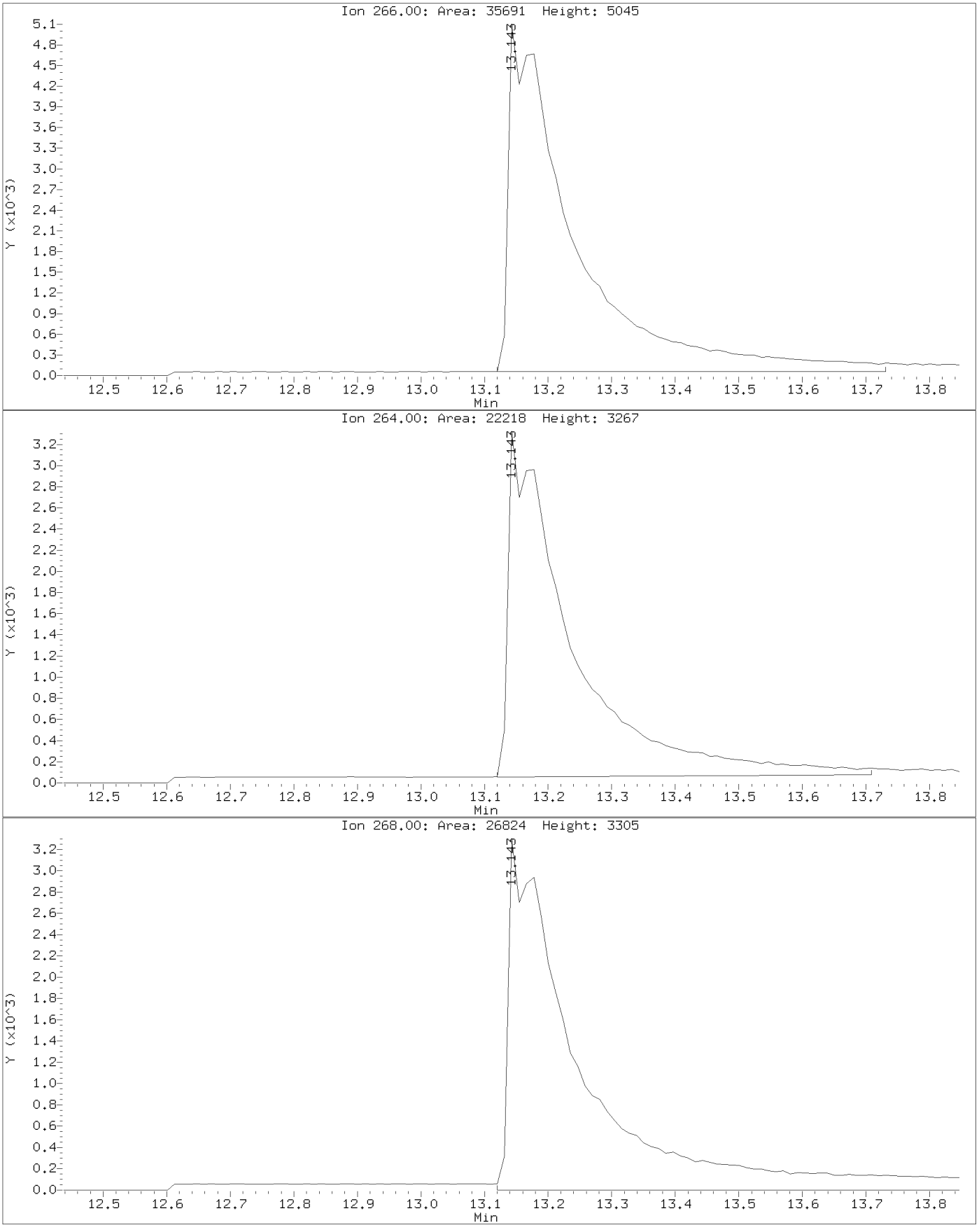
Instrument: gcms-n.i
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5

AFTER MANUAL INTEGRATION



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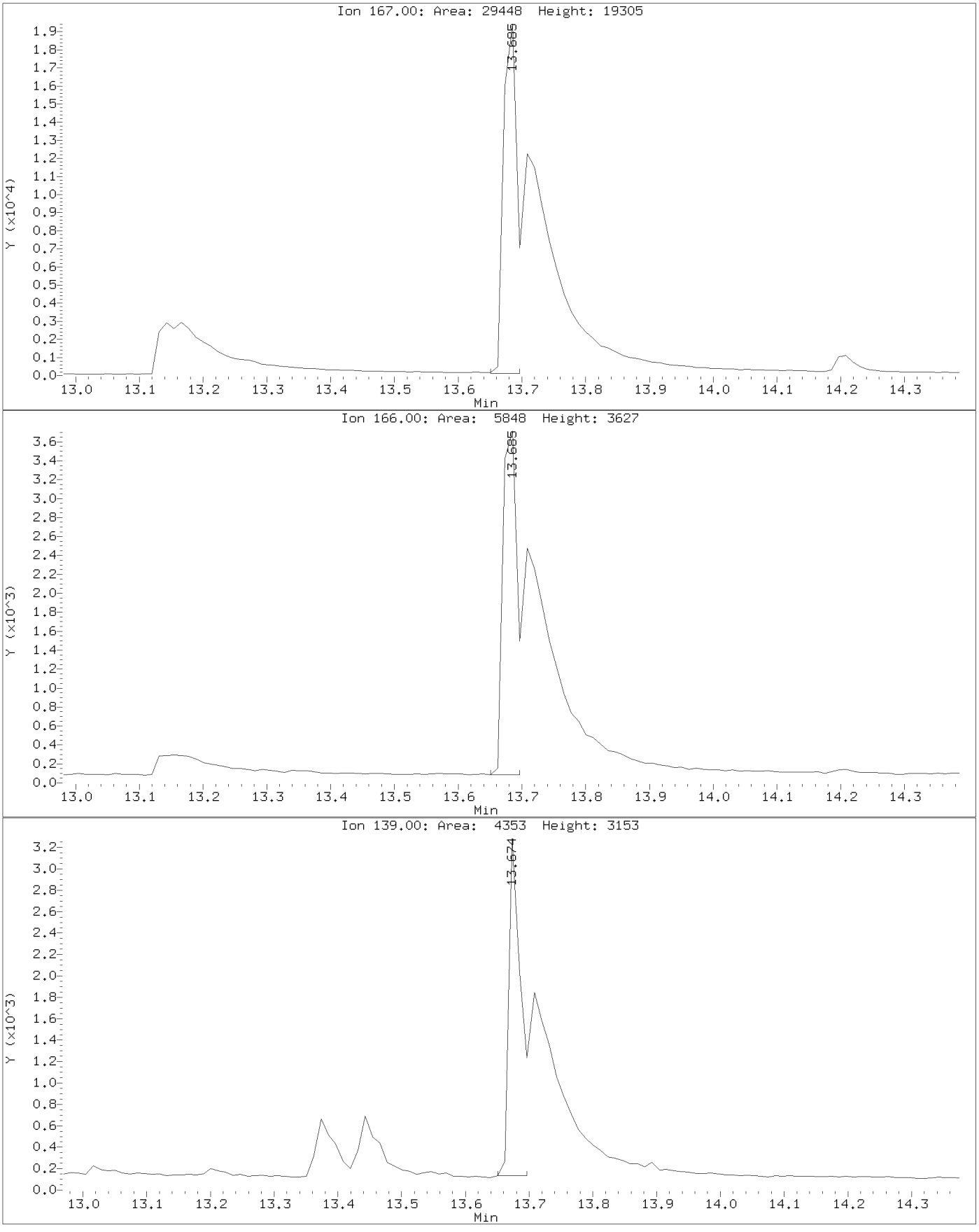
Instrument: gcms-n.i
Client Sample ID:

Compound: Carbazole
CAS Number: 86-74-8

BEFORE MANUAL INTEGRATION



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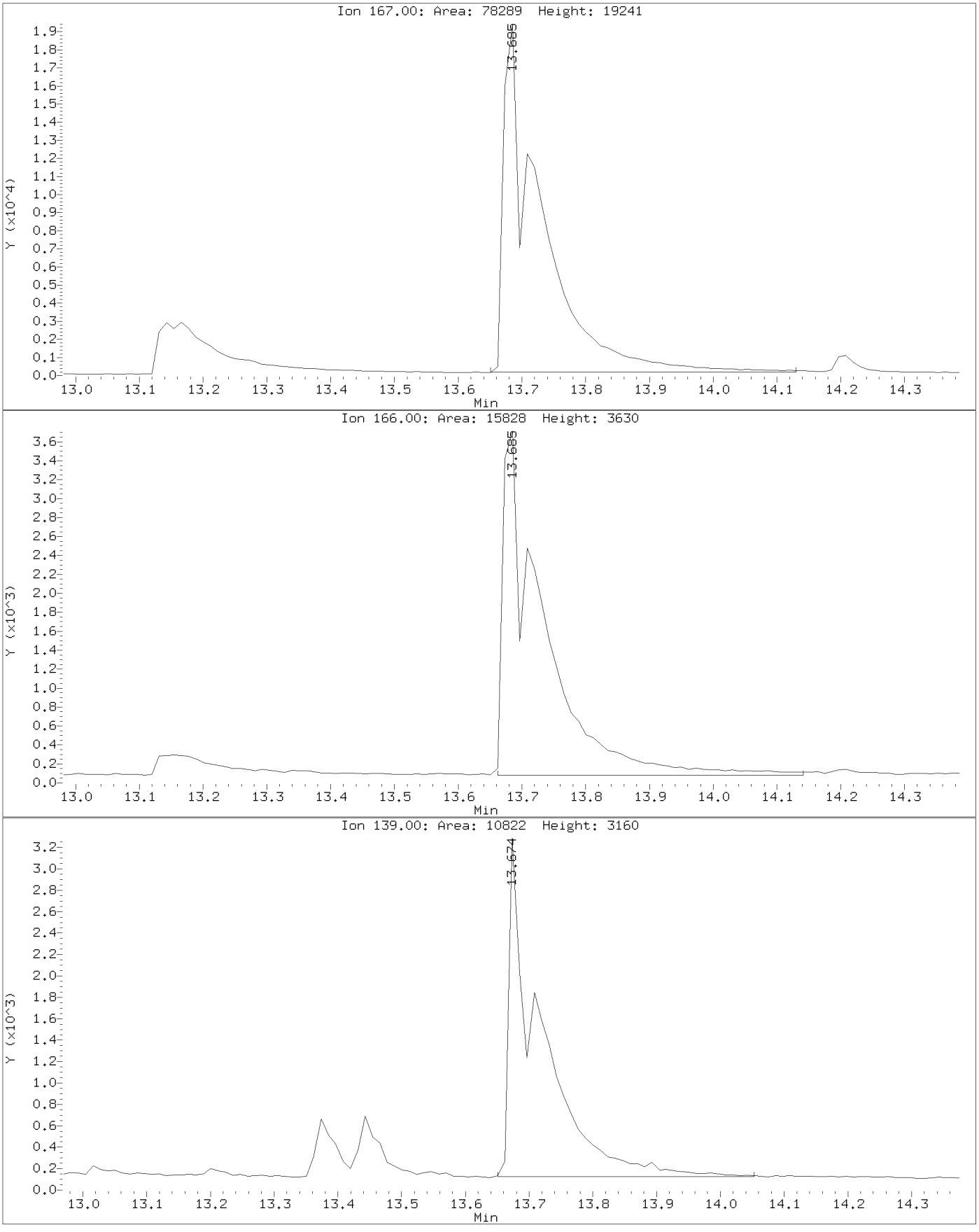
Injection Date: 28-JUL-2021 16:07
Instrument: gcms-n.i
Client Sample ID:

Compound: Carbazole
CAS Number: 86-74-8

AFTER MANUAL INTEGRATION



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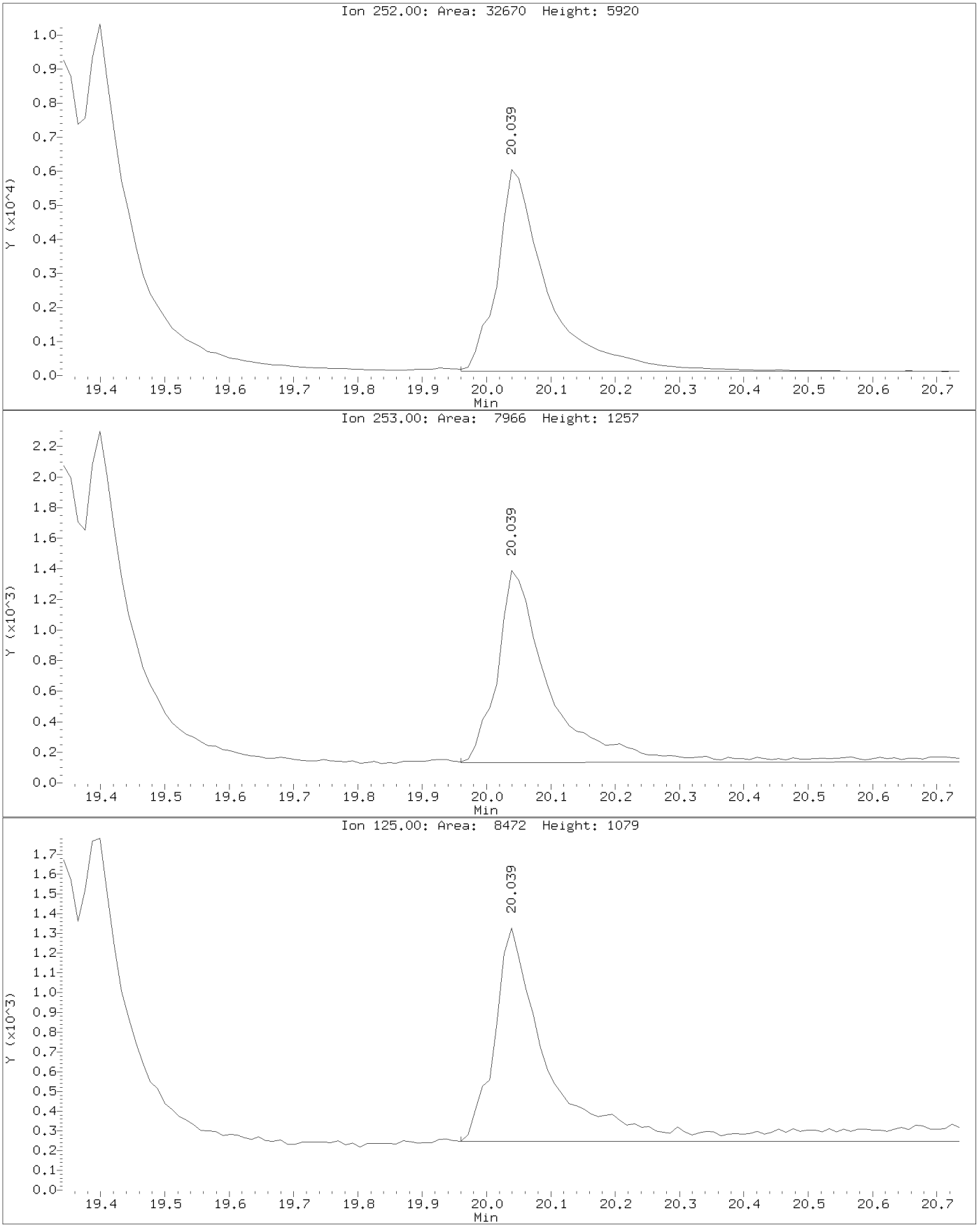
Injection Date: 28-JUL-2021 16:07
Instrument: gcms-n.i
Client Sample ID:

Compound: Benzo(k)fluoranthene
CAS Number: 207-08-9

BEFORE MANUAL INTEGRATION



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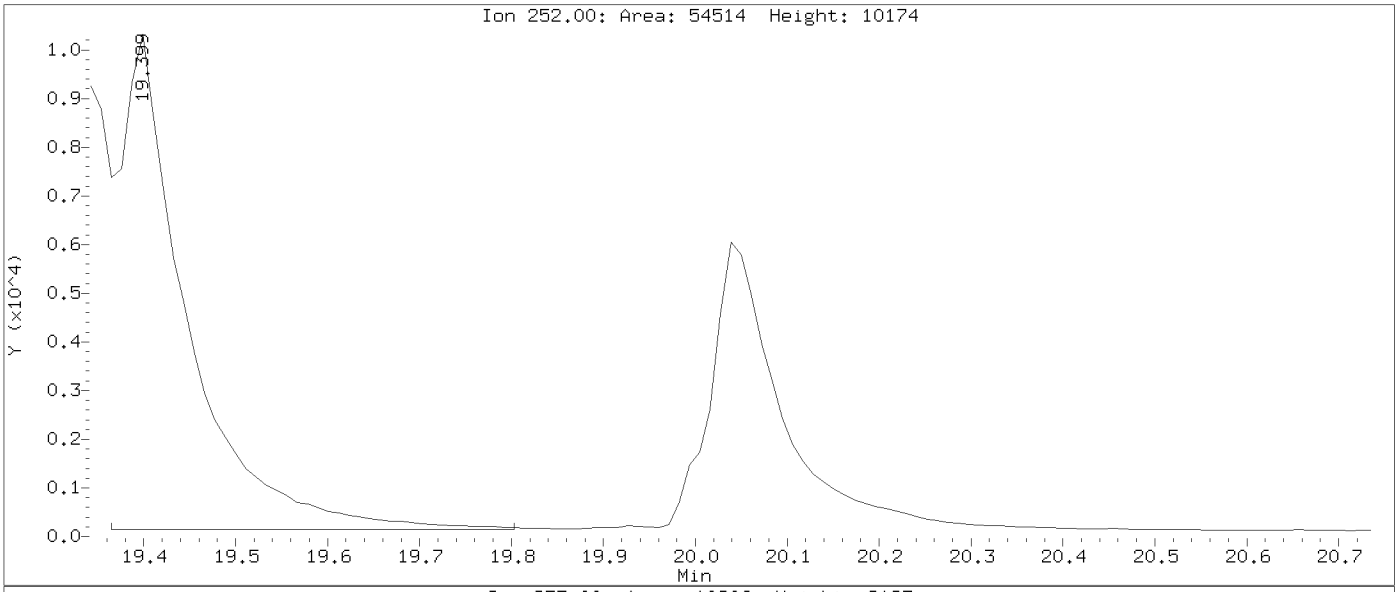
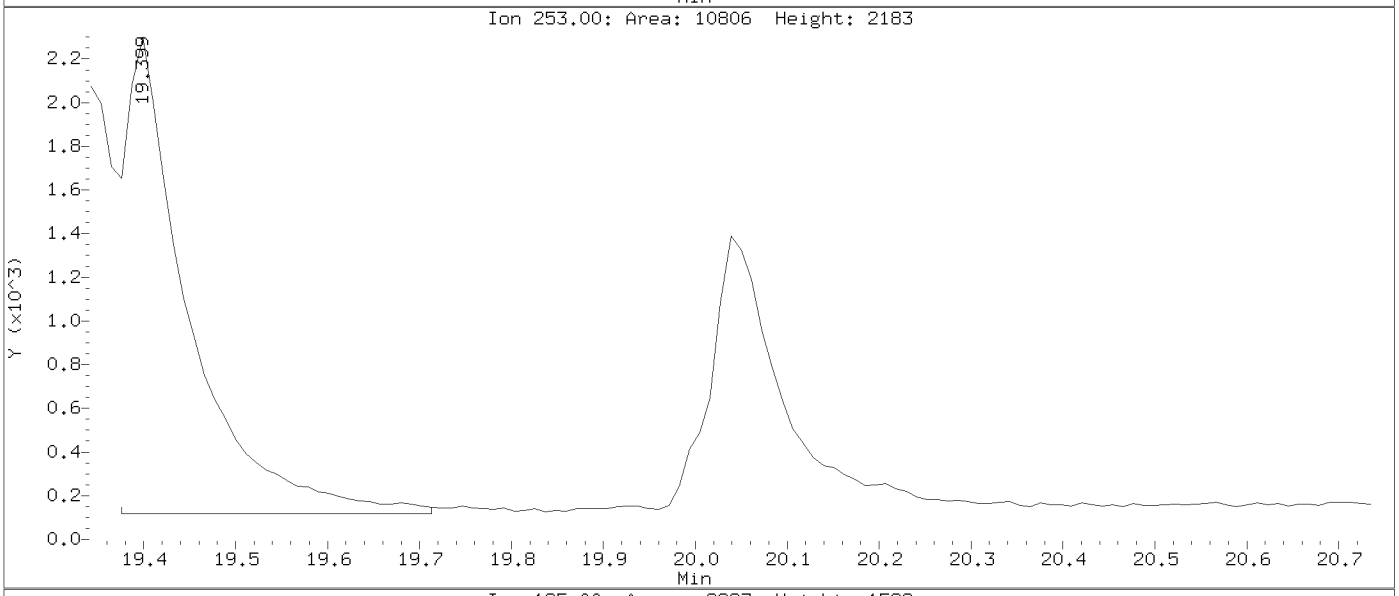
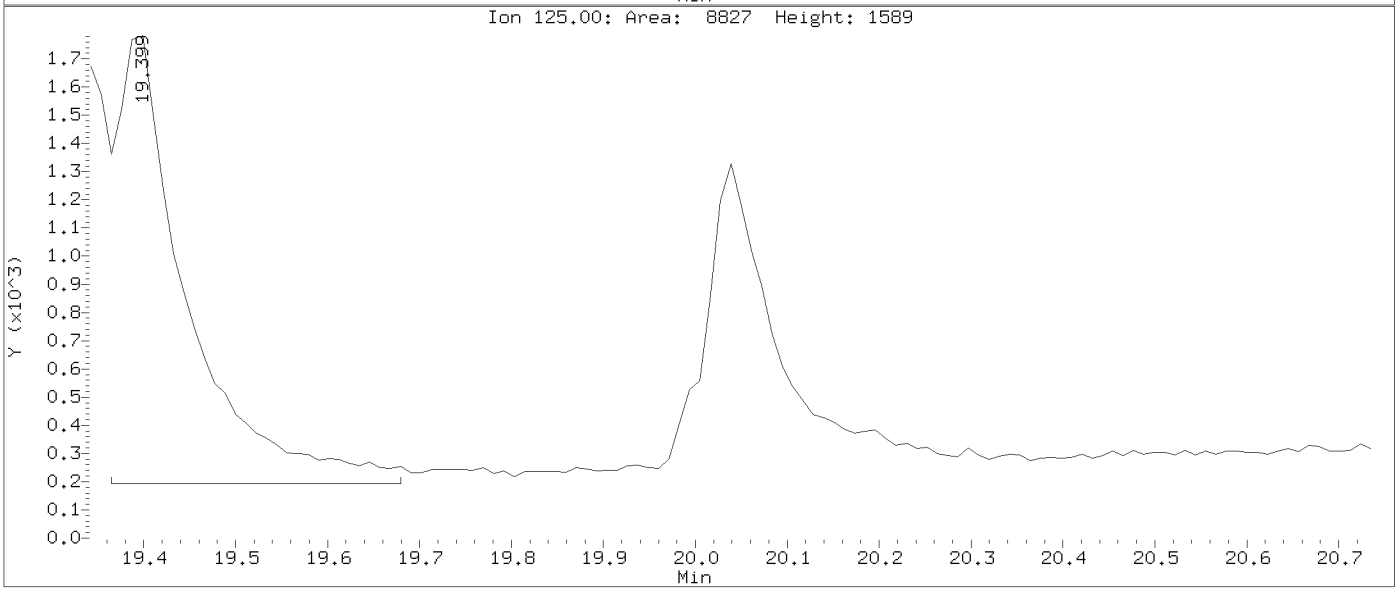
Instrument: gcms-n.i
Client Sample ID:

Compound: Benzo(k)fluoranthene
CAS Number: 207-08-9

AFTER MANUAL INTEGRATION







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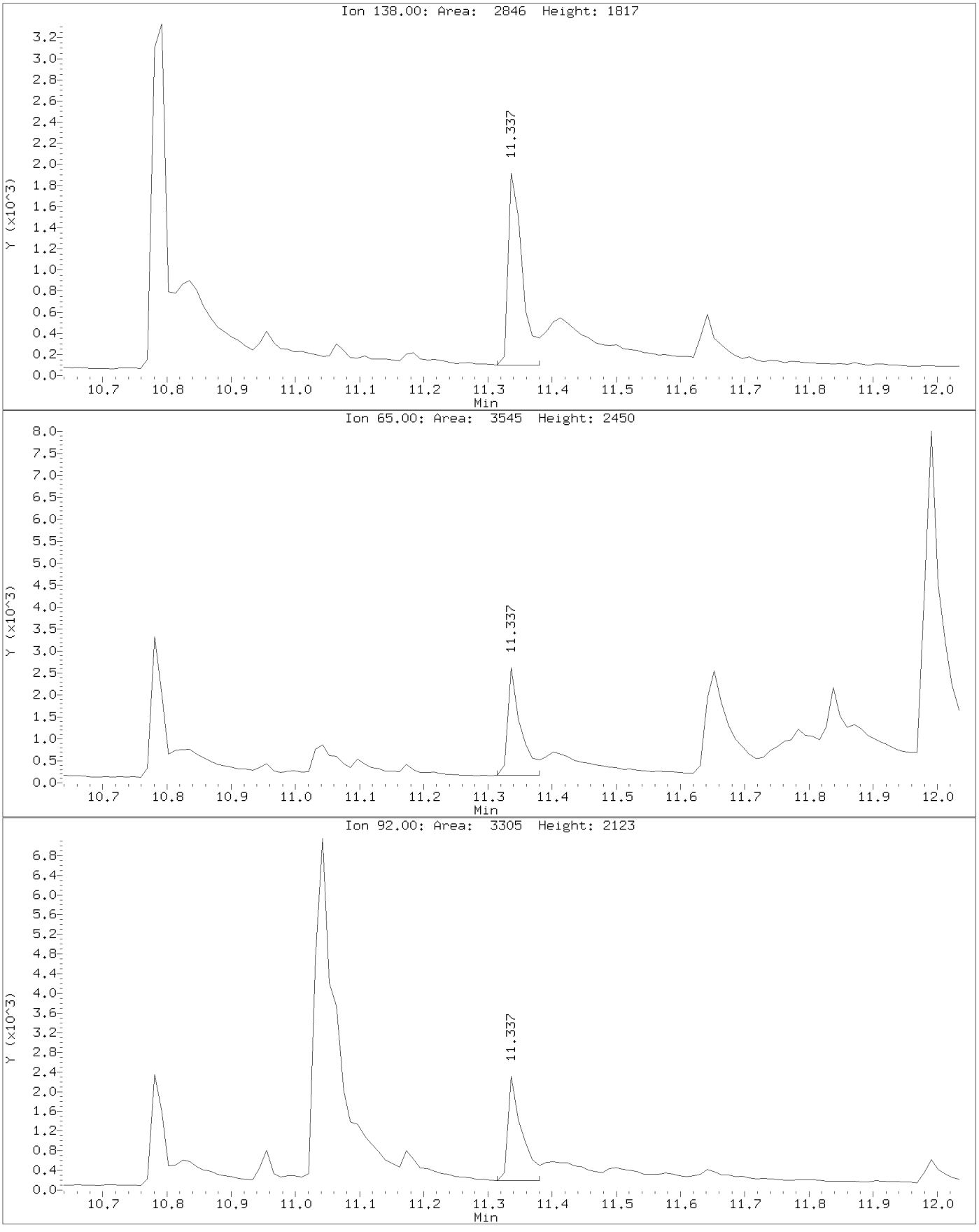
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: 3-Nitroaniline
CAS Number: 99-09-2

BEFORE MANUAL INTEGRATION



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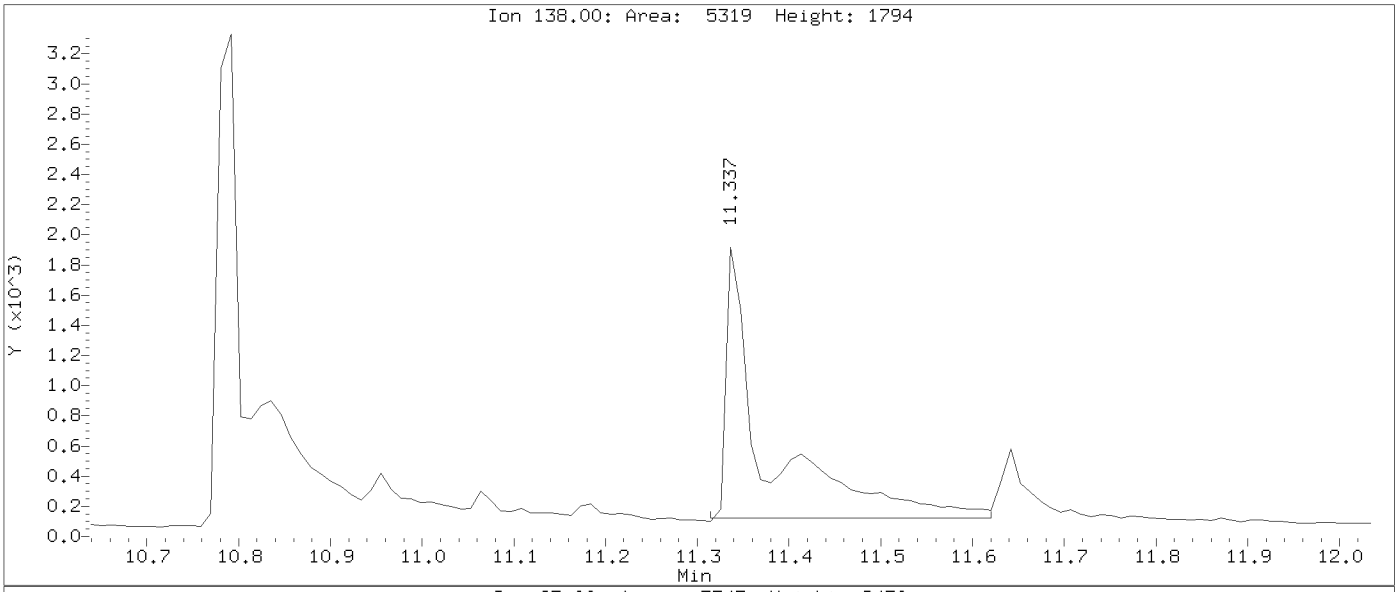
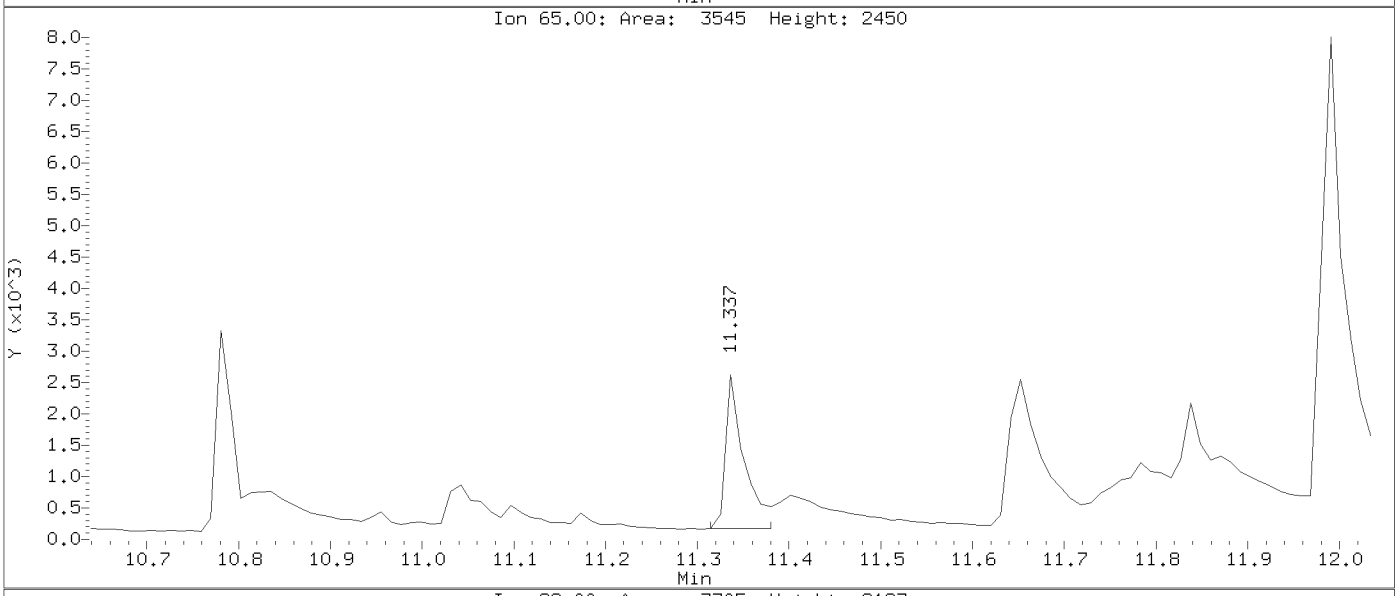
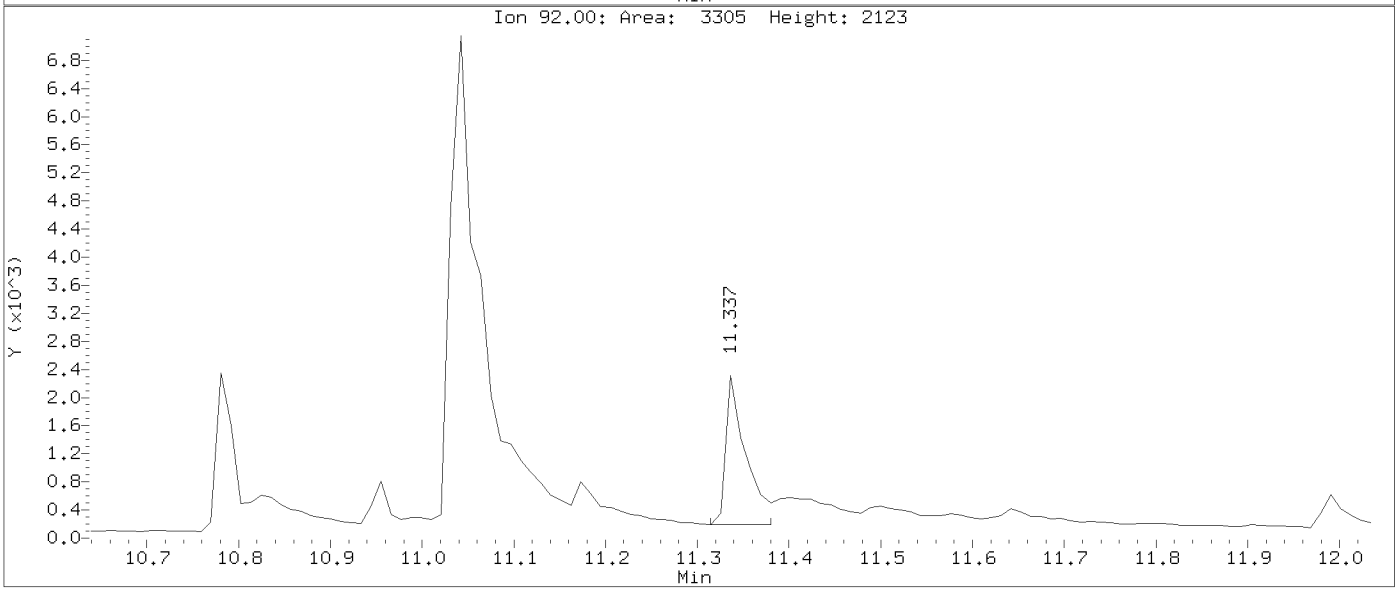
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: 3-Nitroaniline
CAS Number: 99-09-2

AFTER MANUAL INTEGRATION







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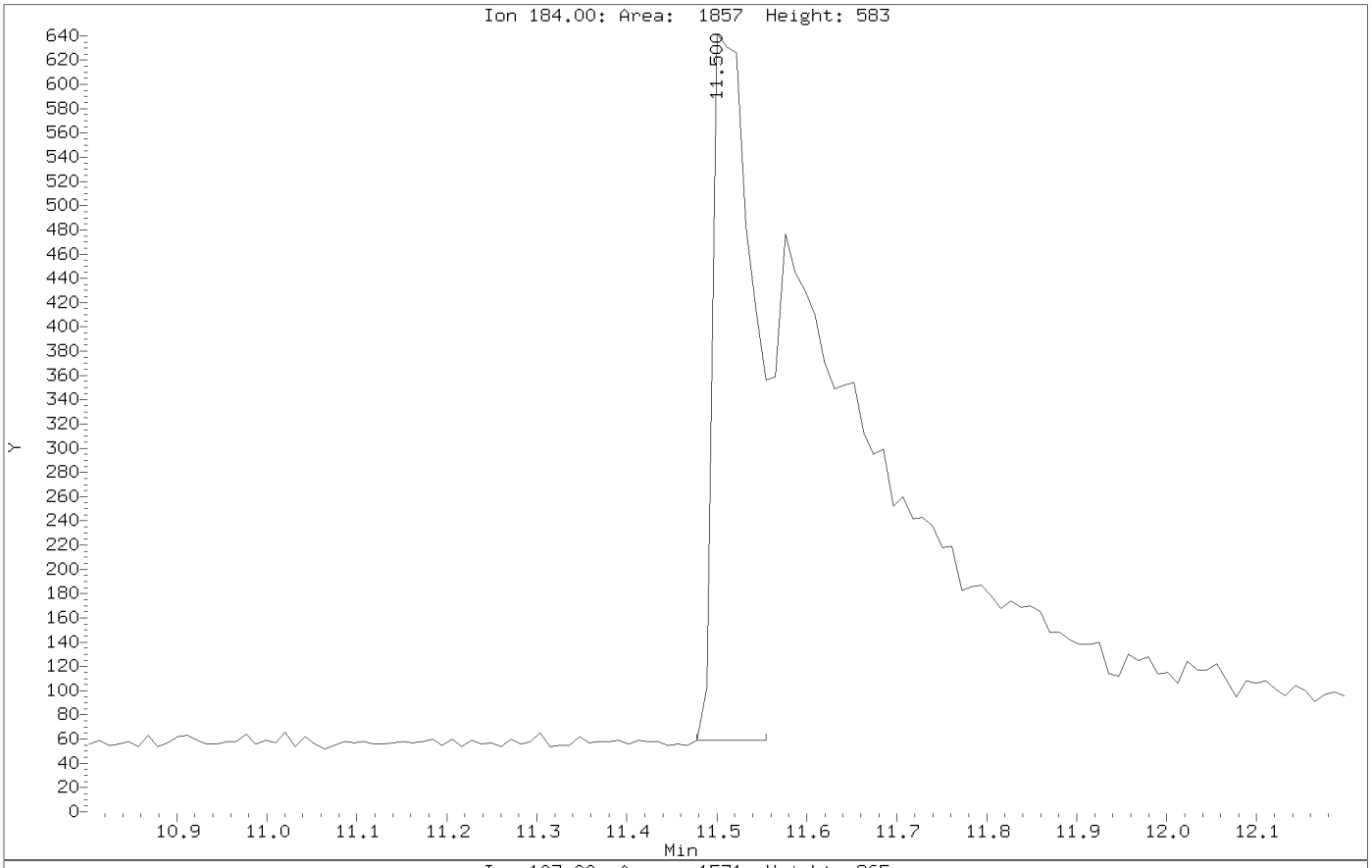
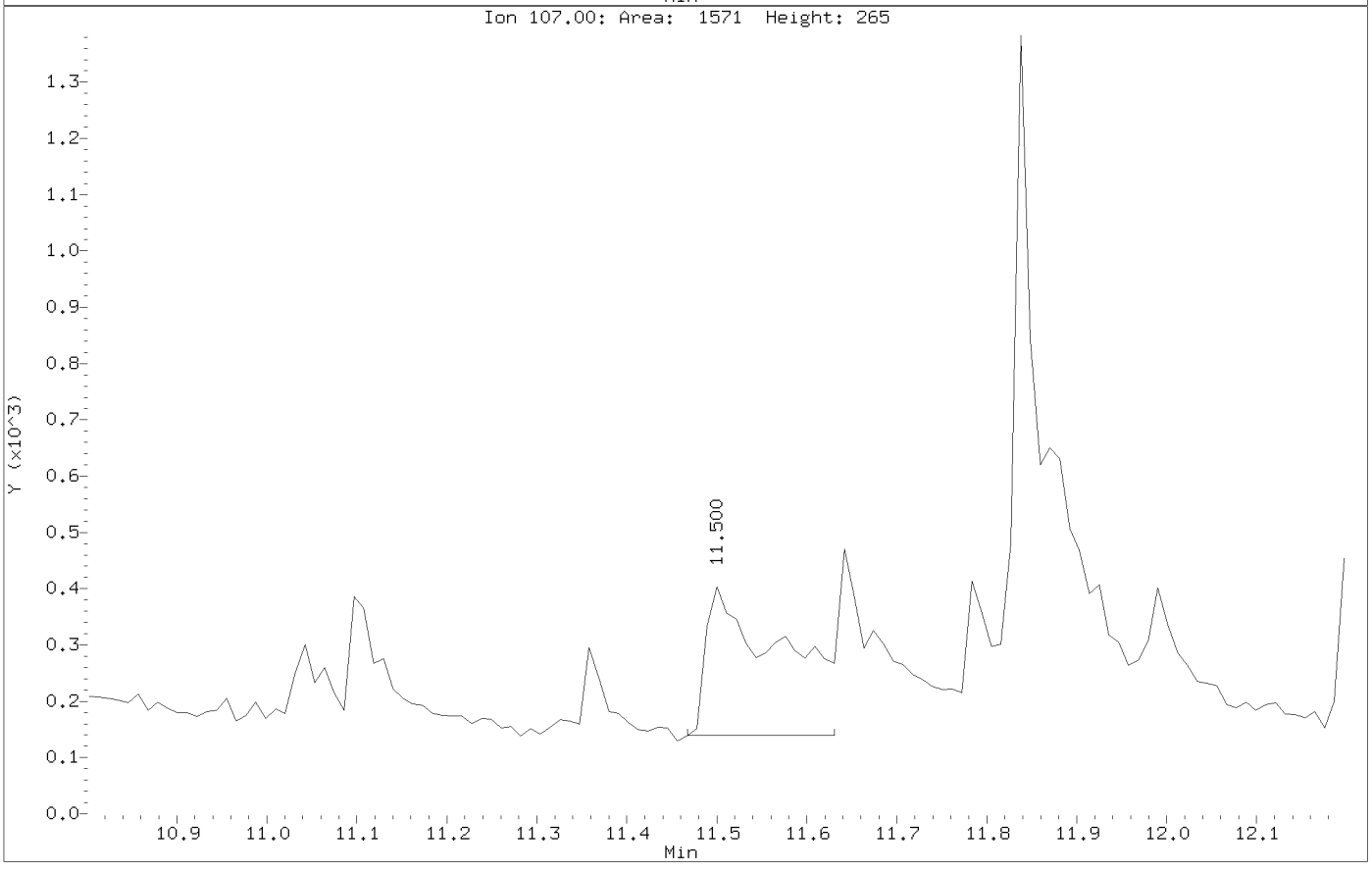
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: 2,4-Dinitrophenol
CAS Number: 51-28-5

BEFORE MANUAL INTEGRATION





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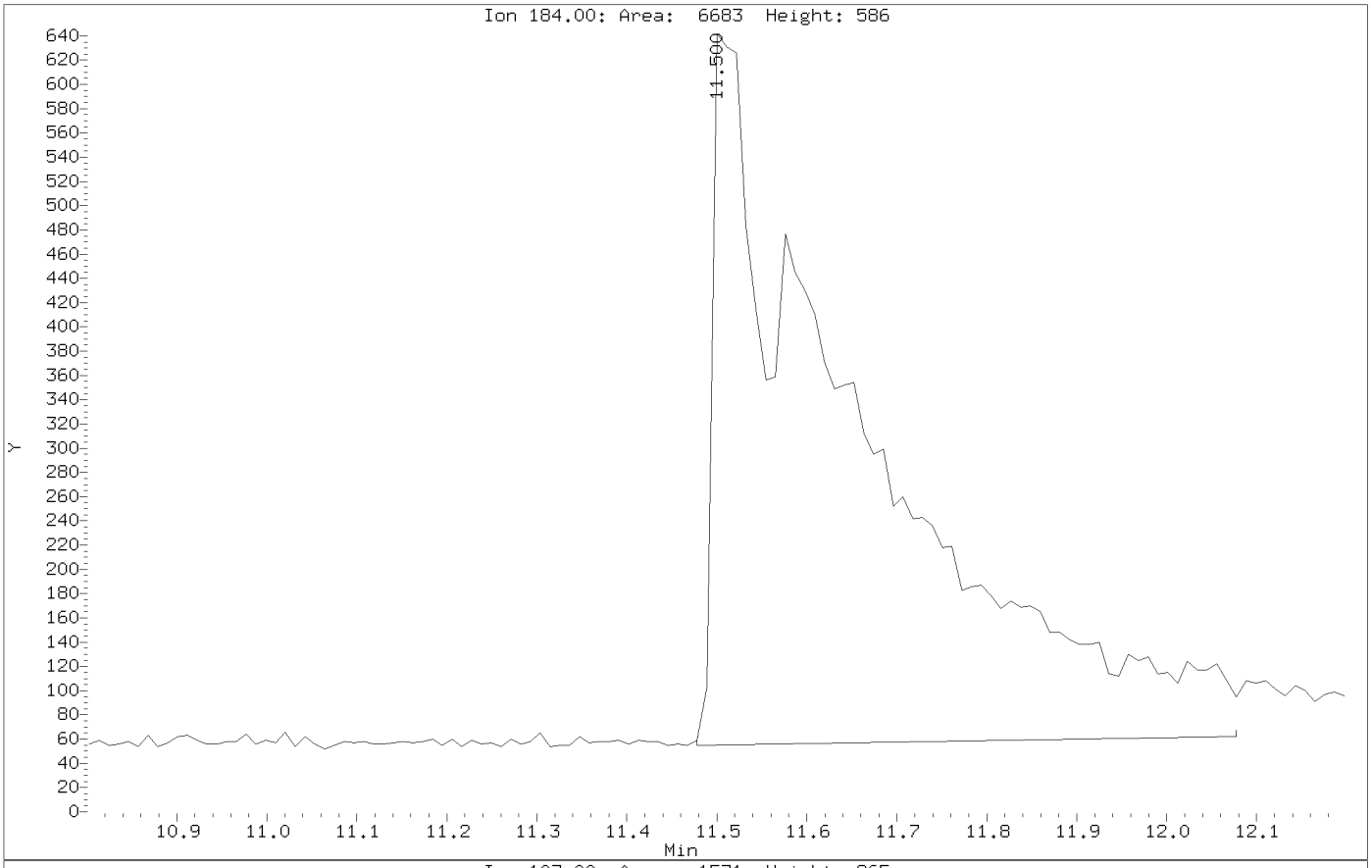
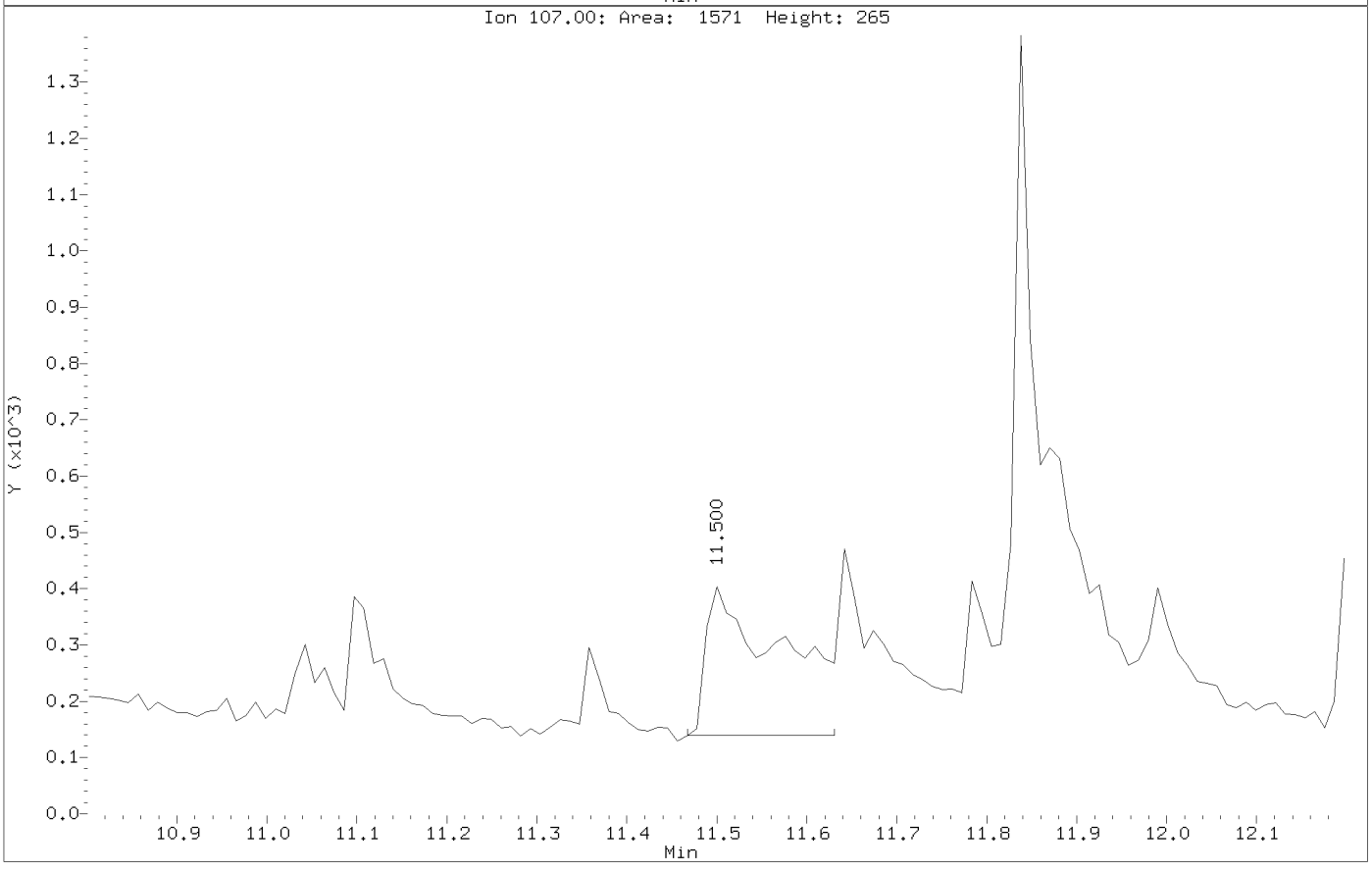
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: 2,4-Dinitrophenol
CAS Number: 51-28-5

AFTER MANUAL INTEGRATION





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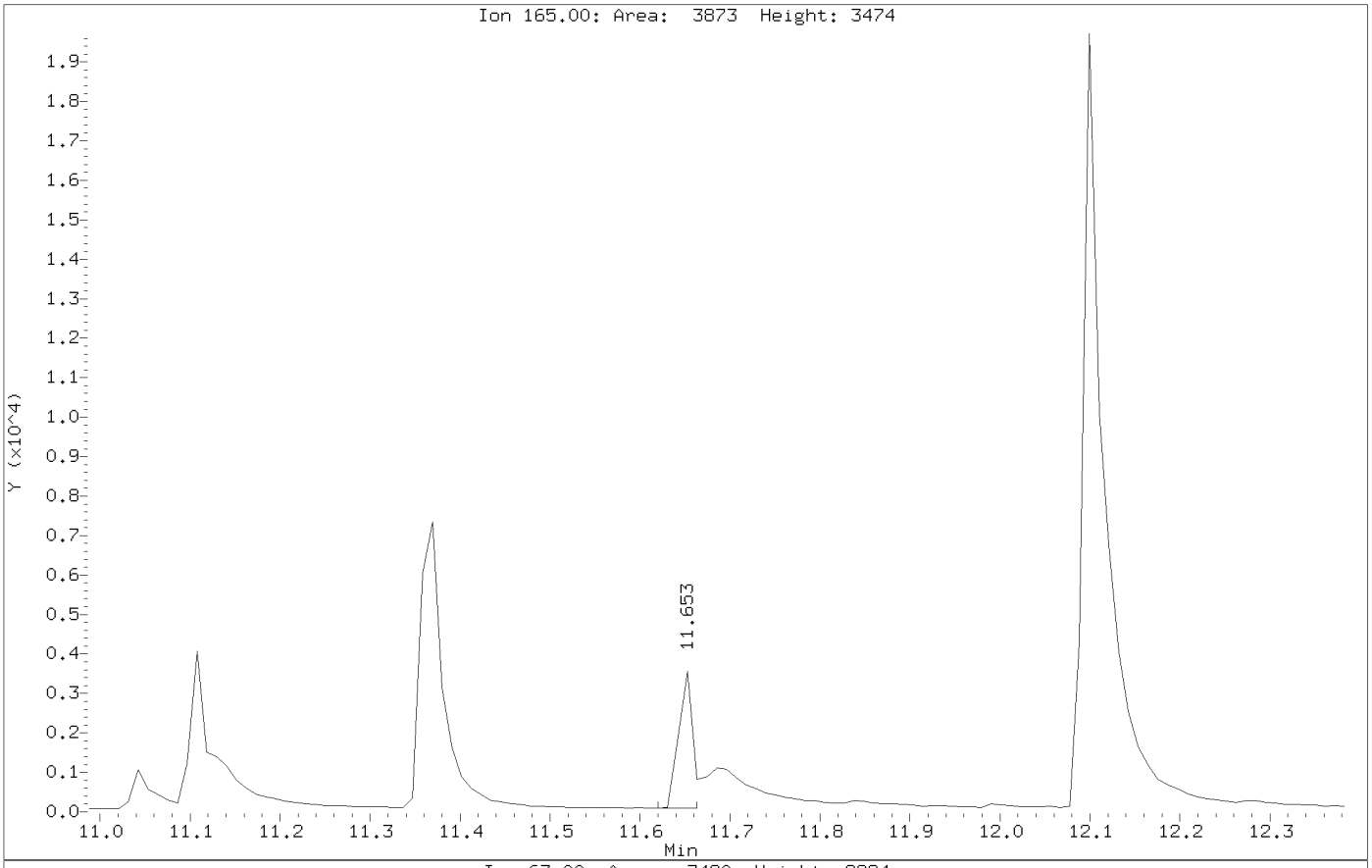
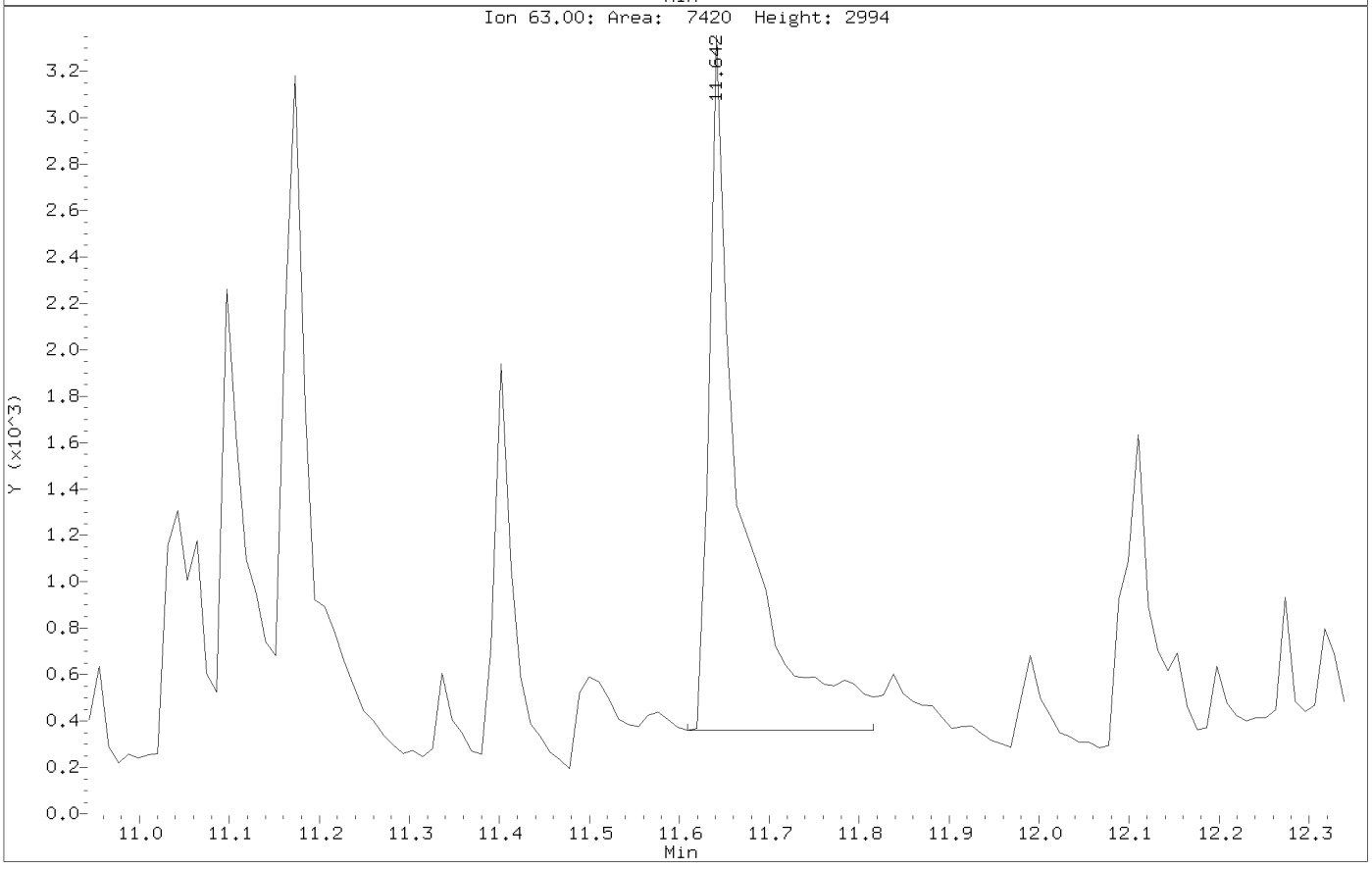
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: 2,4-Dinitrotoluene
CAS Number: 121-14-2

BEFORE MANUAL INTEGRATION





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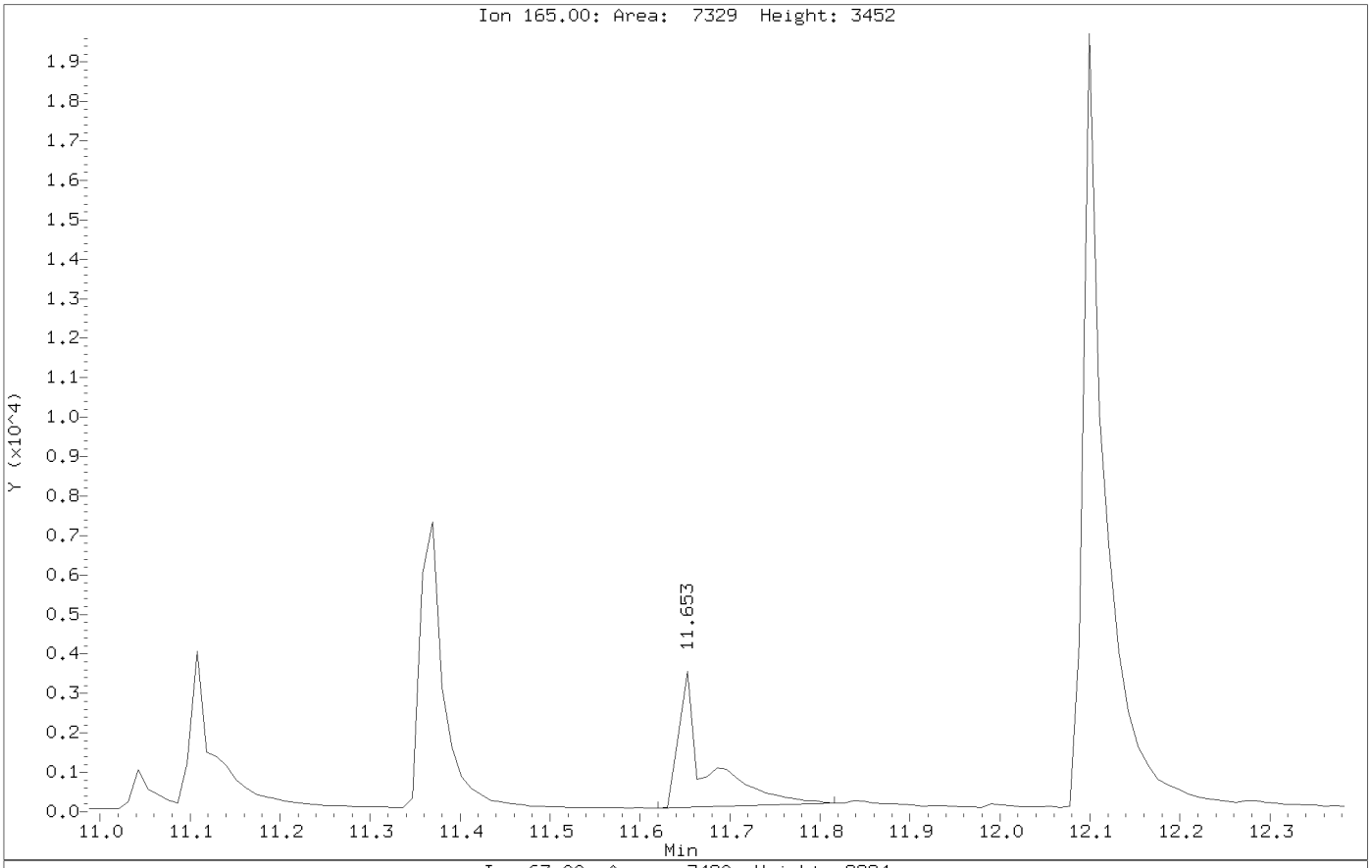
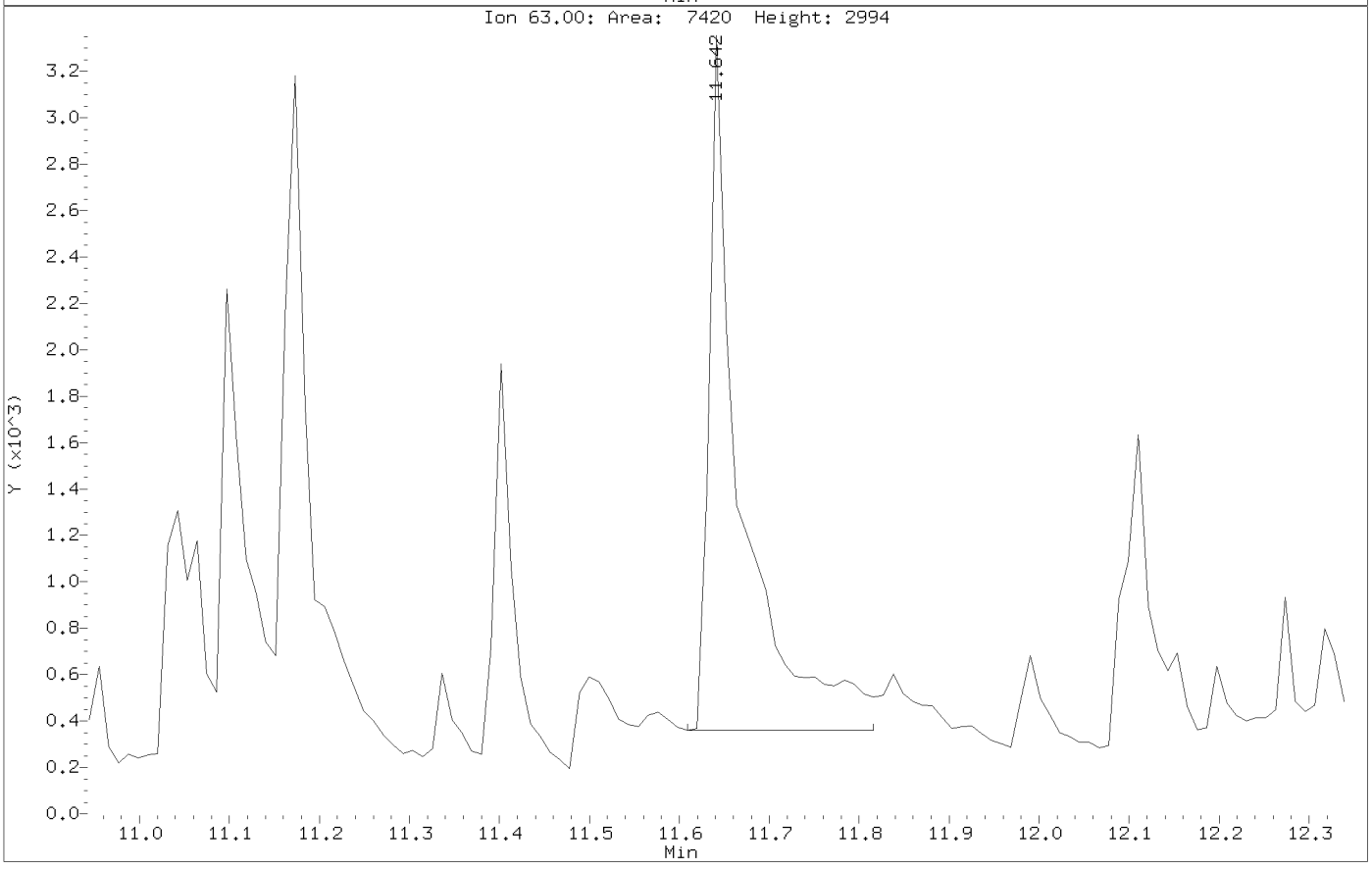
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: 2,4-Dinitrotoluene
CAS Number: 121-14-2

AFTER MANUAL INTEGRATION





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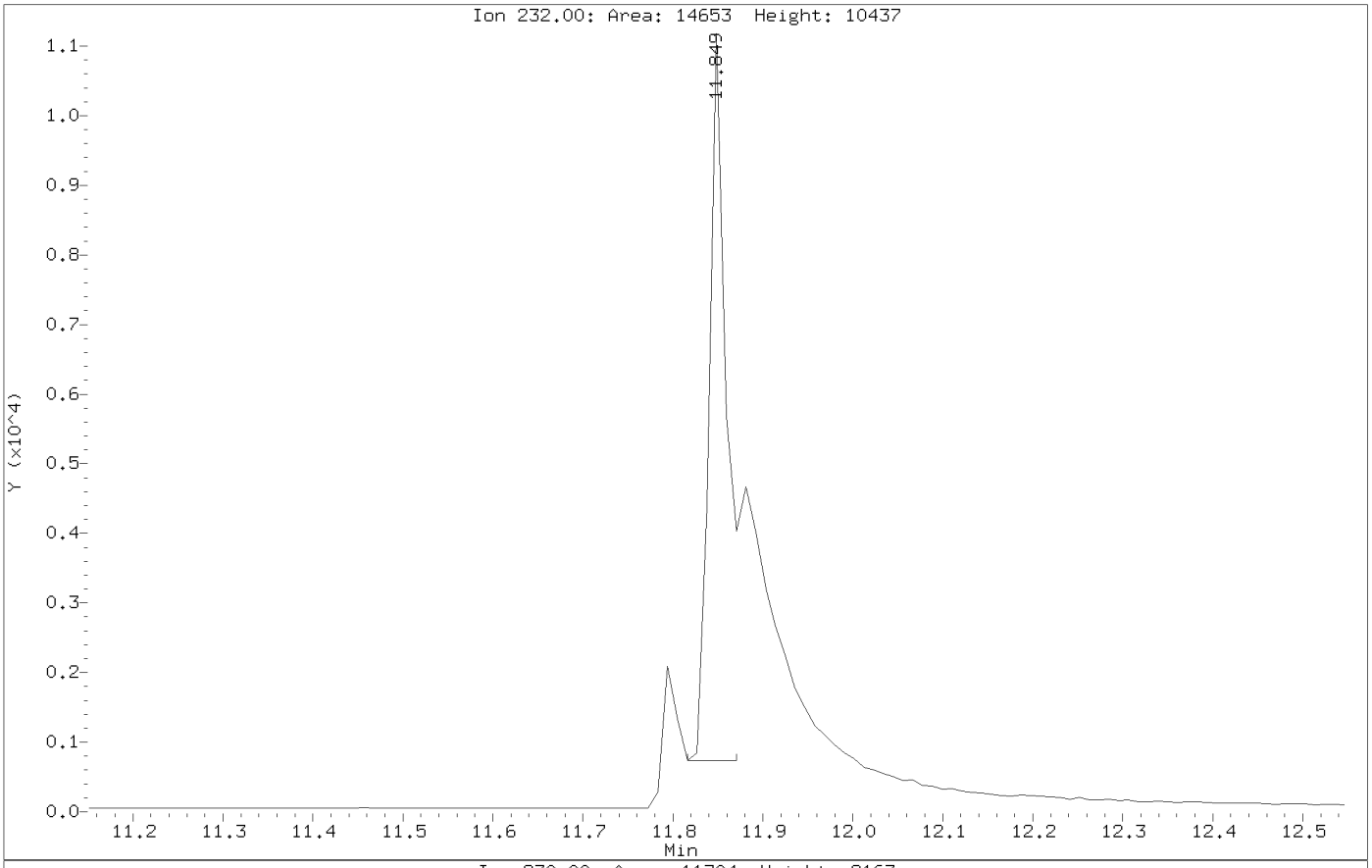
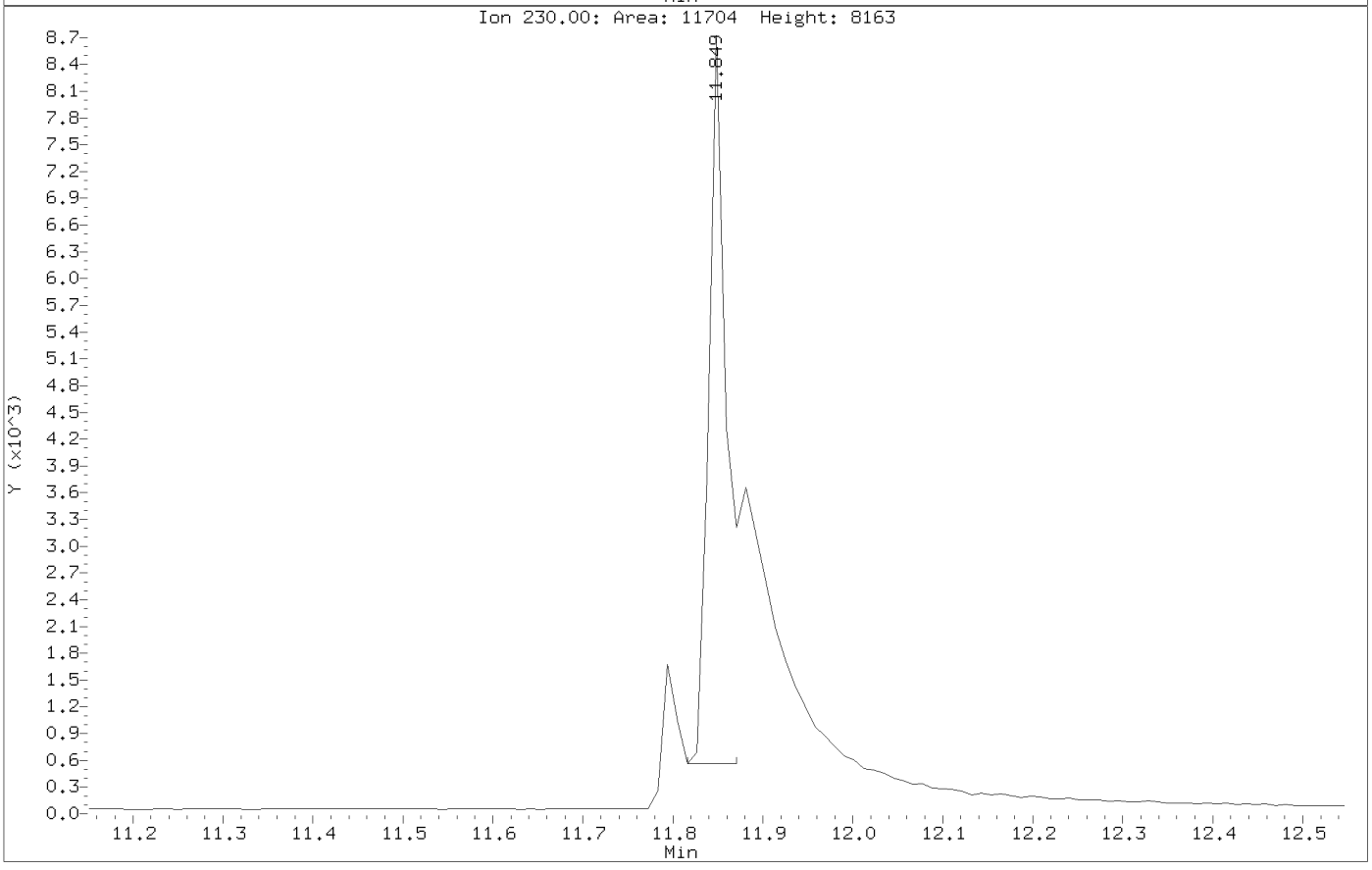
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: 2,3,4,6-Tetrachlorophenol
CAS Number: 58-90-2

BEFORE MANUAL INTEGRATION





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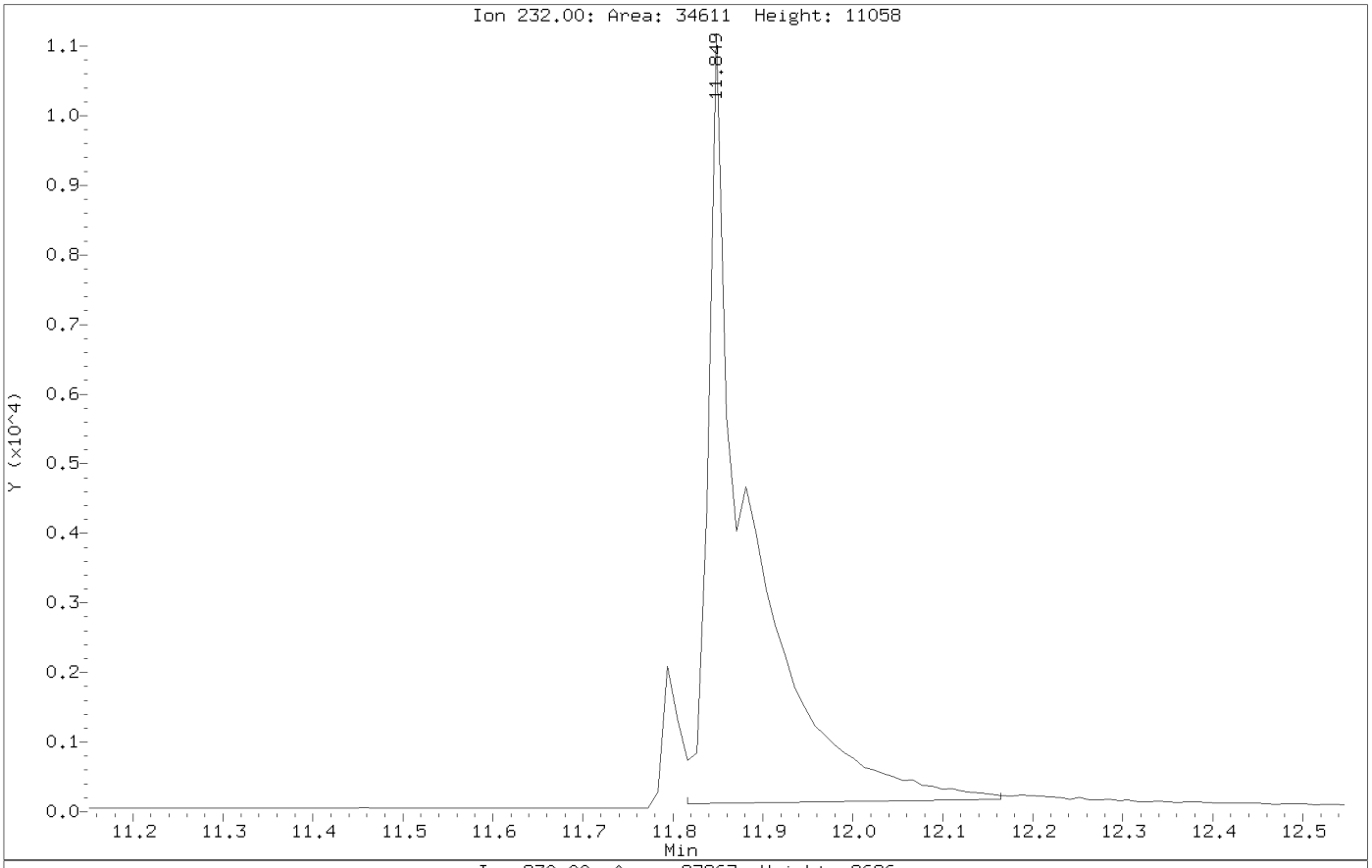
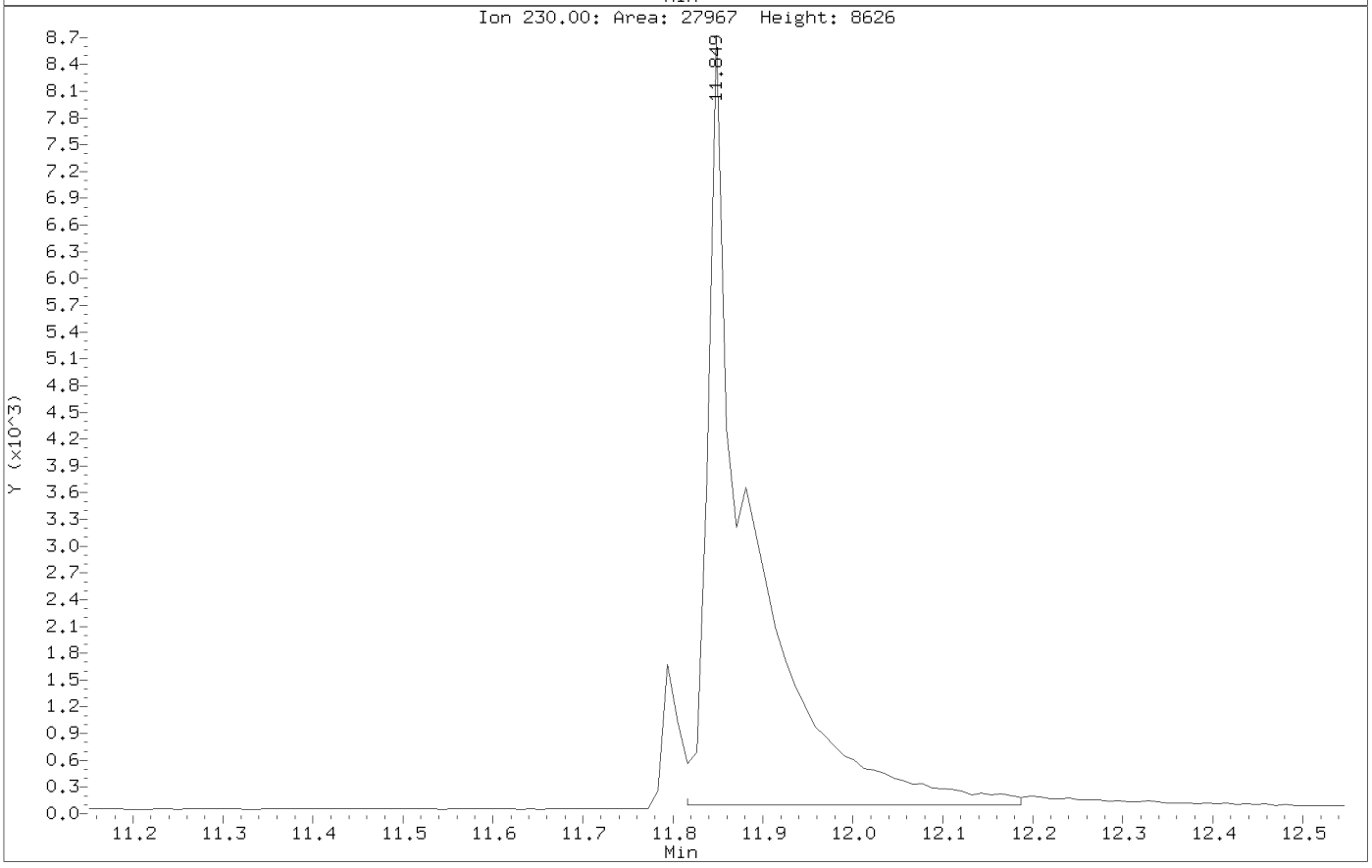
Instrument: gcms-n.i
Client Sample ID:

Compound: 2,3,4,6-Tetrachlorophenol
CAS Number: 58-90-2

AFTER MANUAL INTEGRATION





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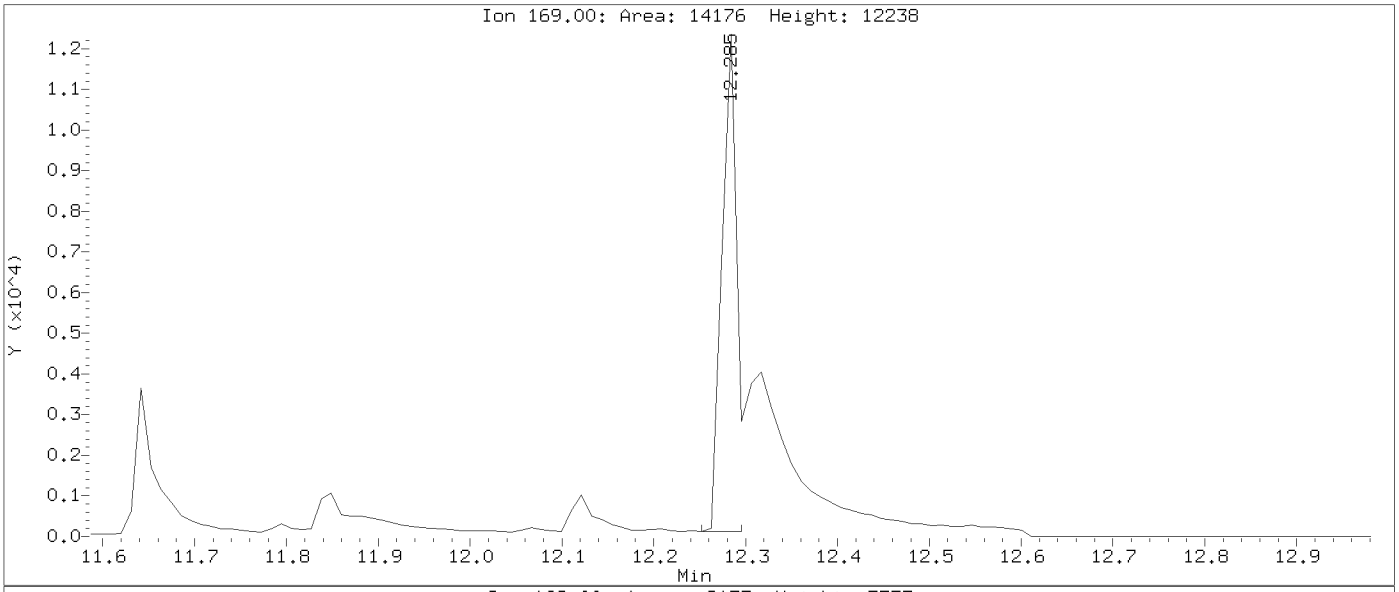
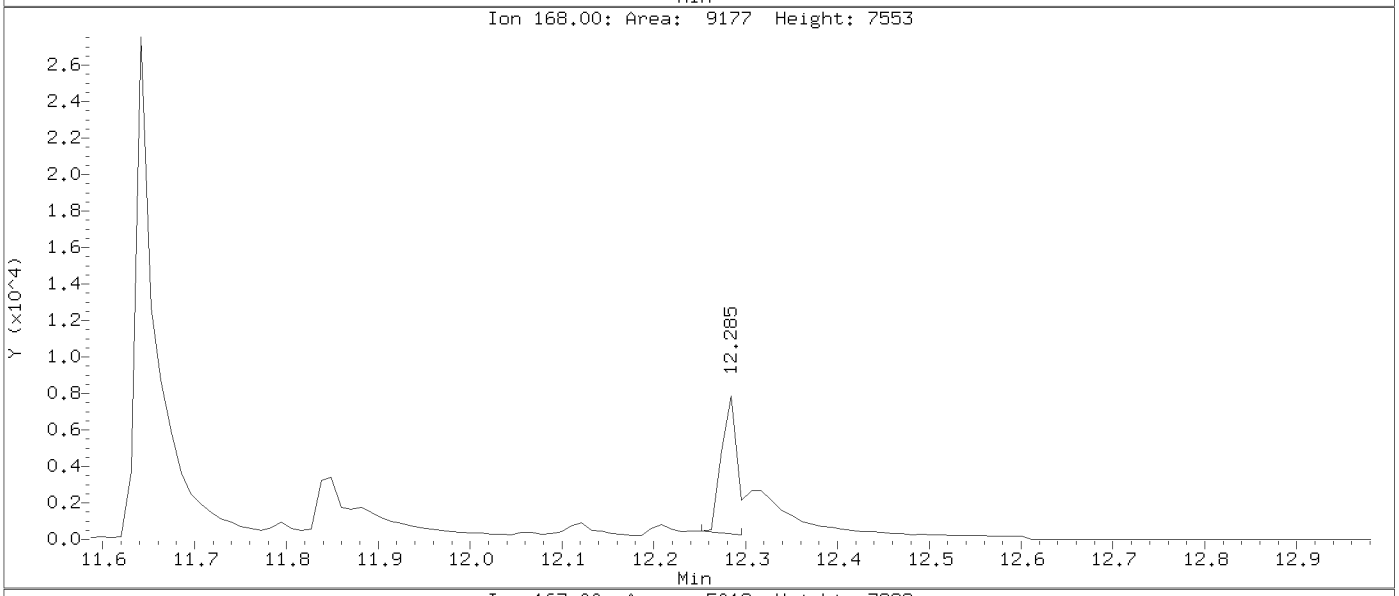
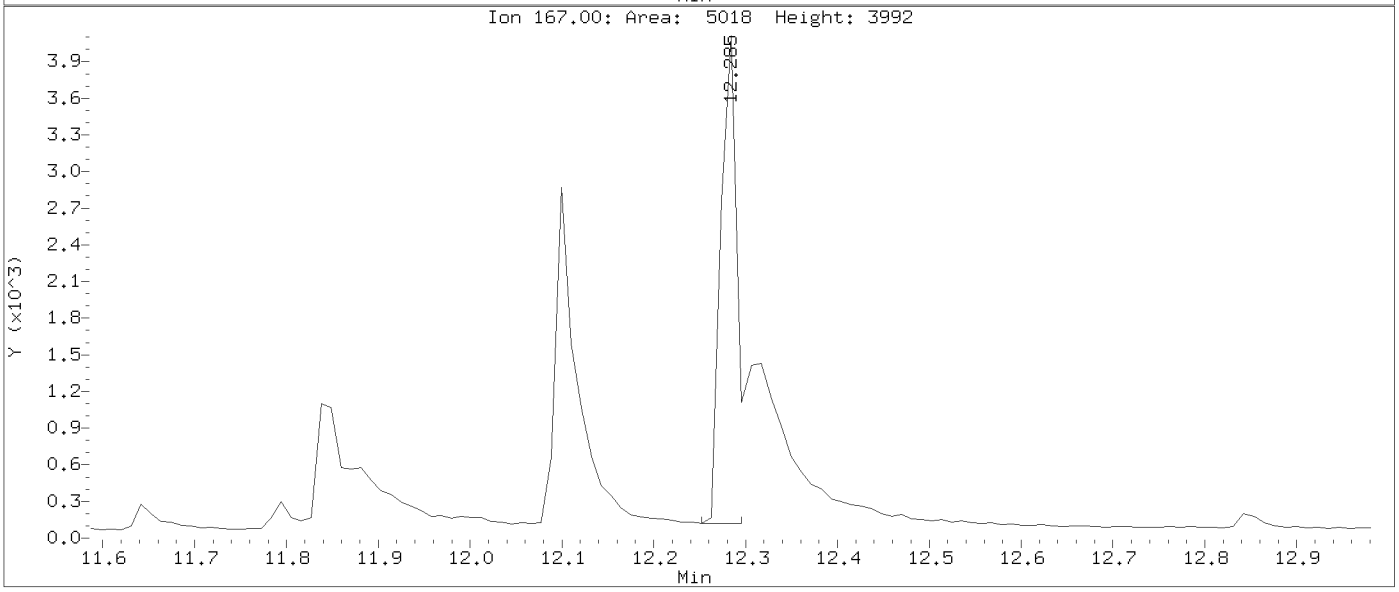
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: N-Nitrosodiphenylamine
CAS Number: 86-30-6

BEFORE MANUAL INTEGRATION







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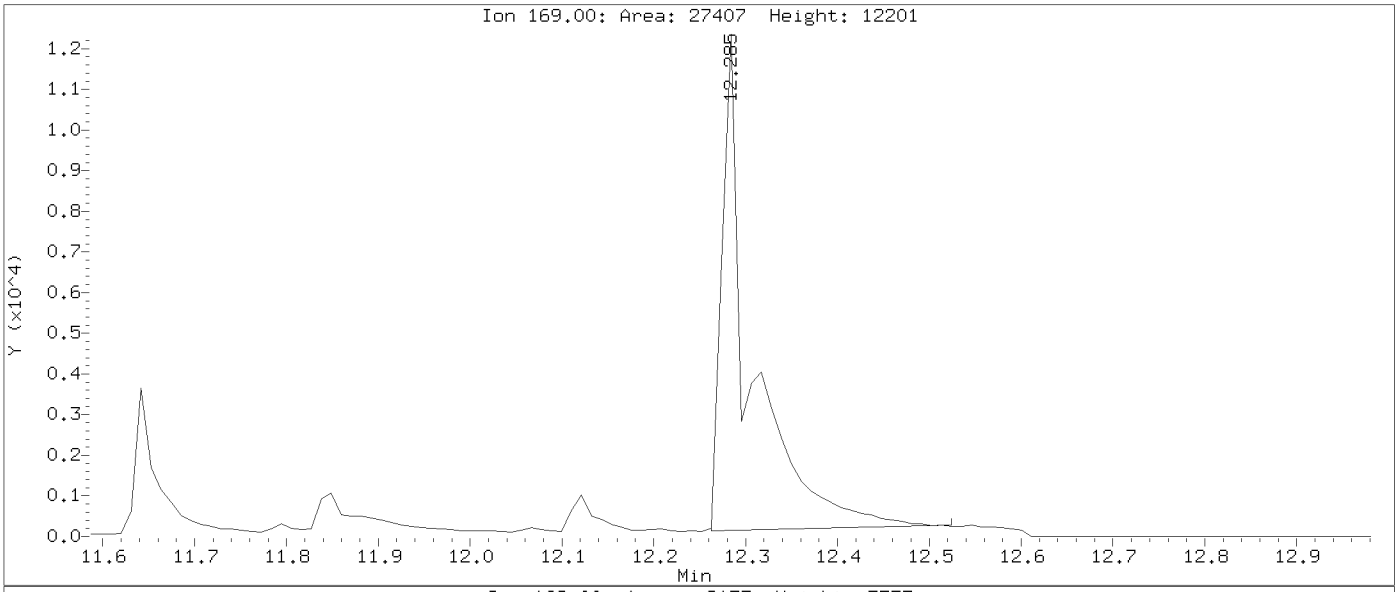
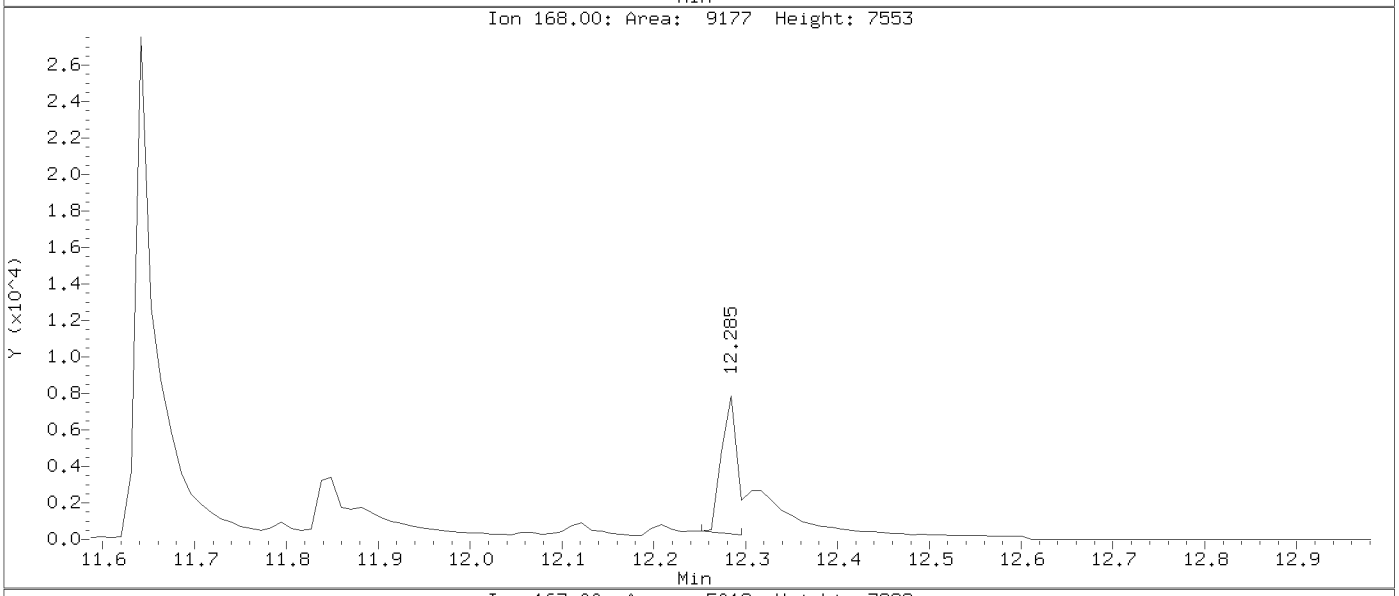
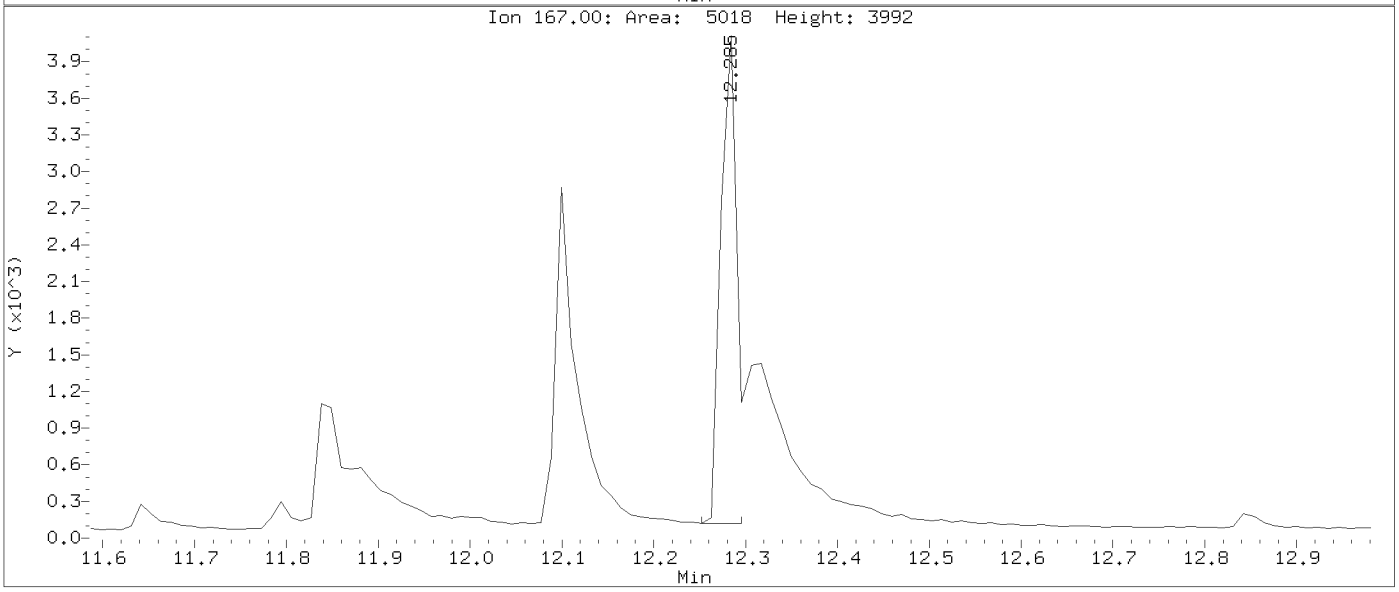
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: N-Nitrosodiphenylamine
CAS Number: 86-30-6

AFTER MANUAL INTEGRATION







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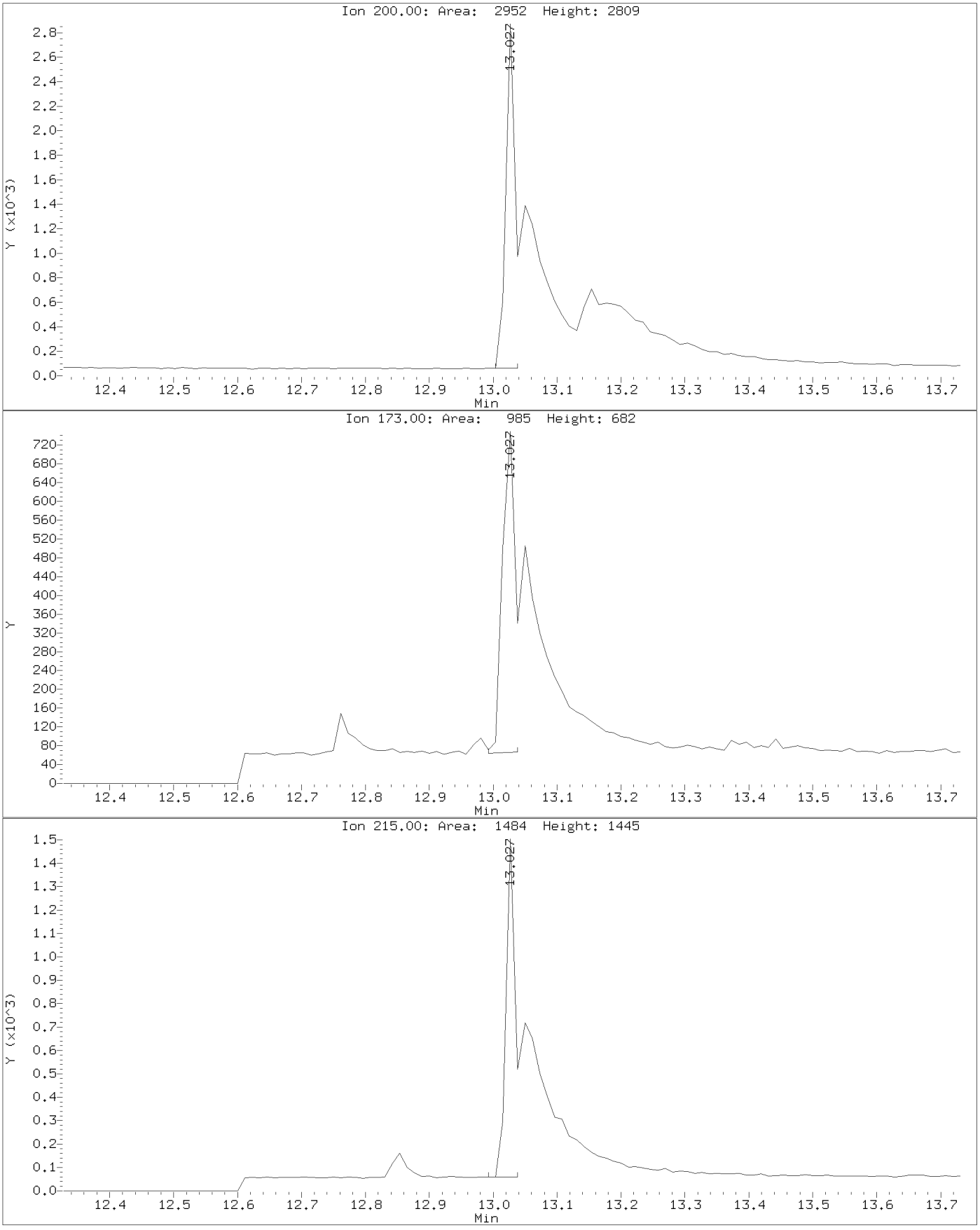
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: Atrazine
CAS Number: 1912-24-9

BEFORE MANUAL INTEGRATION



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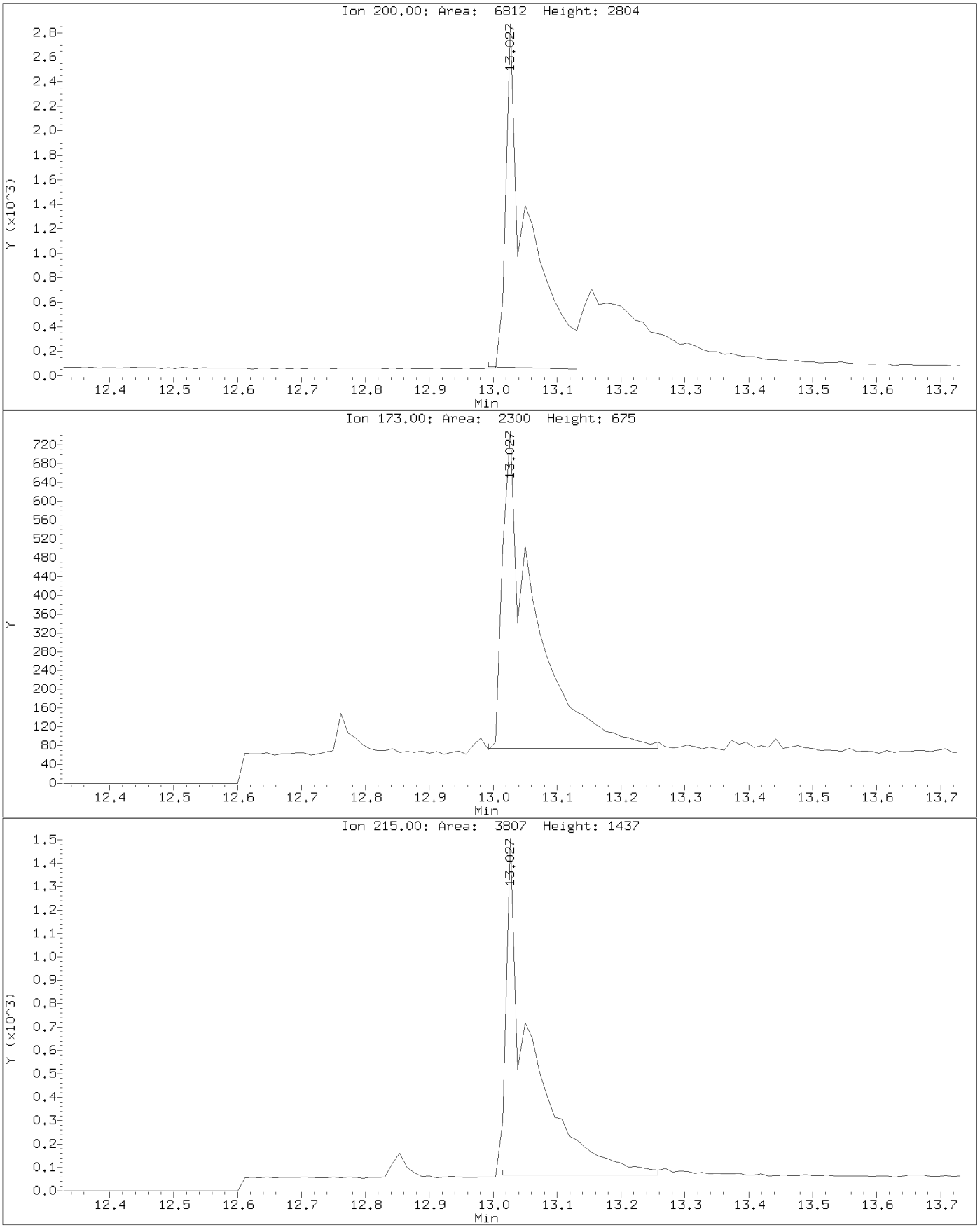
Instrument: gcms-n.i
Client Sample ID:

Compound: Atrazine
CAS Number: 1912-24-9

AFTER MANUAL INTEGRATION



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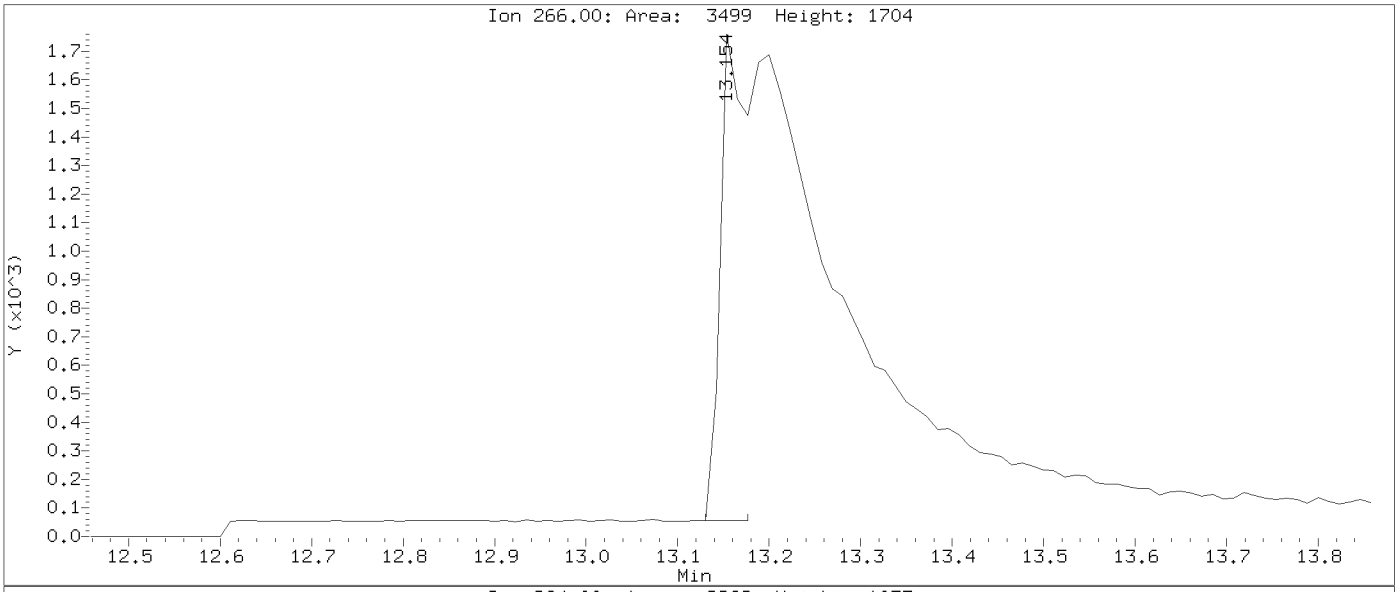
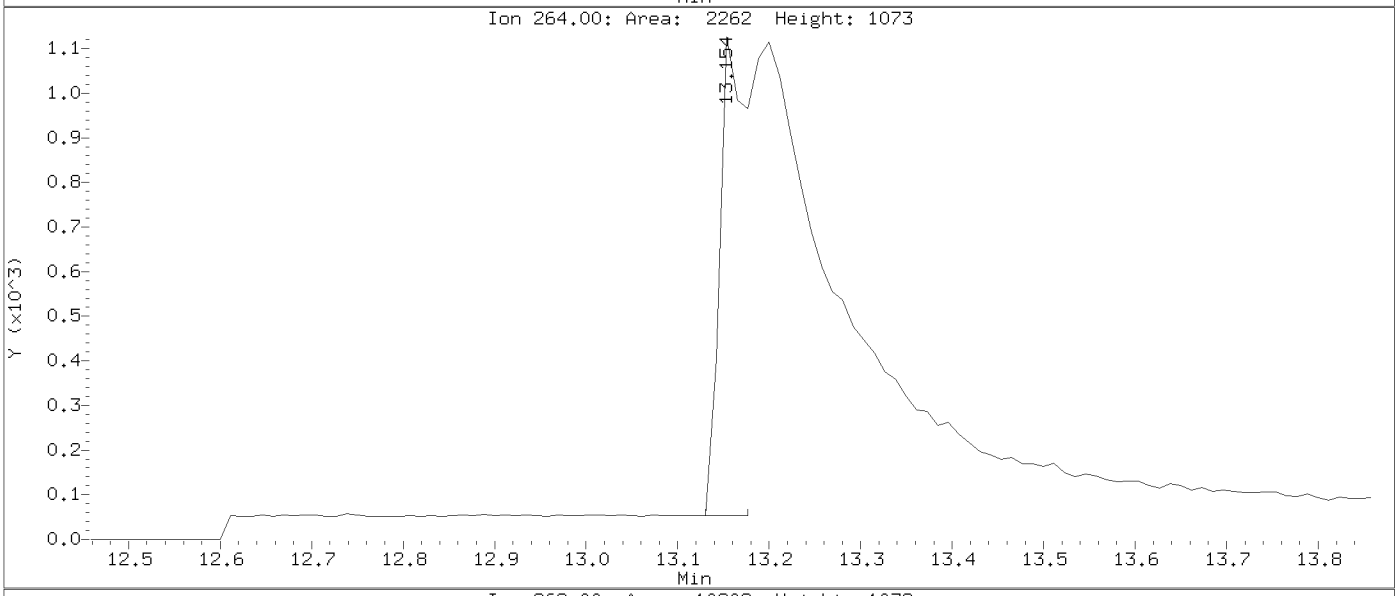
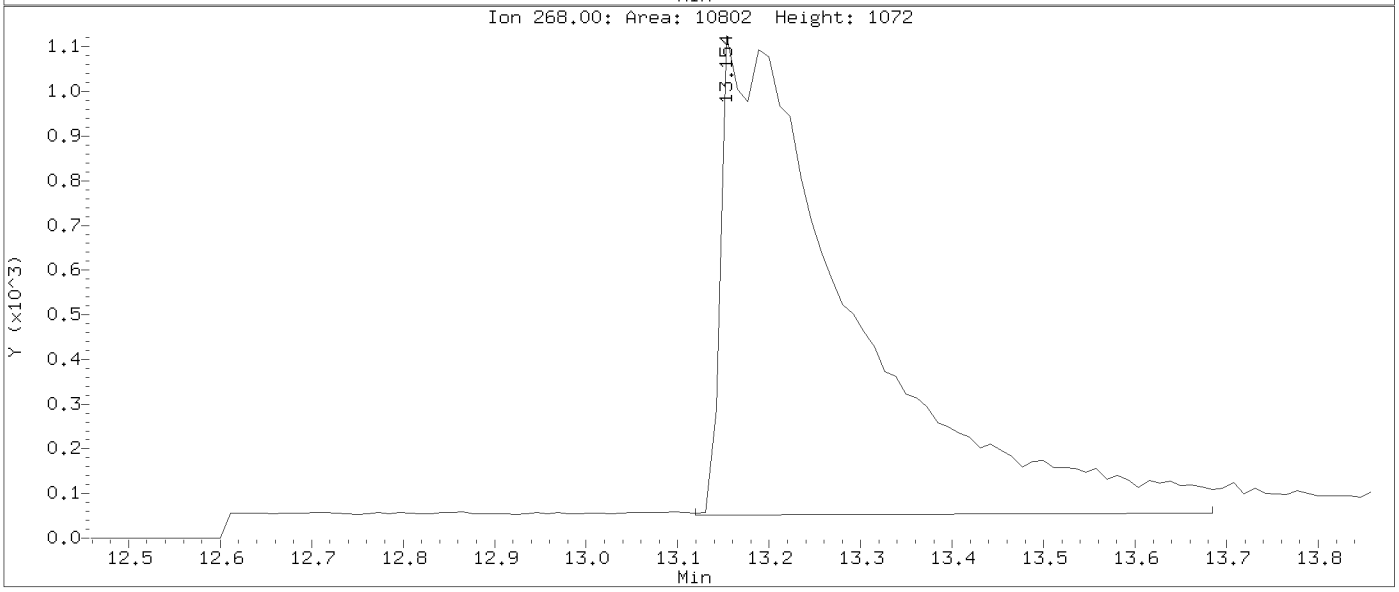
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5

BEFORE MANUAL INTEGRATION







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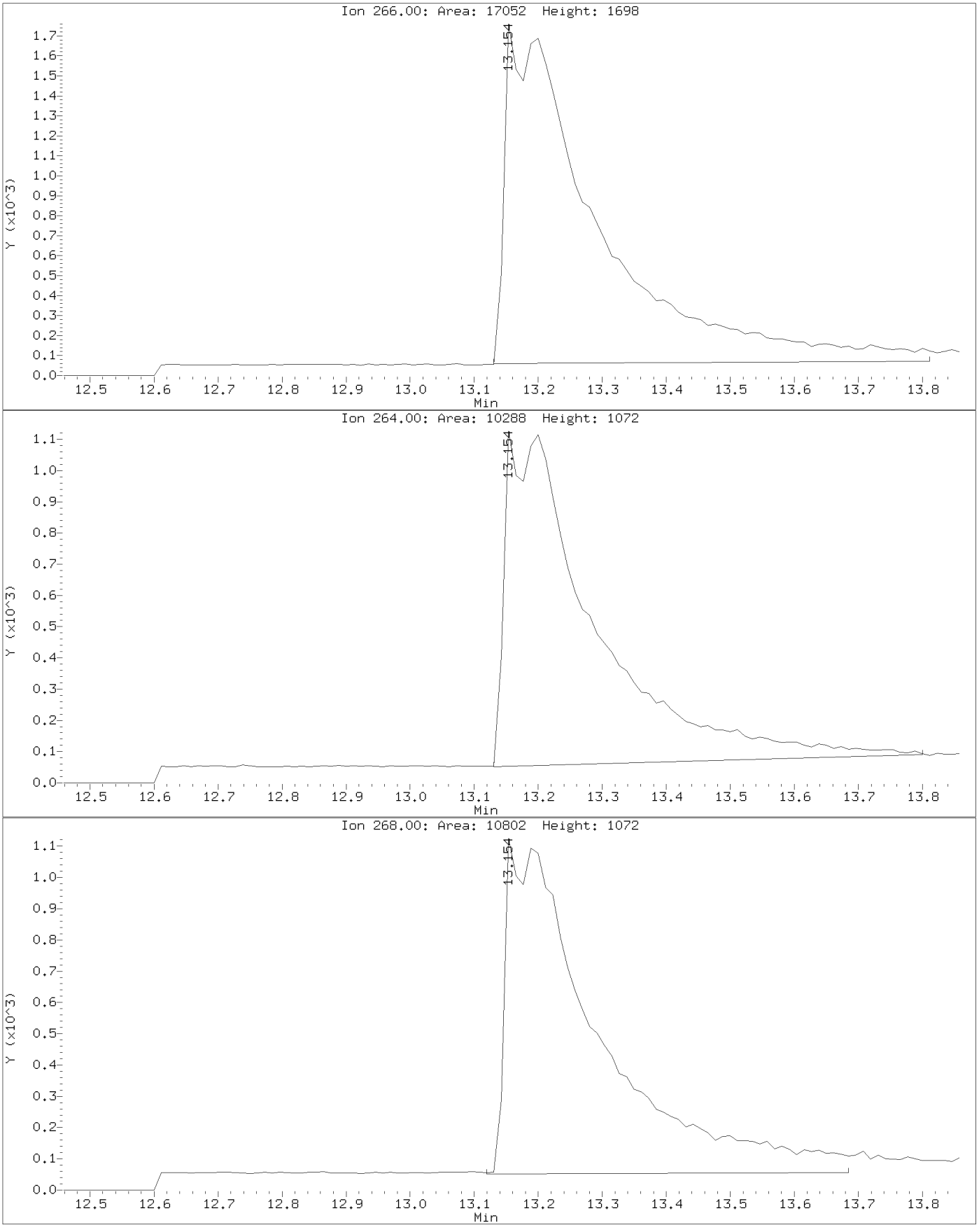
Instrument: gcms-n.i
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5

AFTER MANUAL INTEGRATION



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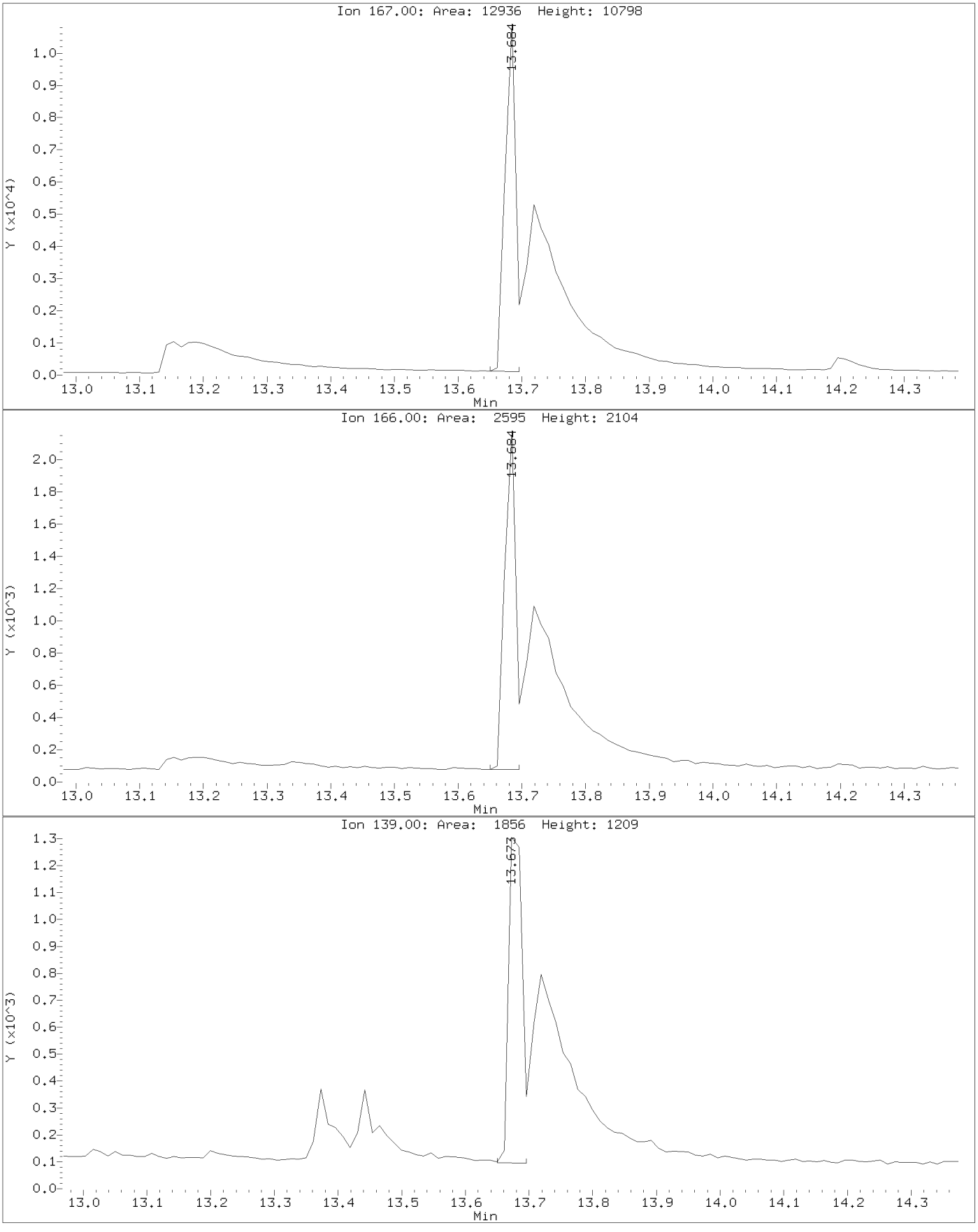
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: Carbazole
CAS Number: 86-74-8

BEFORE MANUAL INTEGRATION



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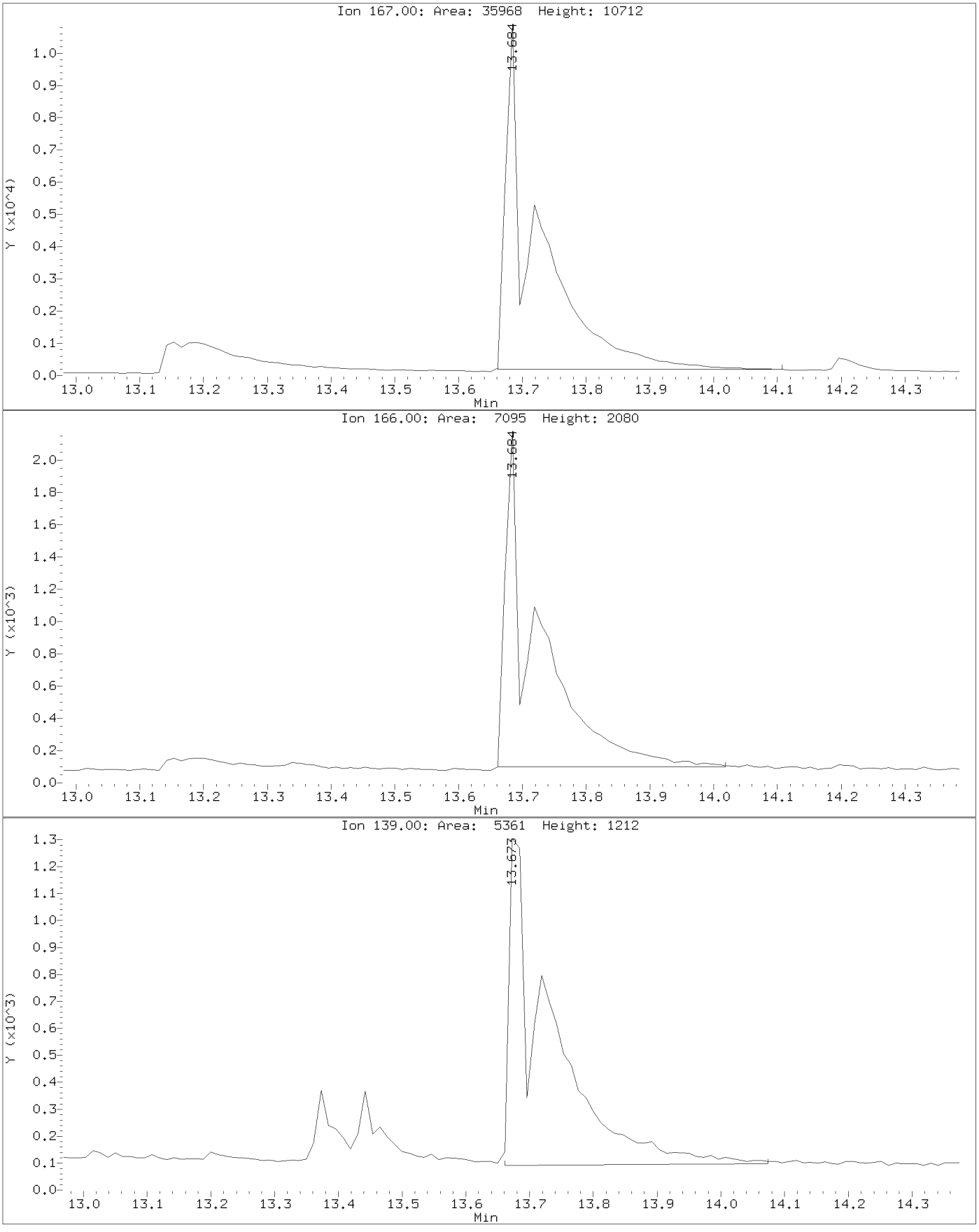
Instrument: gcms-n.i
Client Sample ID:

Compound: Carbazole
CAS Number: 86-74-8

AFTER MANUAL INTEGRATION



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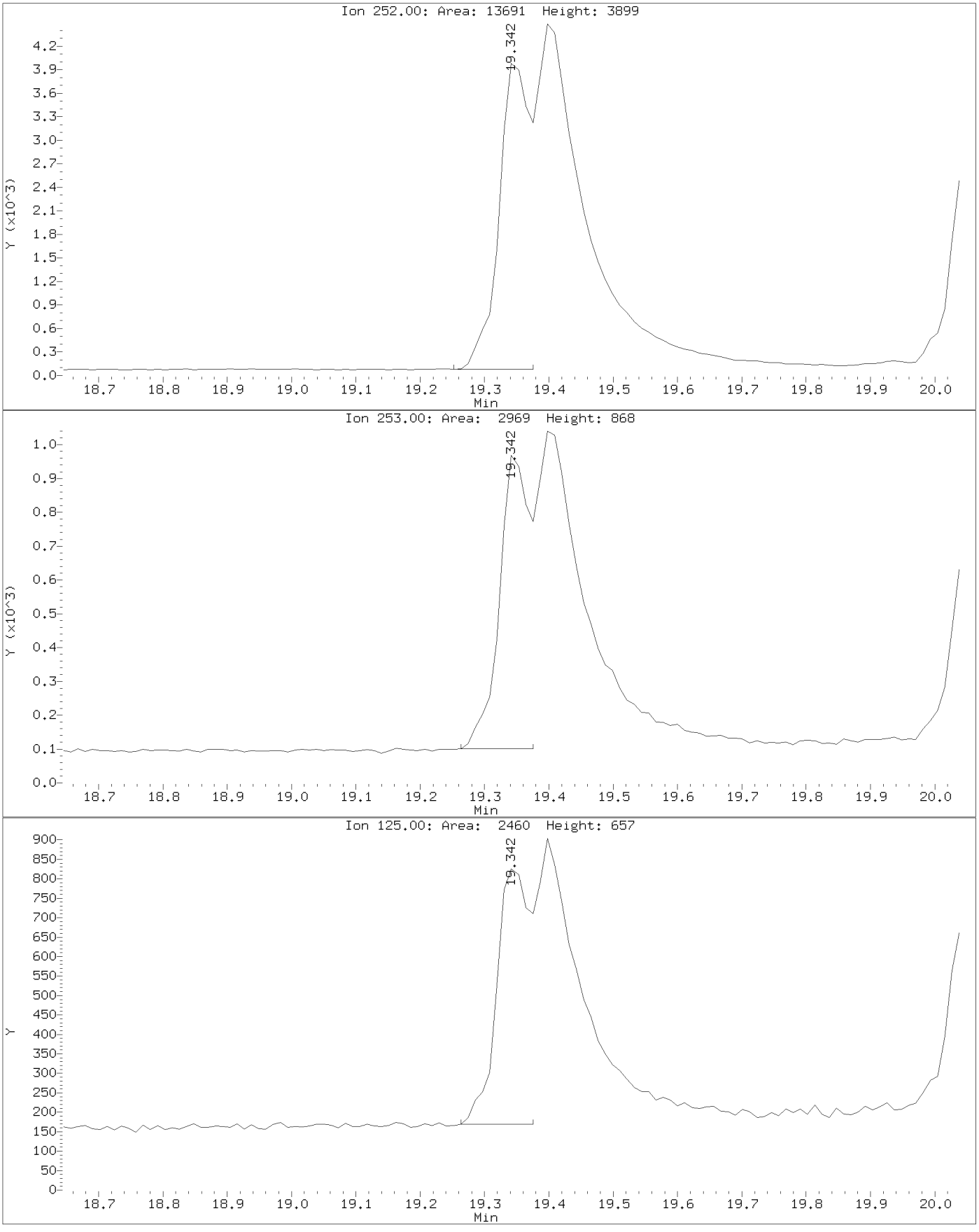
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: Benzo(k)fluoranthene
CAS Number: 207-08-9

BEFORE MANUAL INTEGRATION



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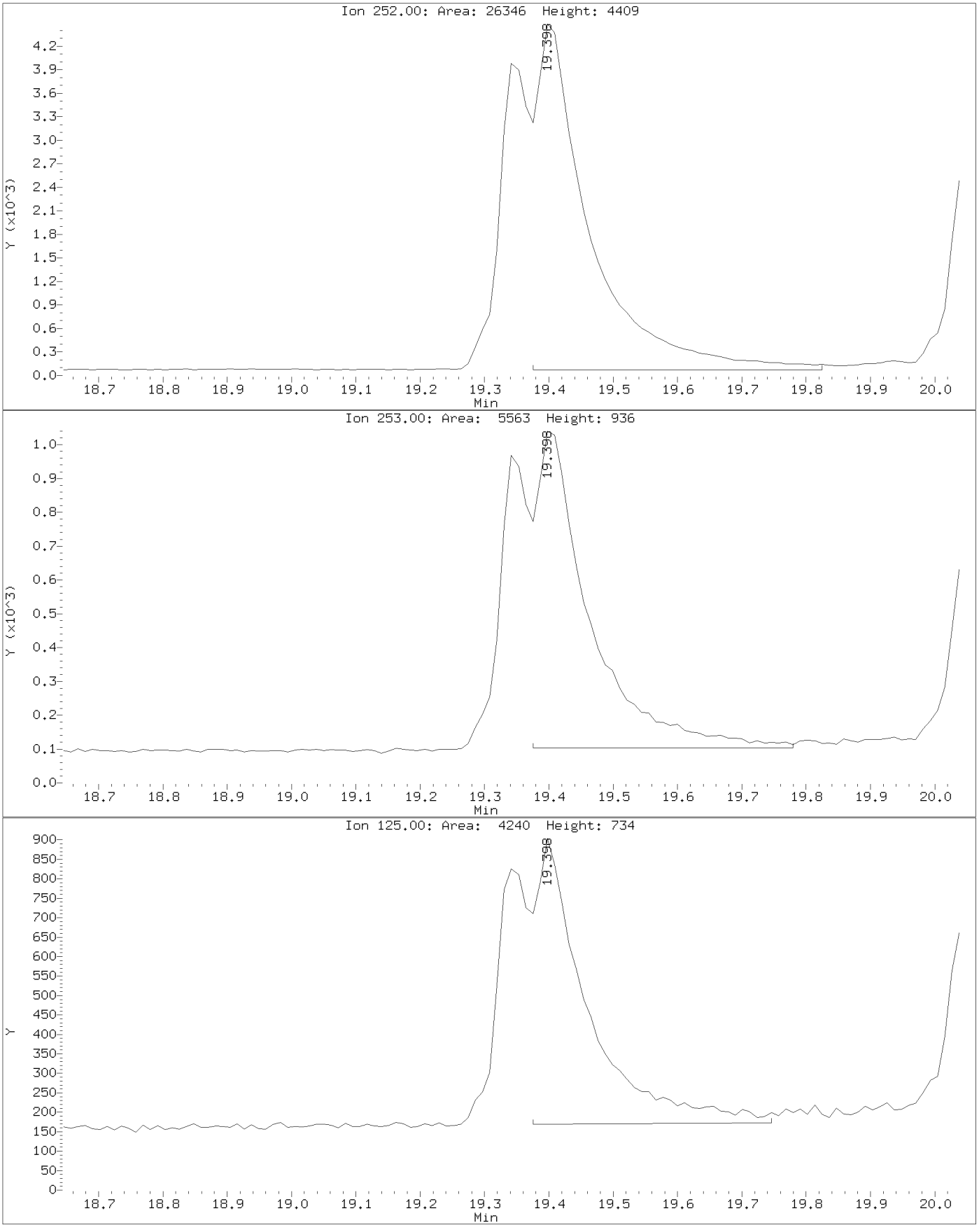
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: Benzo(k)fluoranthene
CAS Number: 207-08-9

AFTER MANUAL INTEGRATION



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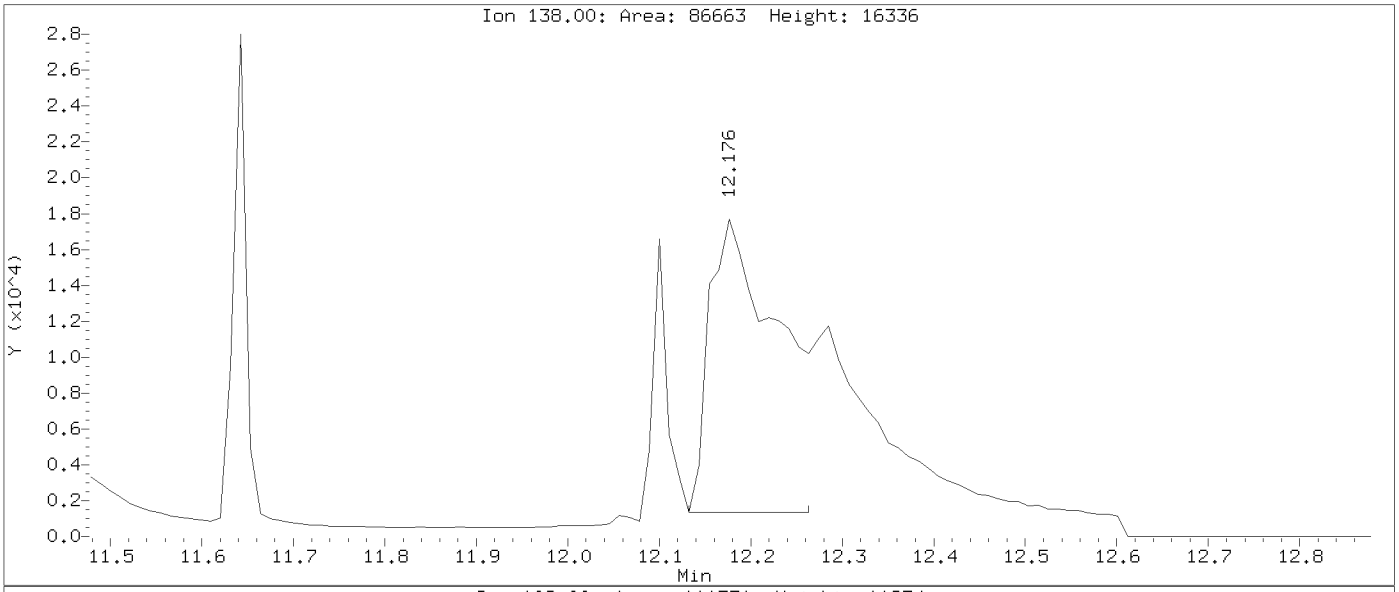
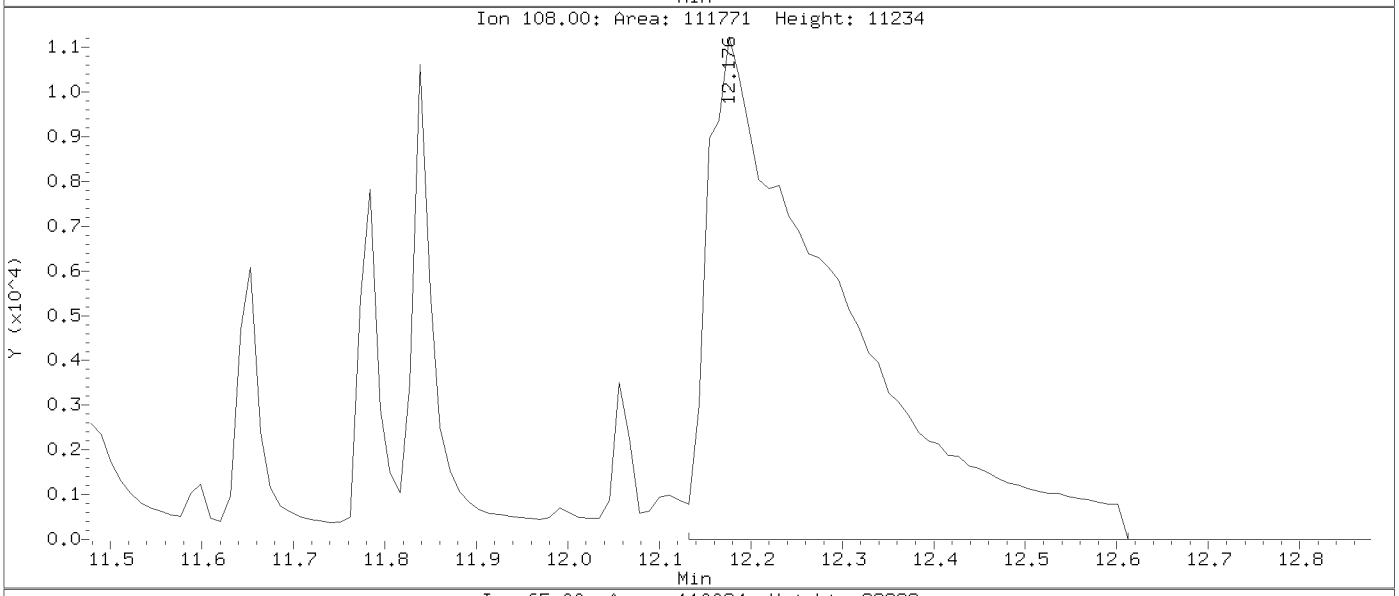
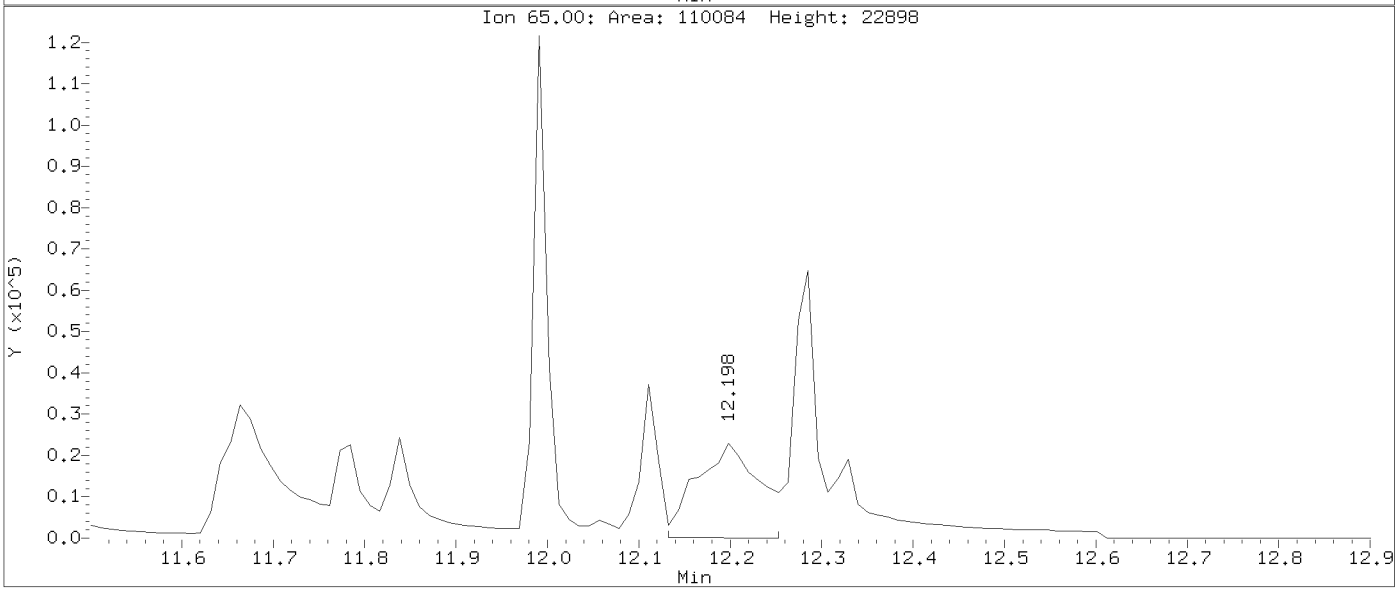
Injection Date: 28-JUL-2021 17:15
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitroaniline
CAS Number: 100-01-6

BEFORE MANUAL INTEGRATION







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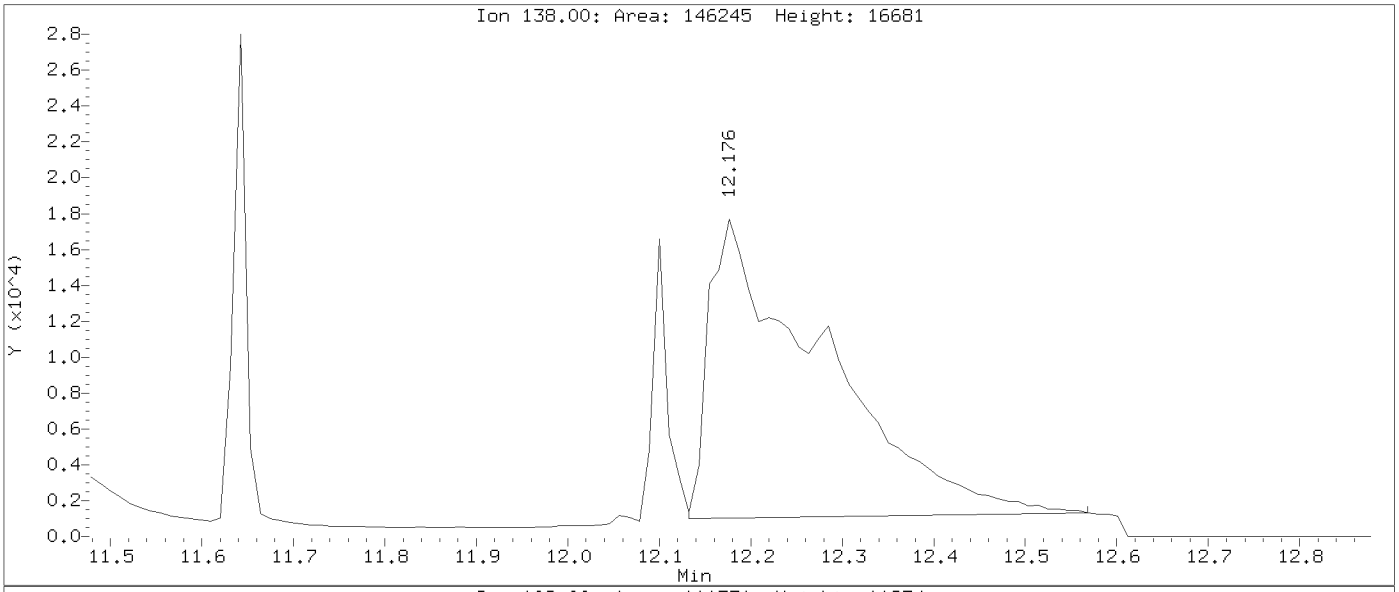
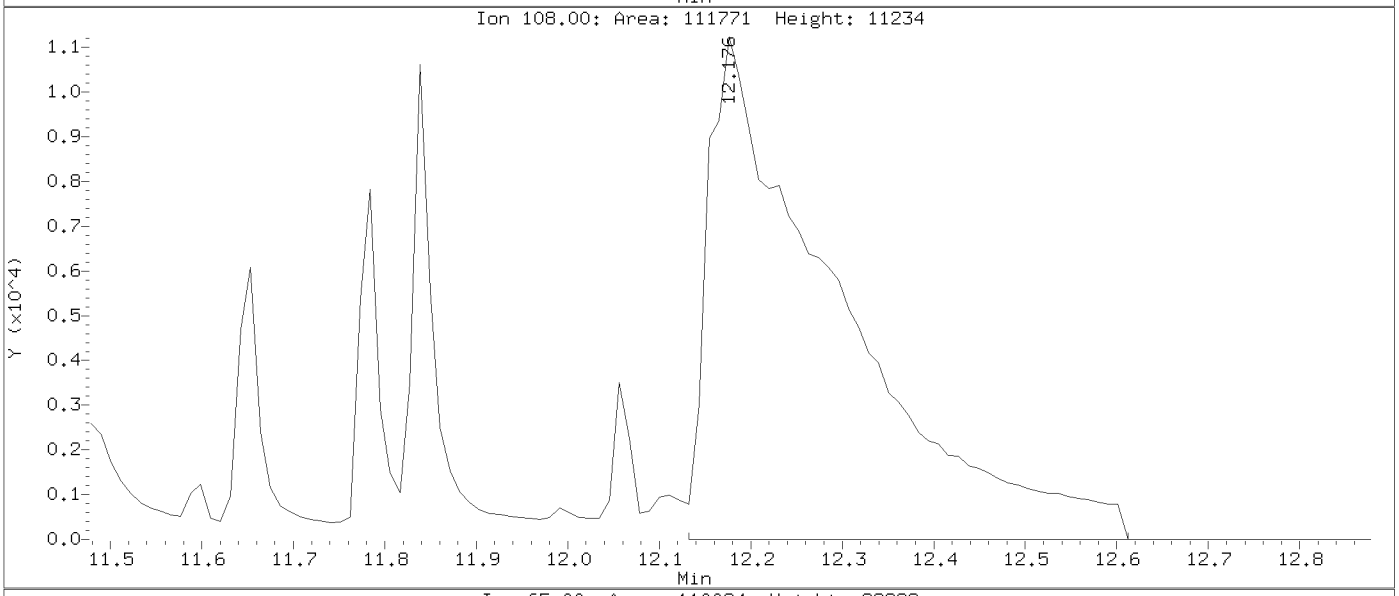
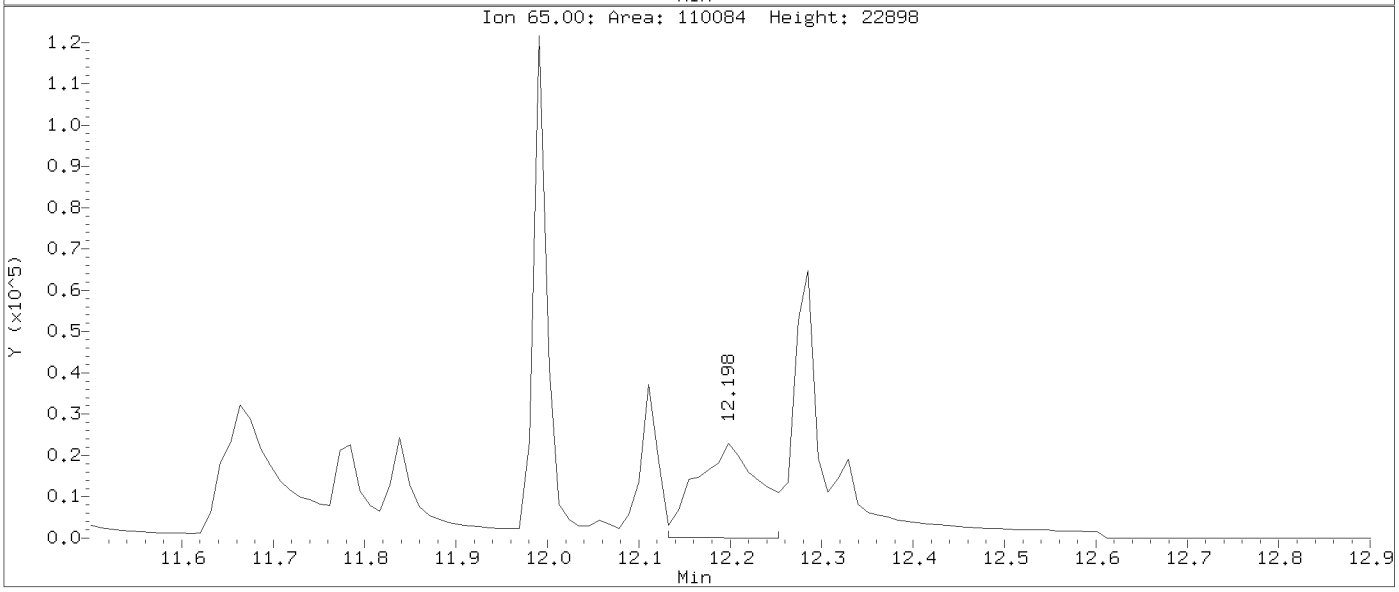
Injection Date: 28-JUL-2021 17:15
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitroaniline
CAS Number: 100-01-6

AFTER MANUAL INTEGRATION







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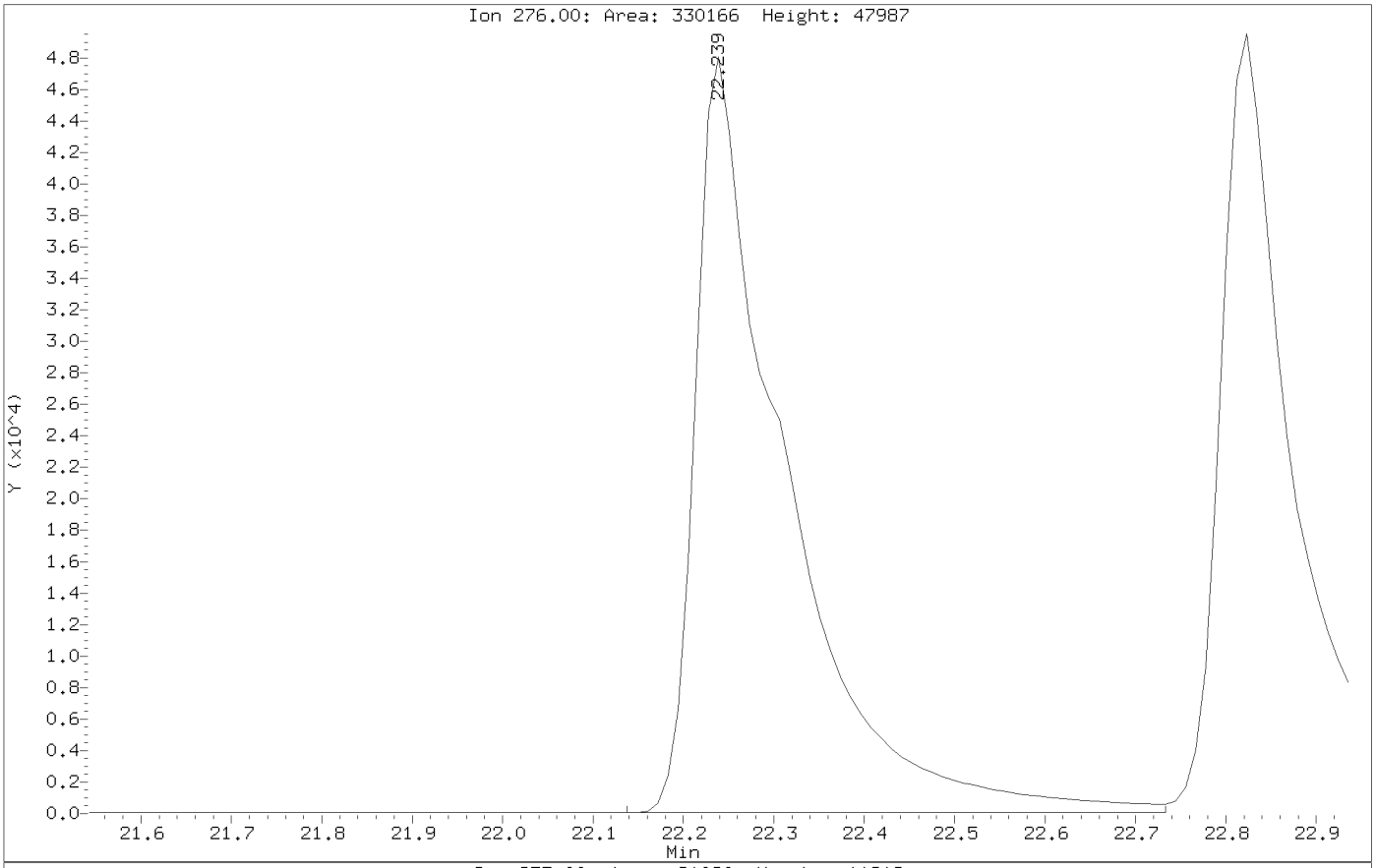
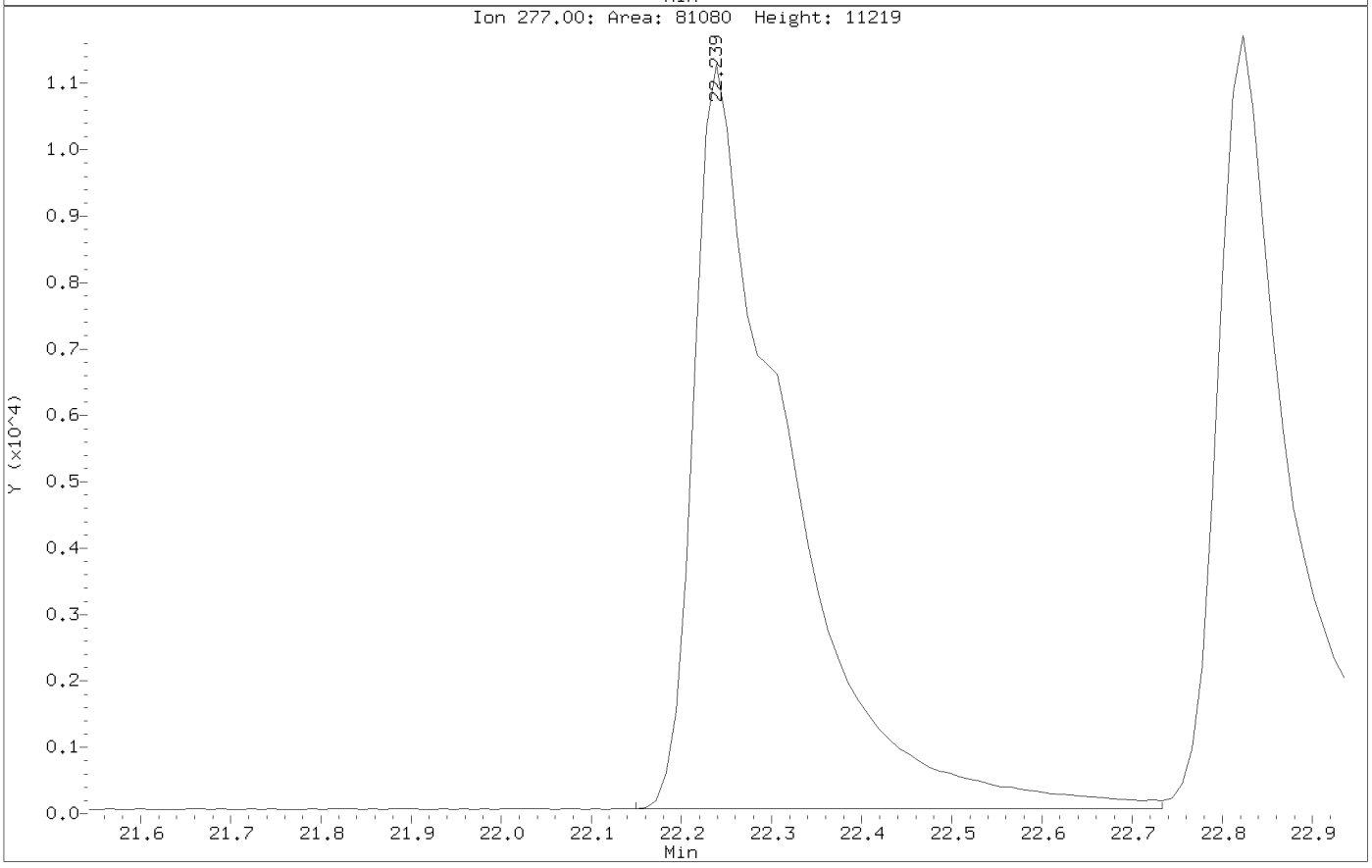
Injection Date: 28-JUL-2021 17:15
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

BEFORE MANUAL INTEGRATION





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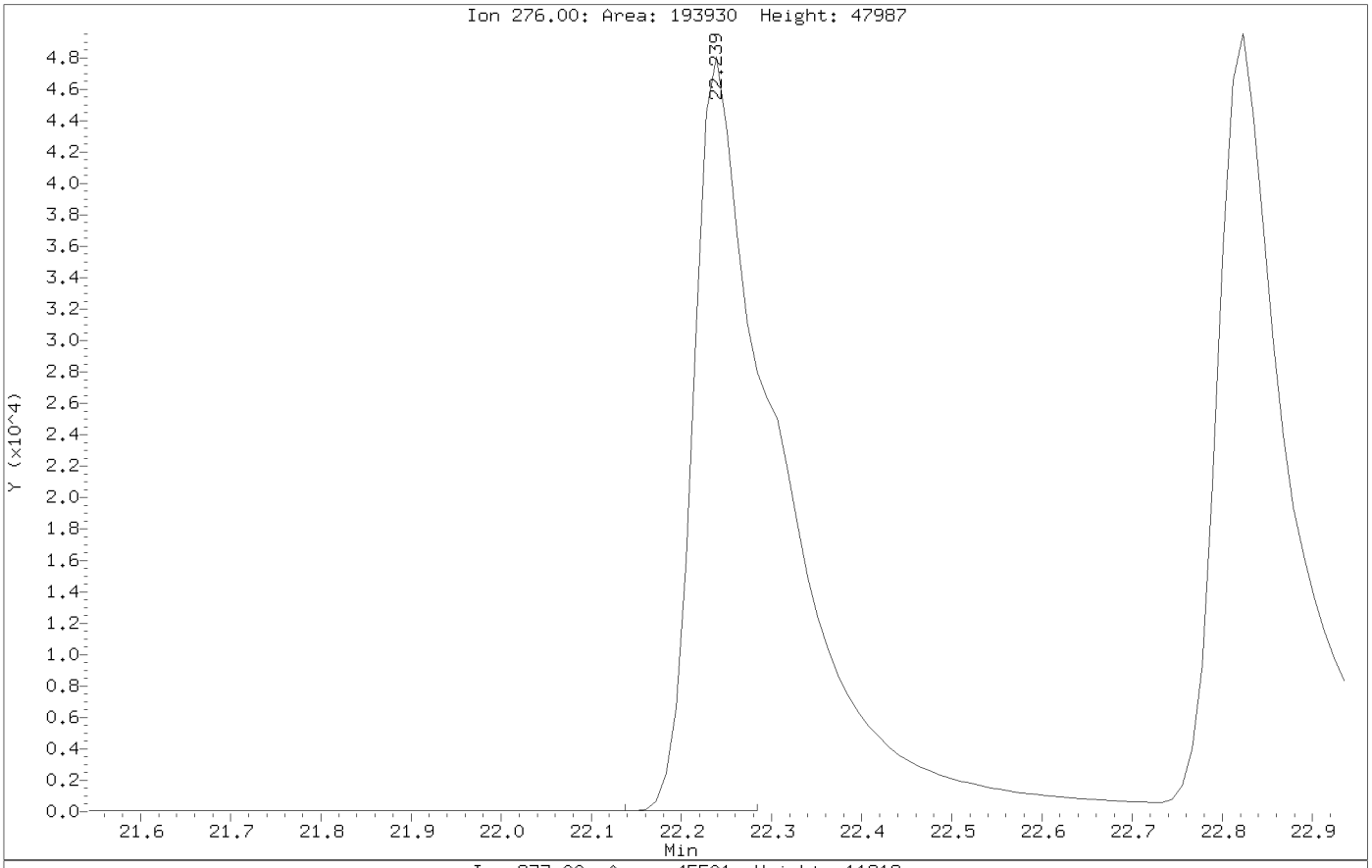
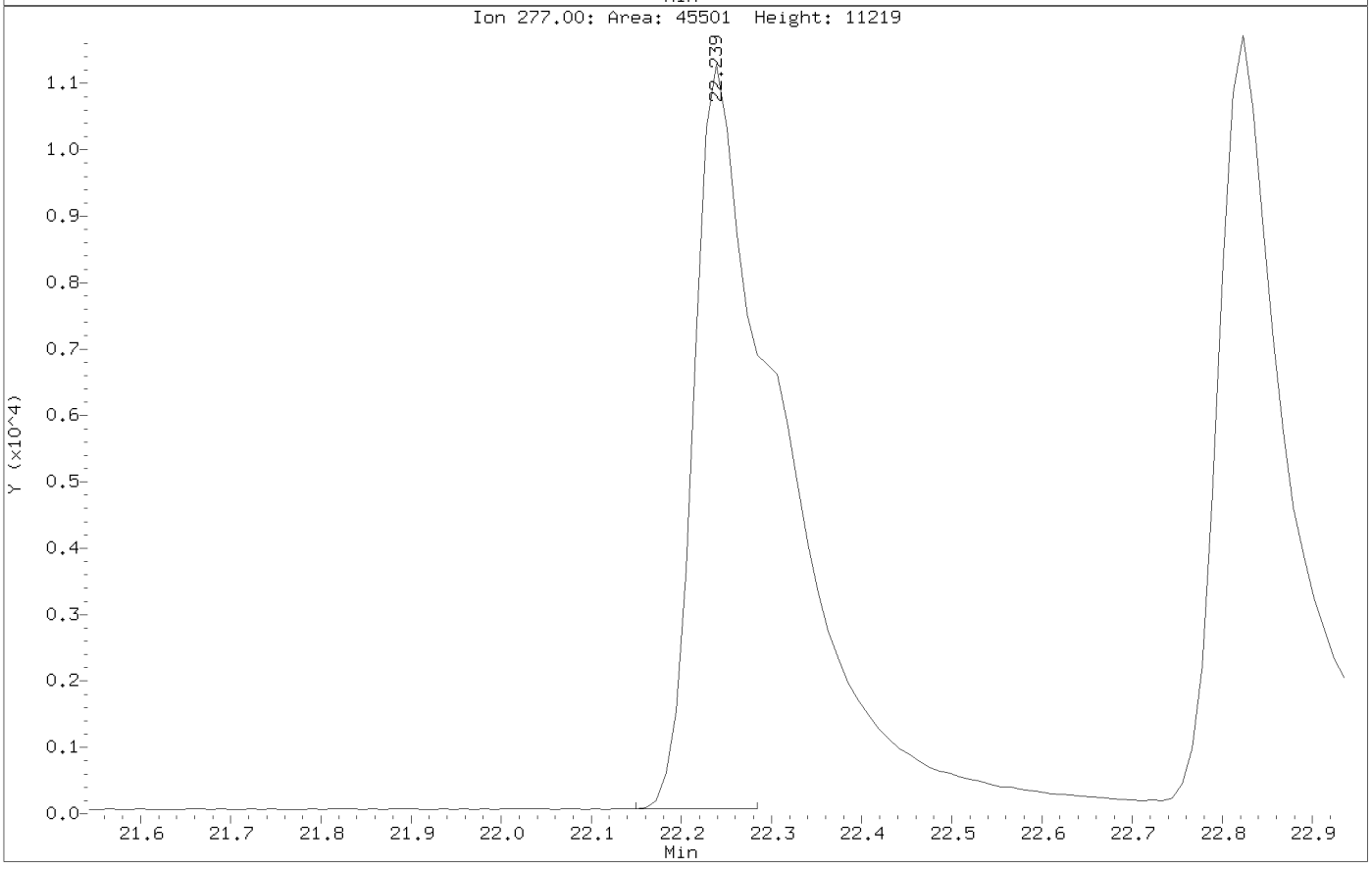
Injection Date: 28-JUL-2021 17:15
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

AFTER MANUAL INTEGRATION





BEFORE MANUAL INTEGRATION

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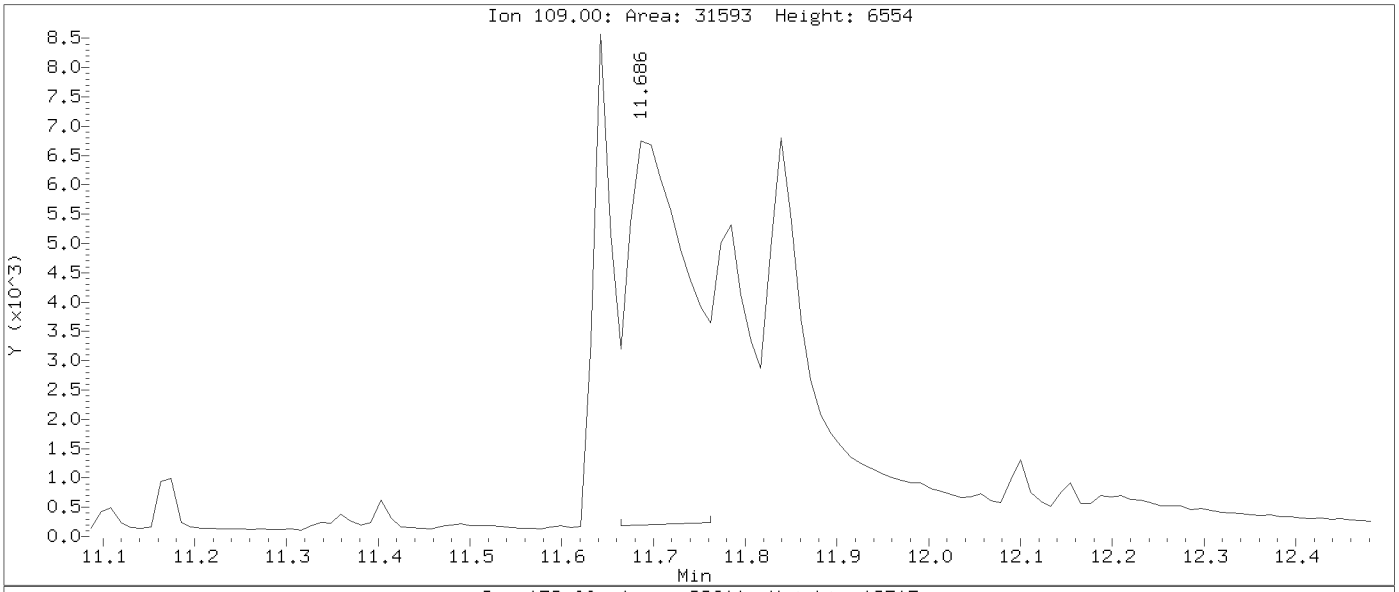
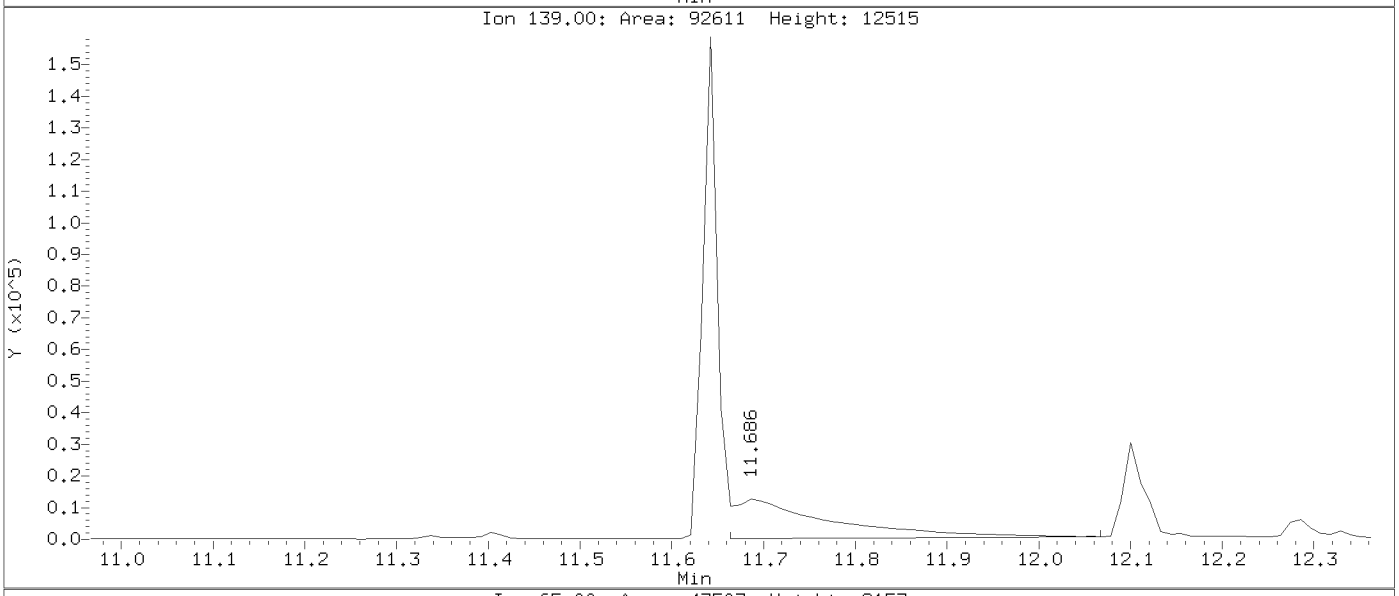
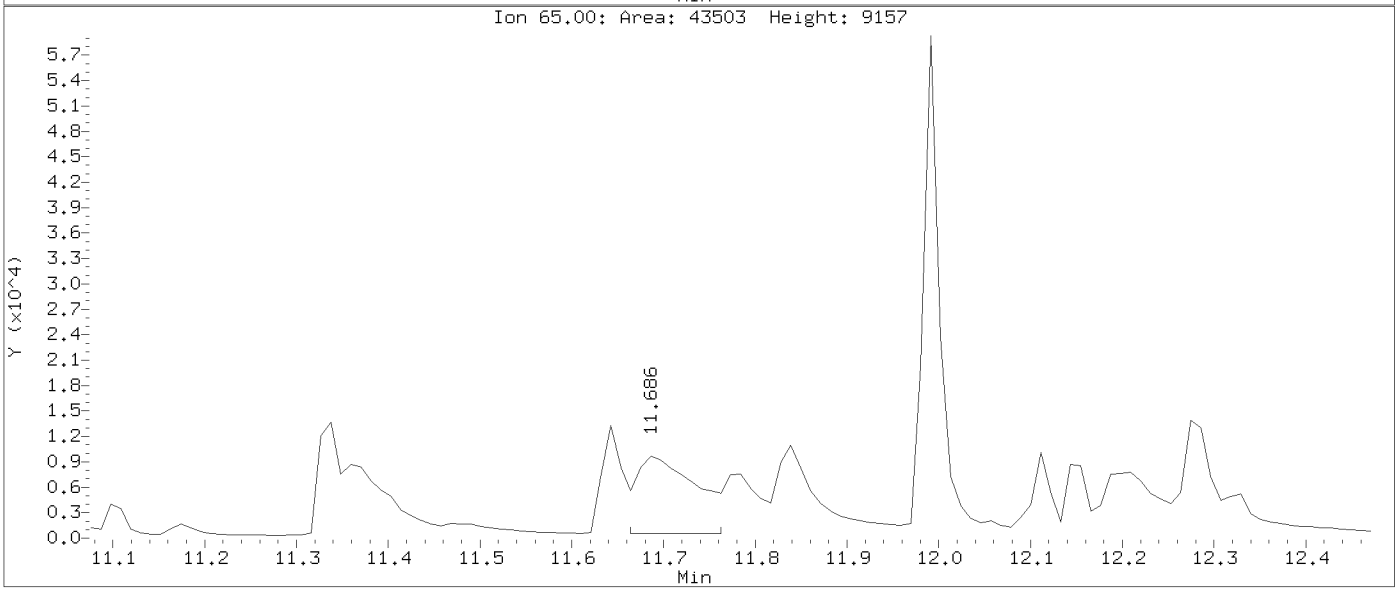
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitrophenol
CAS Number: 100-02-7







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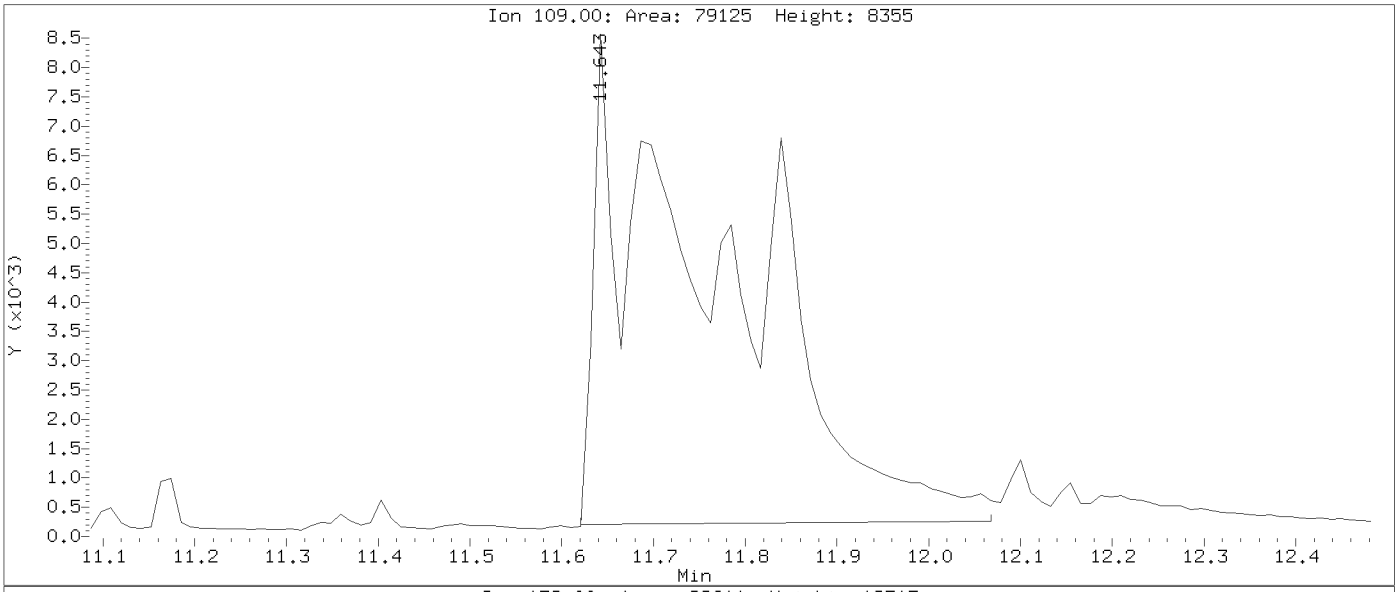
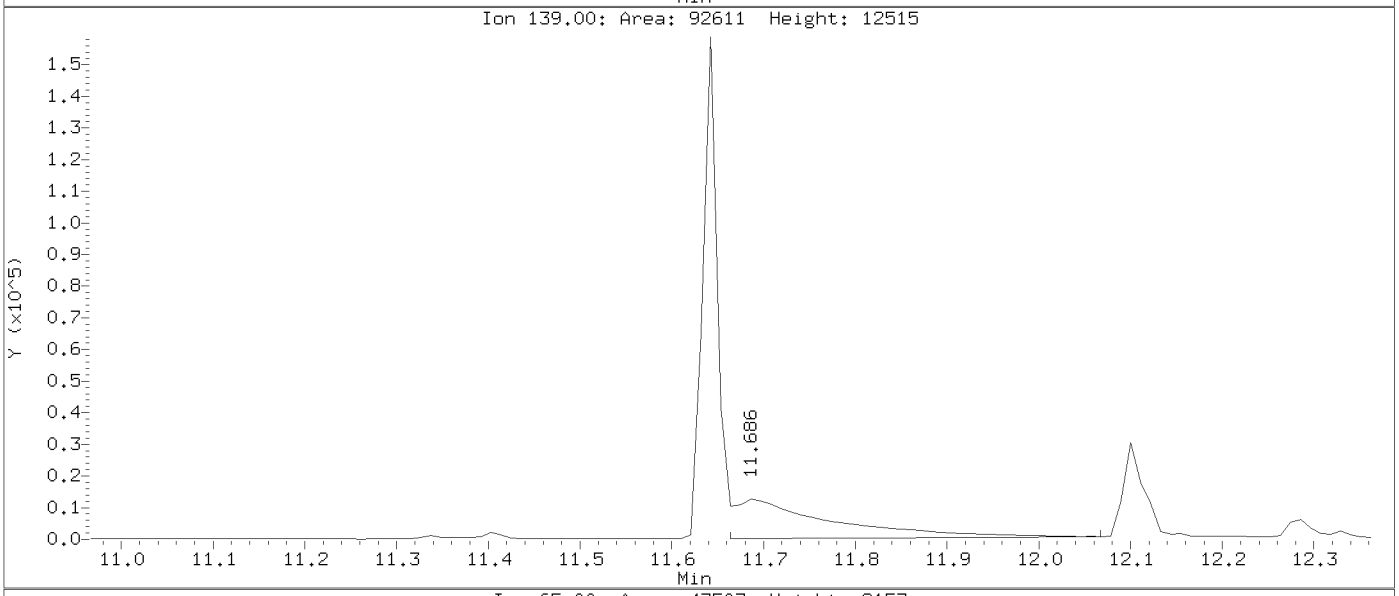
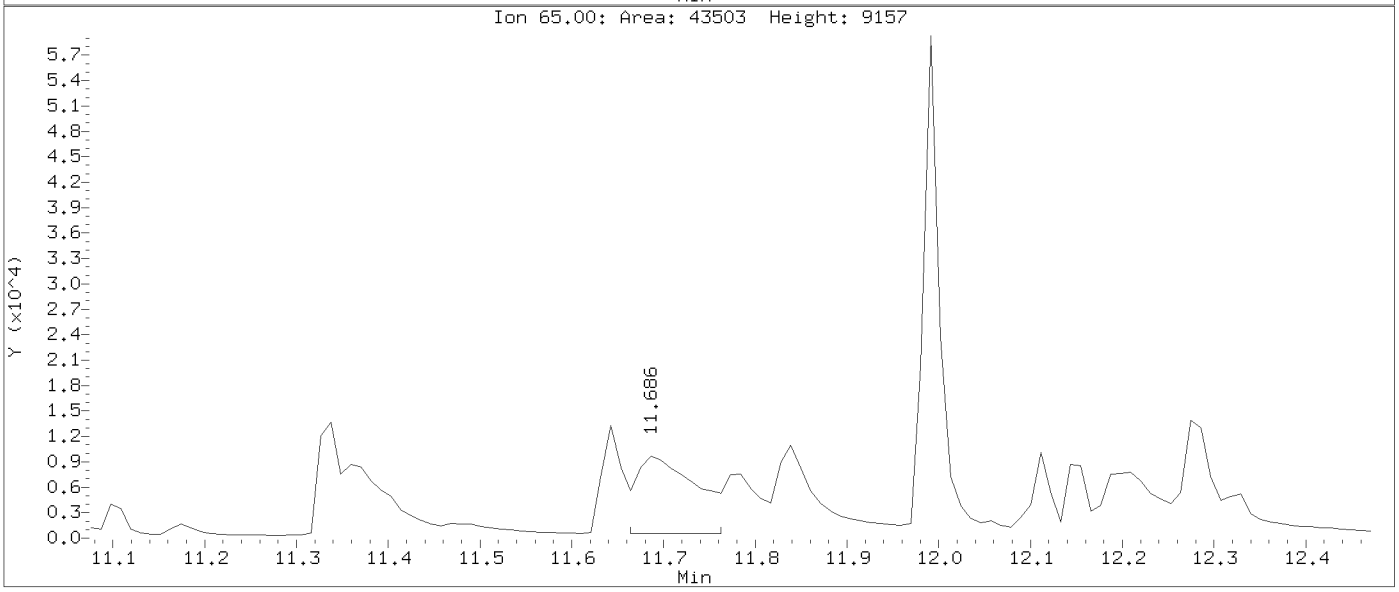
Injection Date: 28-JUL-2021 15:35
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitrophenol
CAS Number: 100-02-7

AFTER MANUAL INTEGRATION







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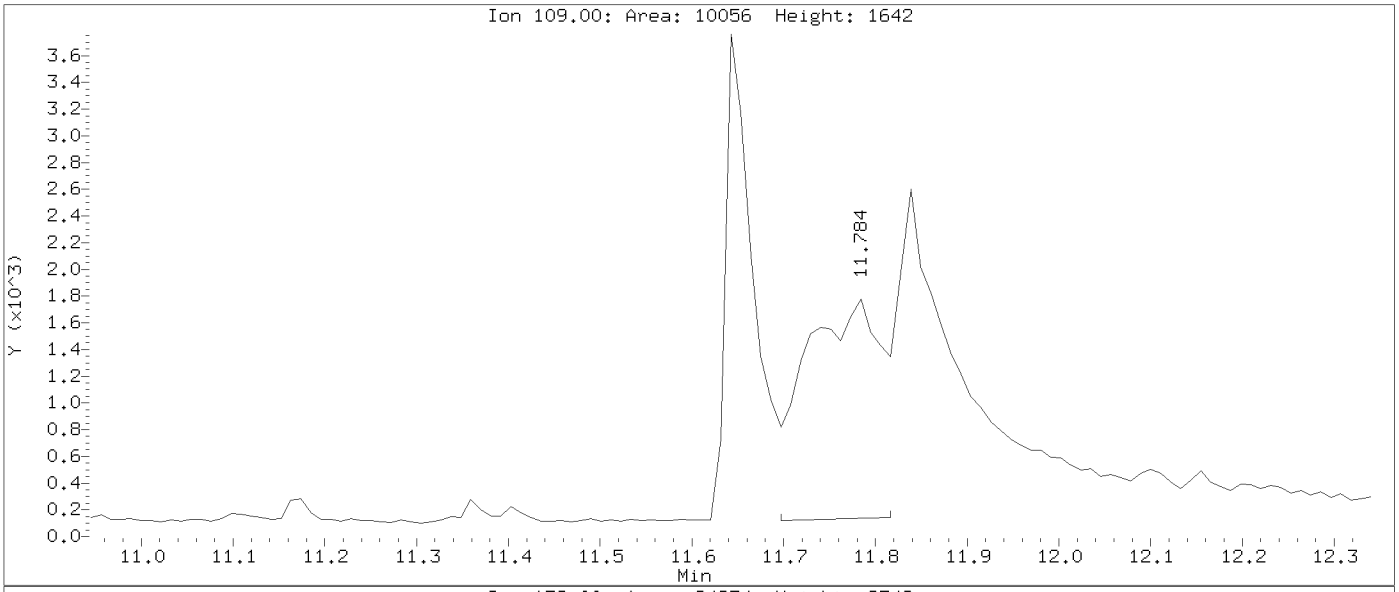
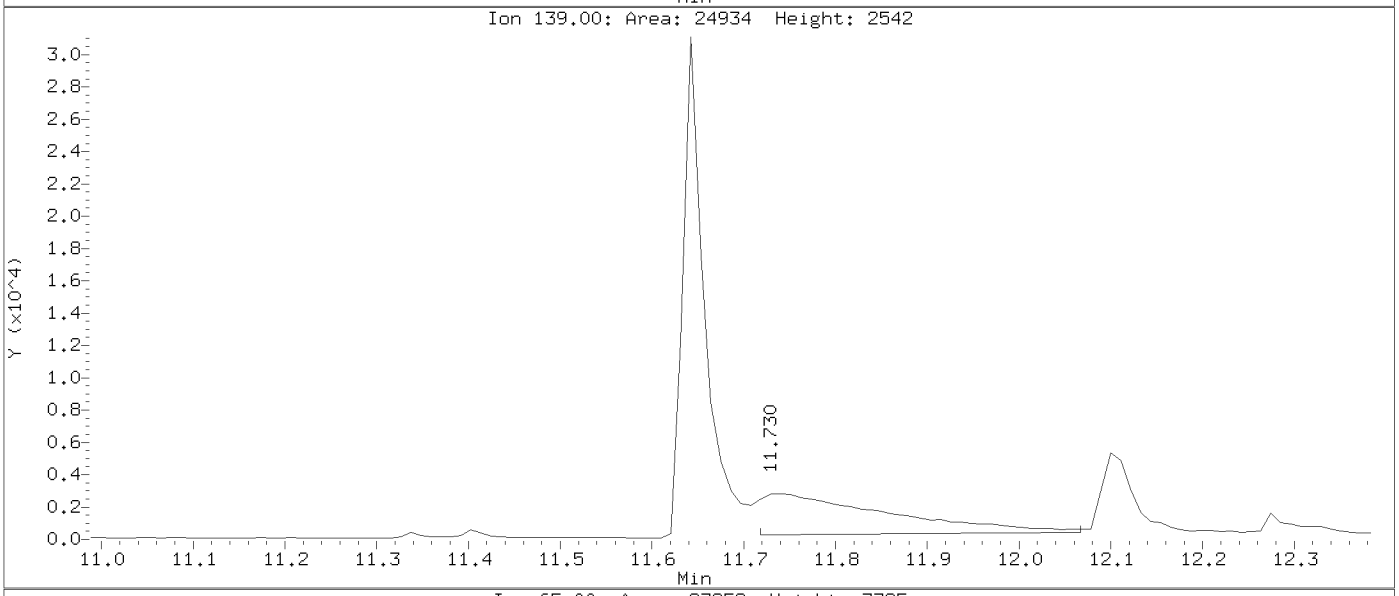
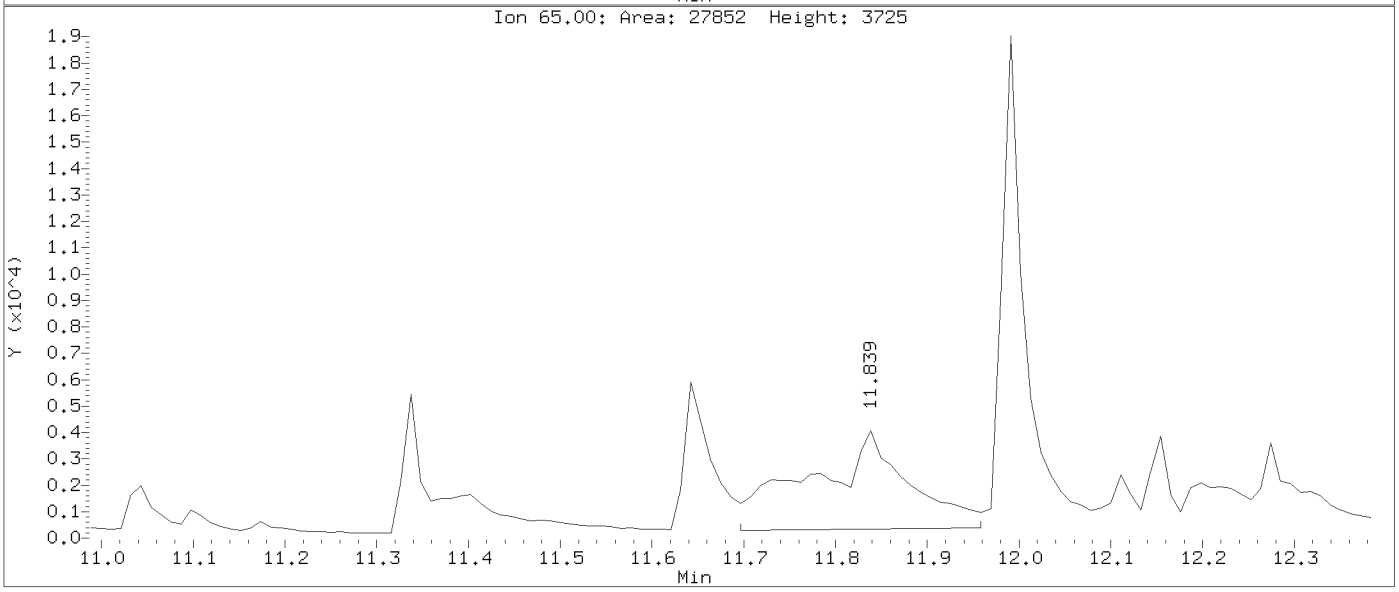
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitrophenol
CAS Number: 100-02-7

BEFORE MANUAL INTEGRATION







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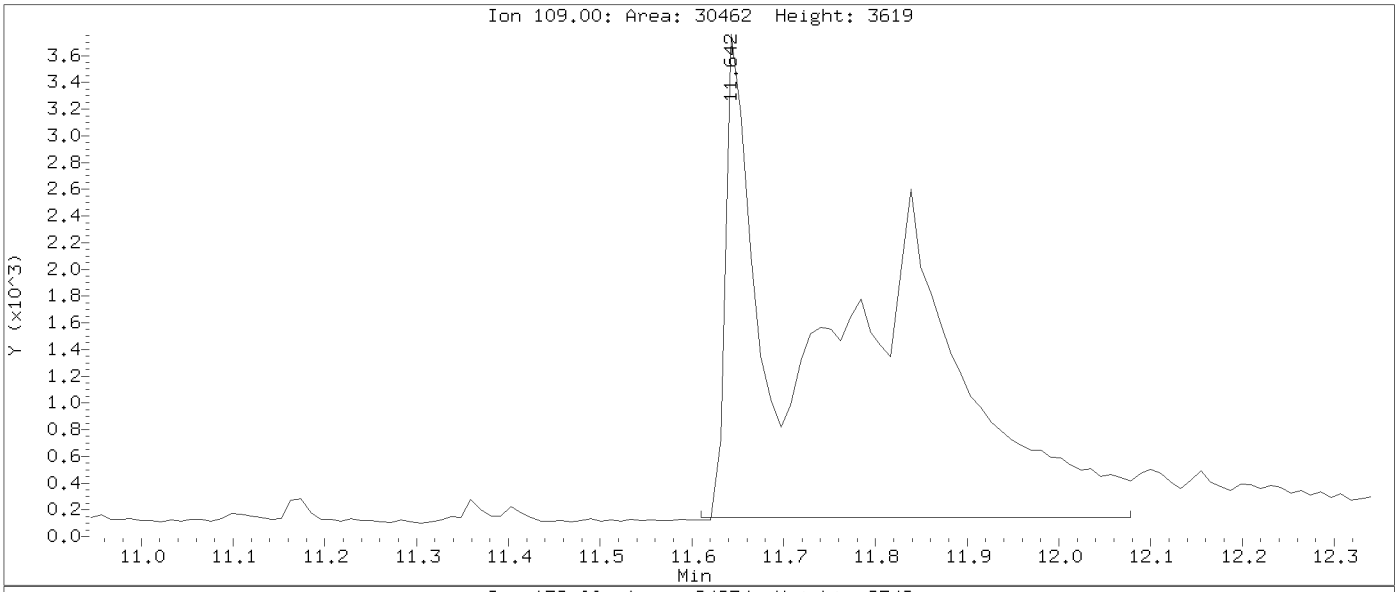
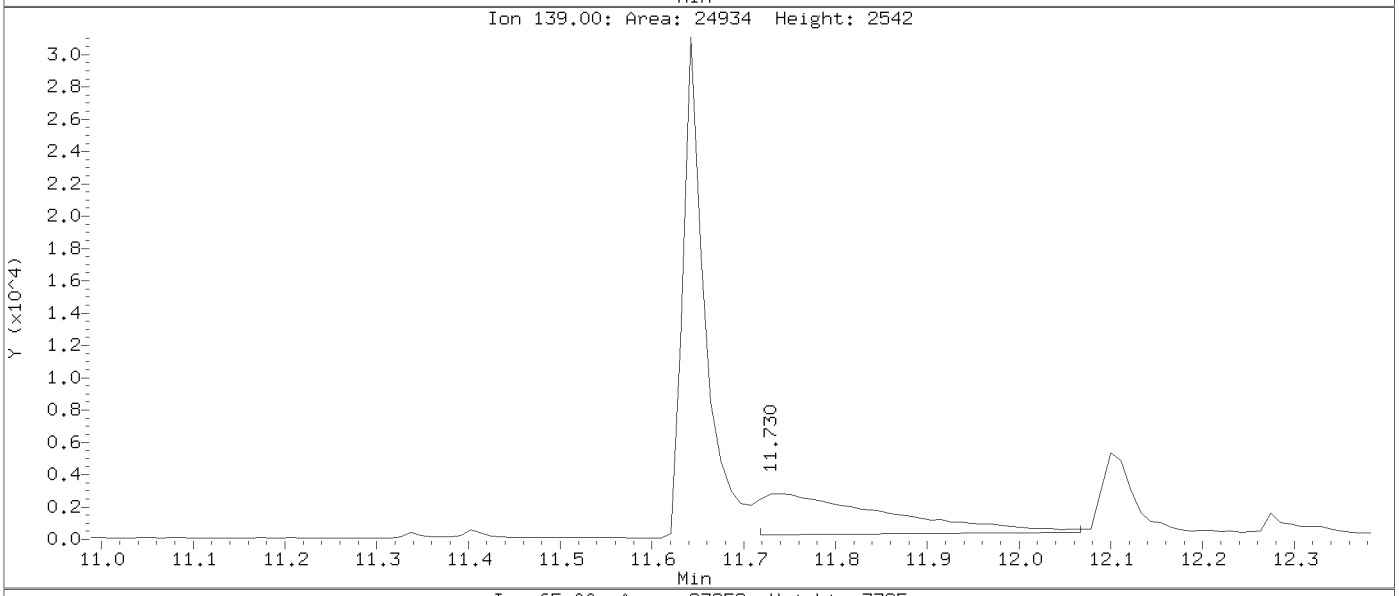
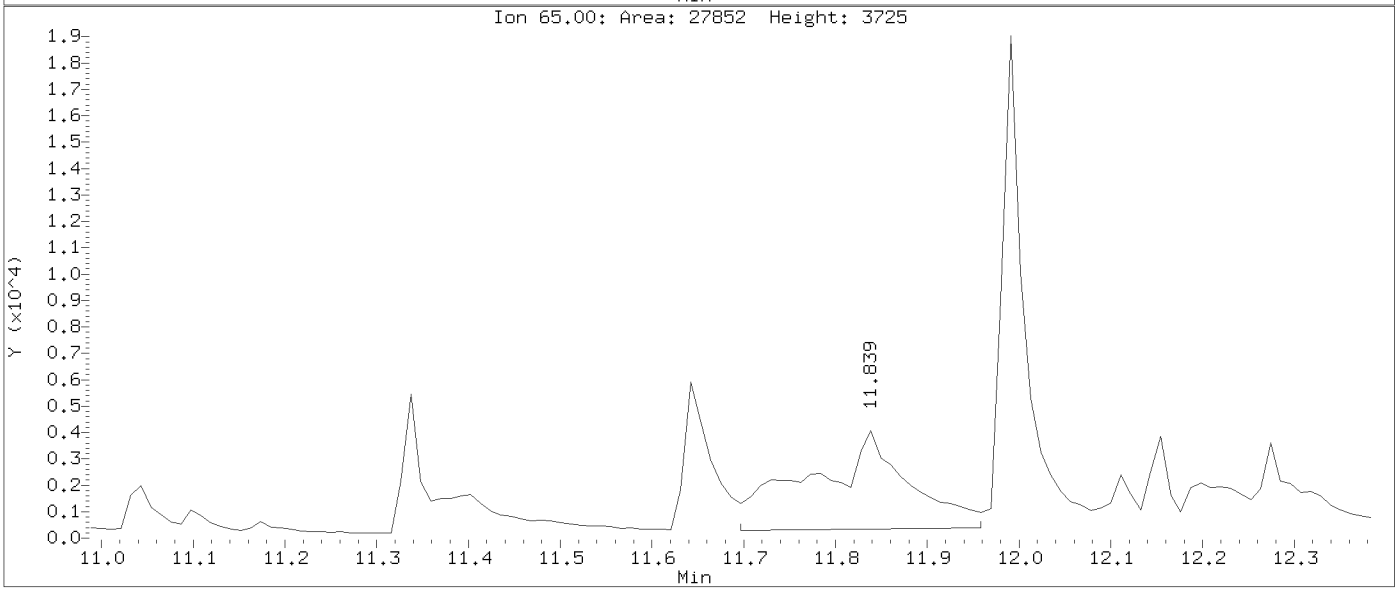
Injection Date: 28-JUL-2021 16:07
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitrophenol
CAS Number: 100-02-7

AFTER MANUAL INTEGRATION







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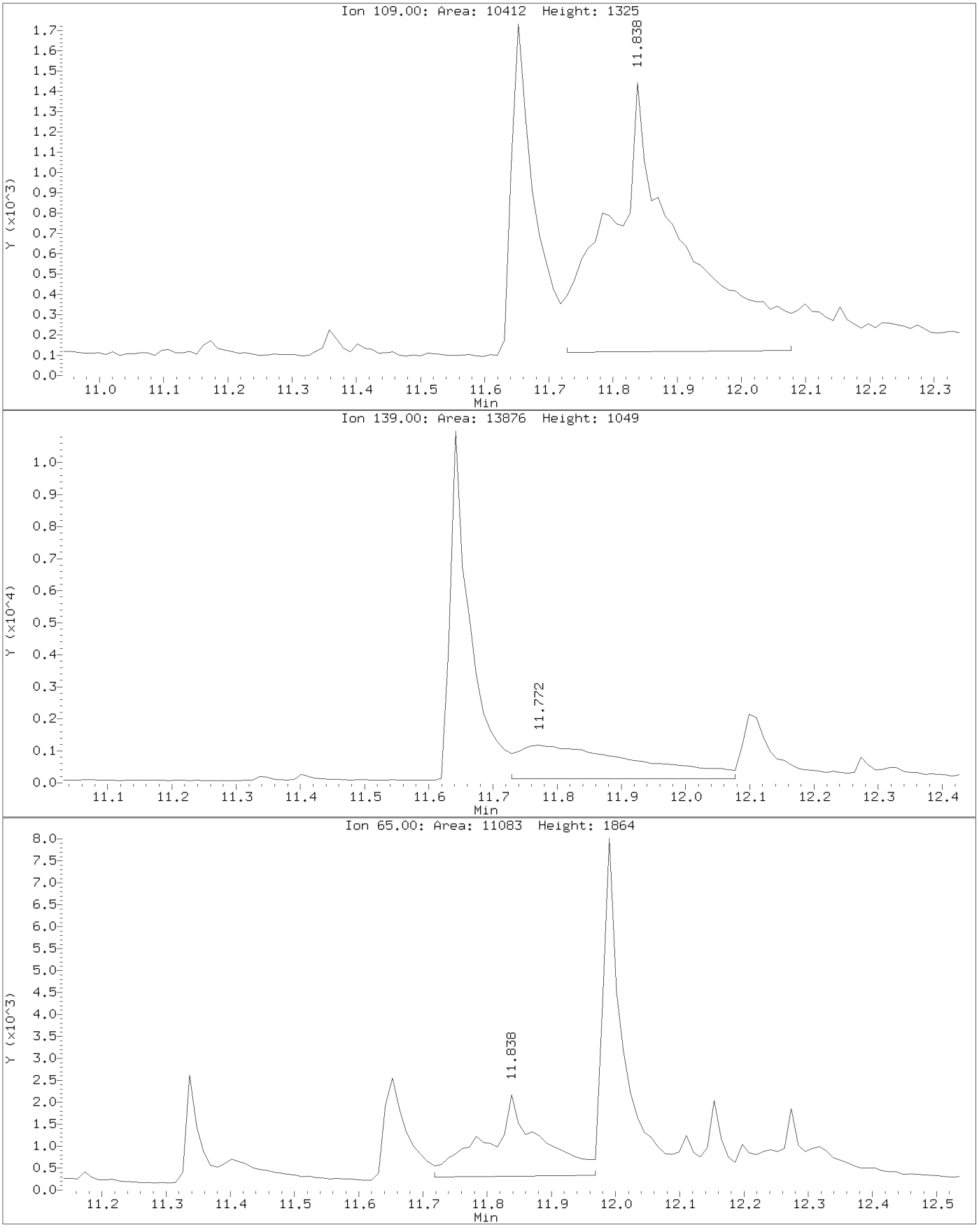
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitrophenol
CAS Number: 100-02-7

BEFORE MANUAL INTEGRATION



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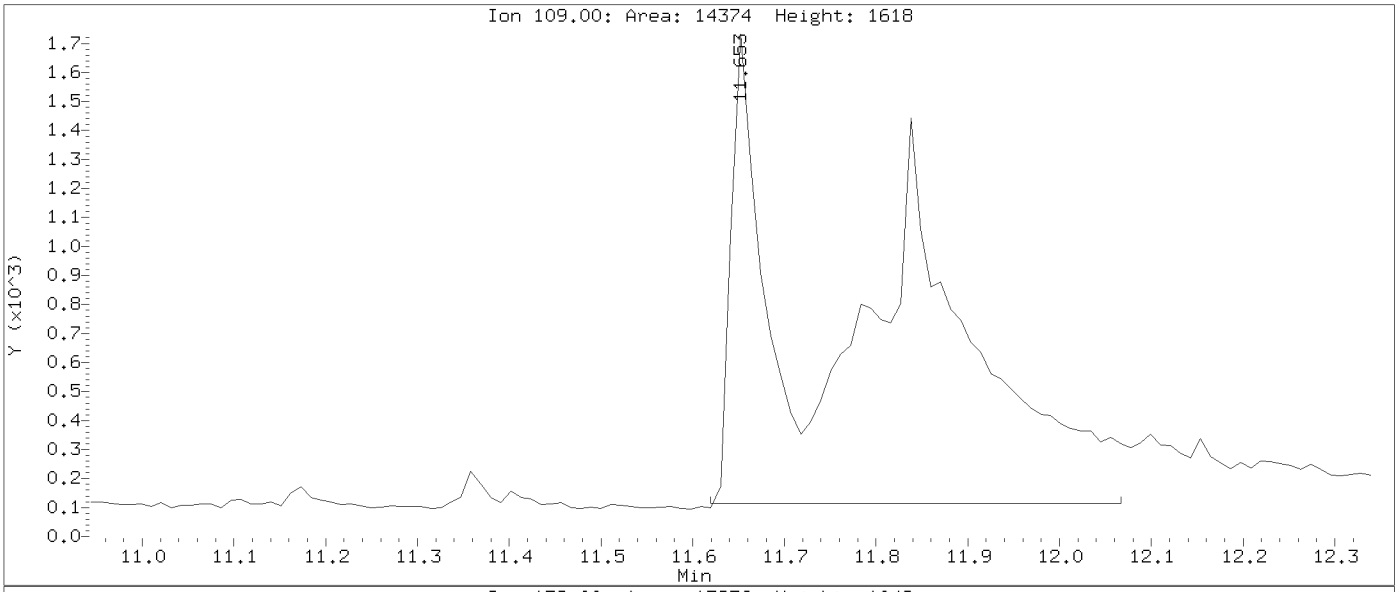
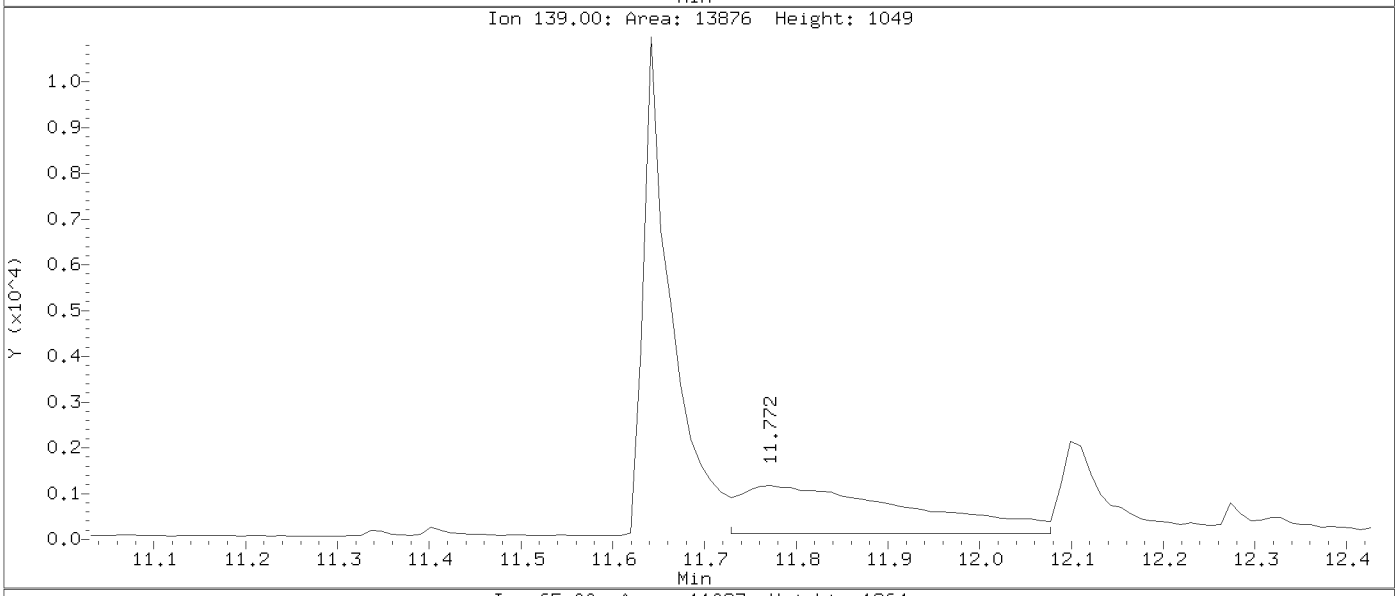
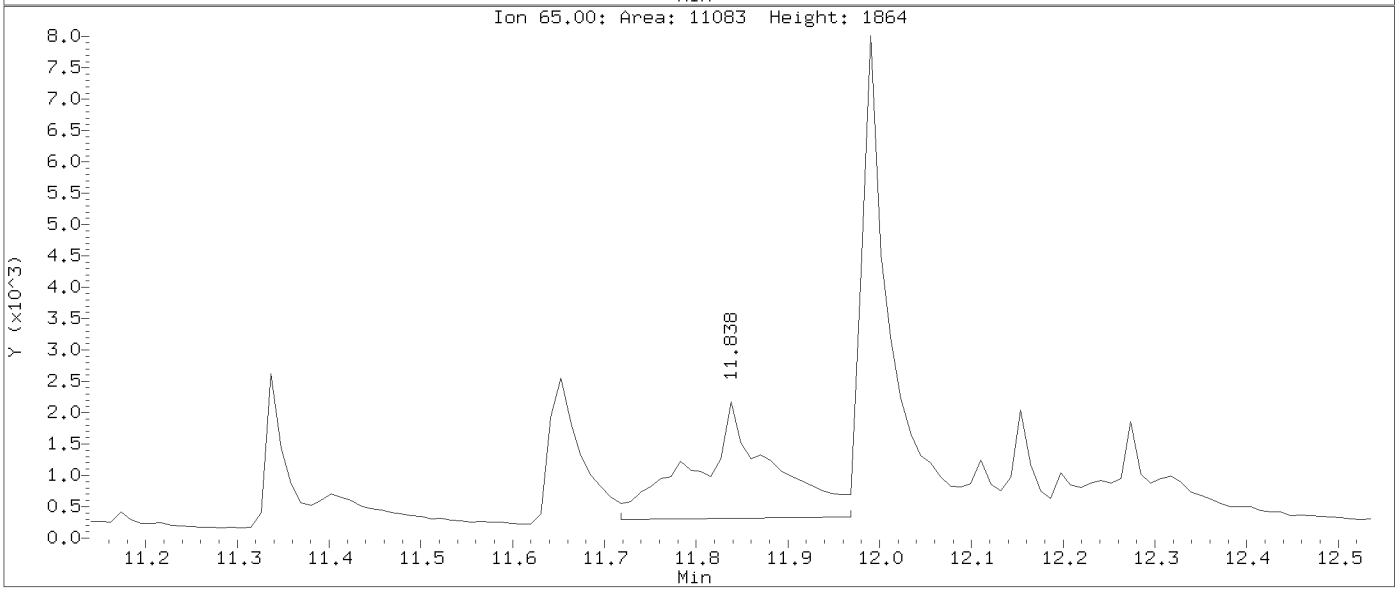
Client Sample ID:

Compound: 4-Nitrophenol
CAS Number: 100-02-7

AFTER MANUAL INTEGRATION







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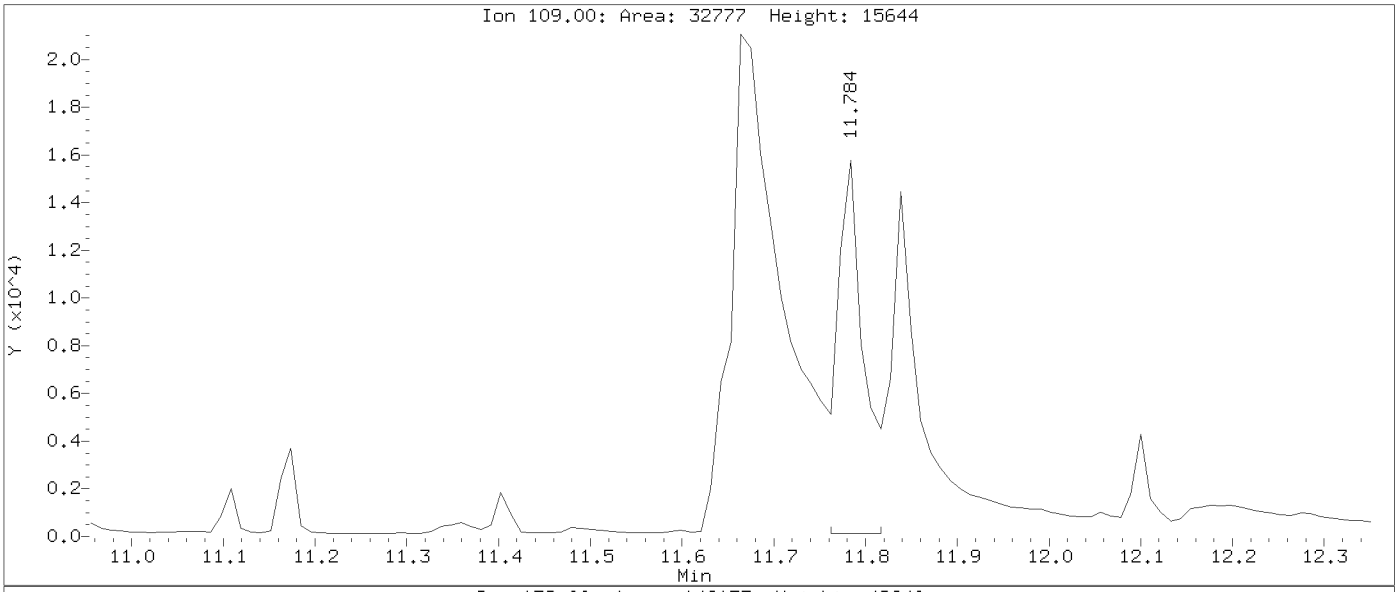
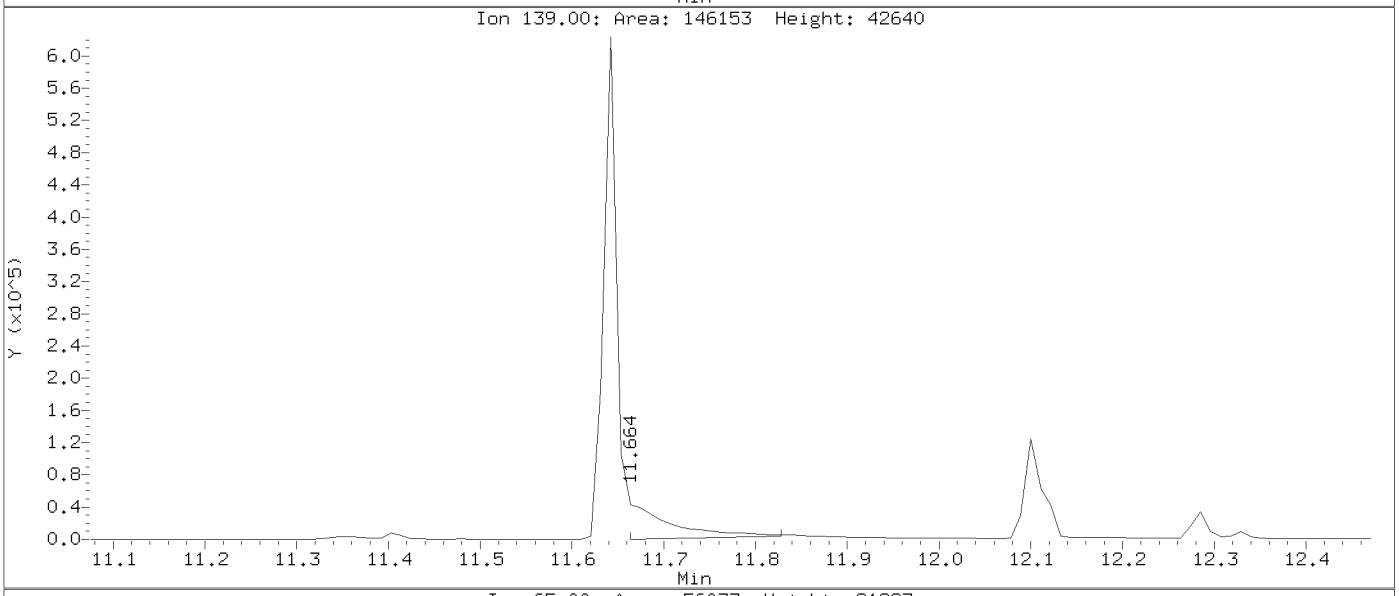
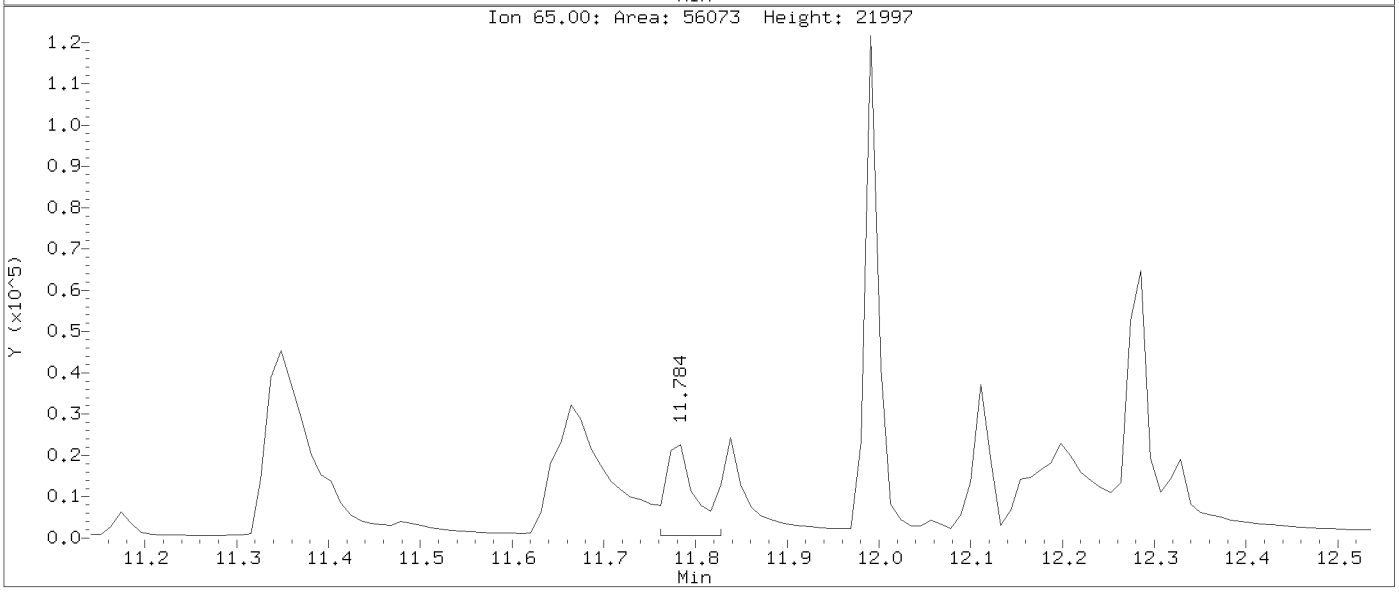
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitrophenol
CAS Number: 100-02-7

BEFORE MANUAL INTEGRATION







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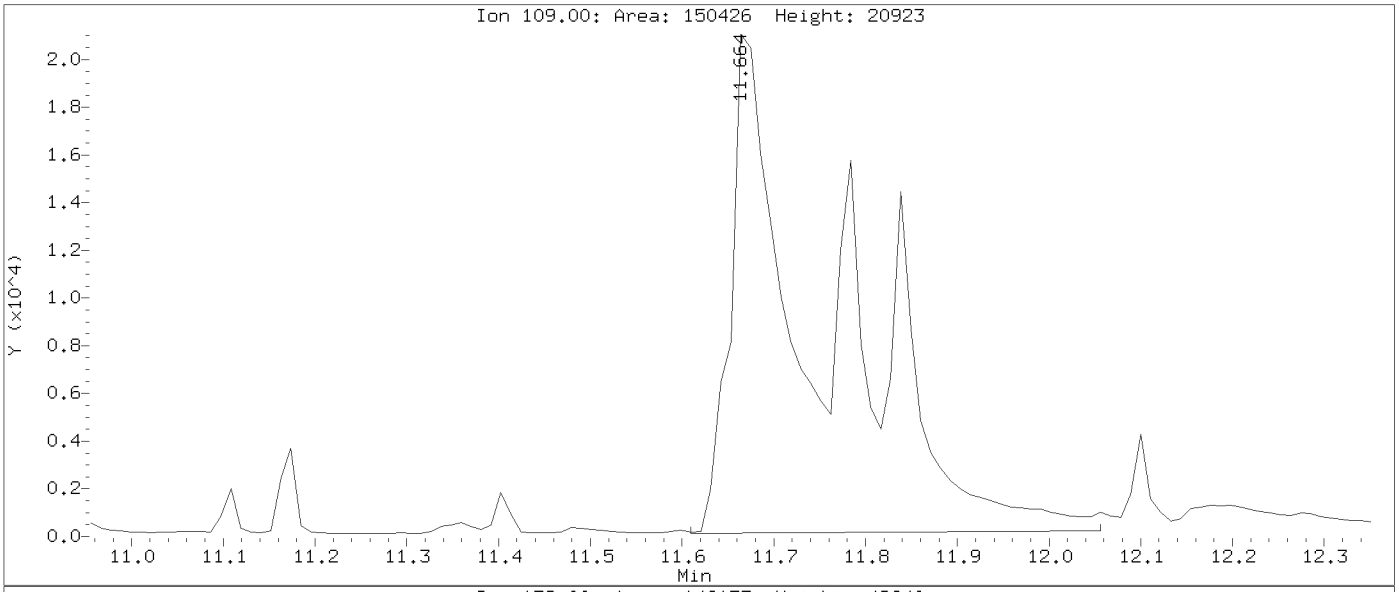
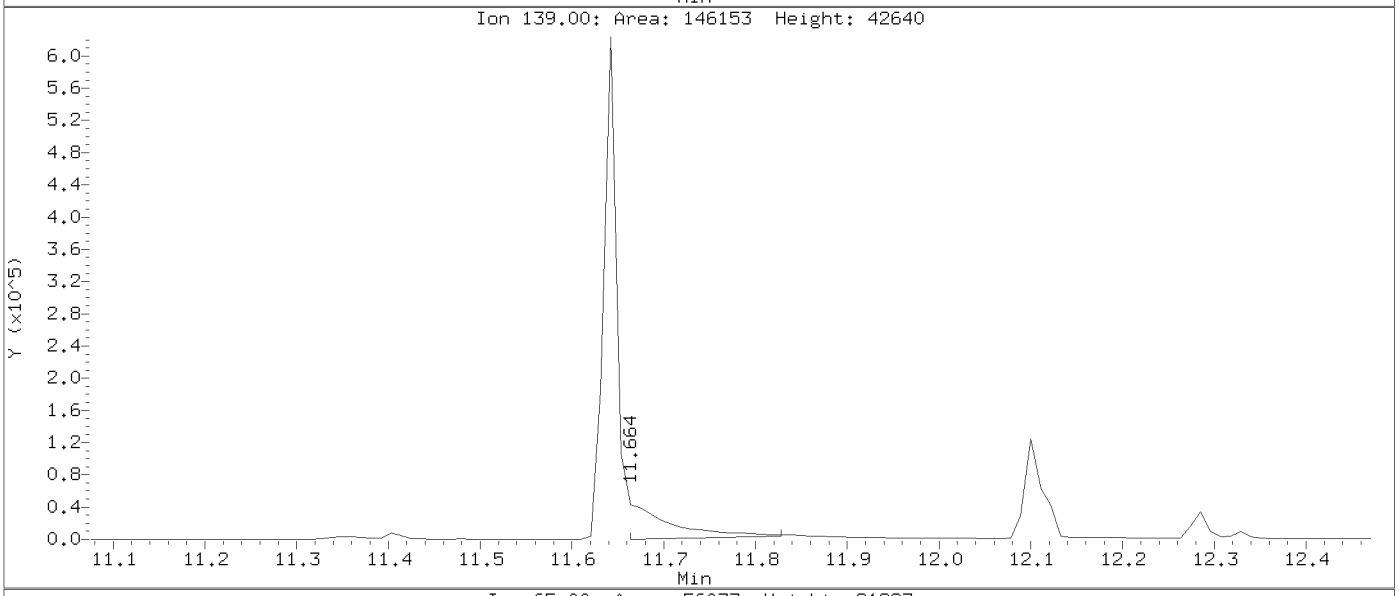
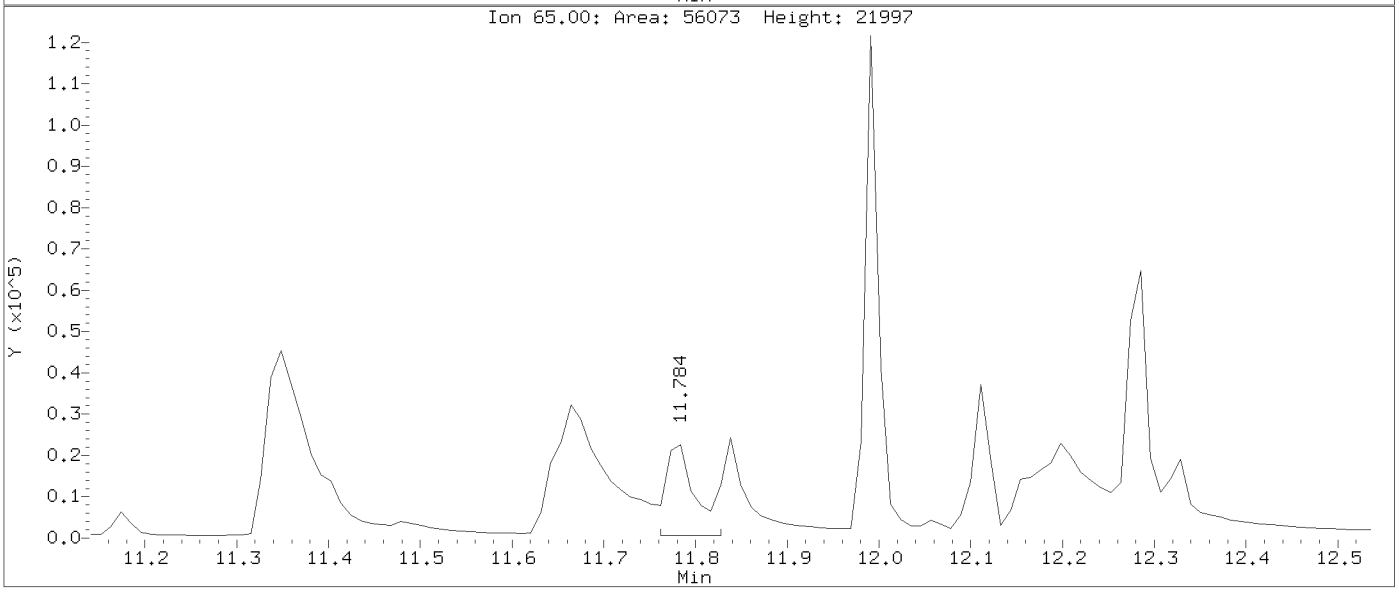
Client Sample ID:

Compound: 4-Nitrophenol
CAS Number: 100-02-7

AFTER MANUAL INTEGRATION







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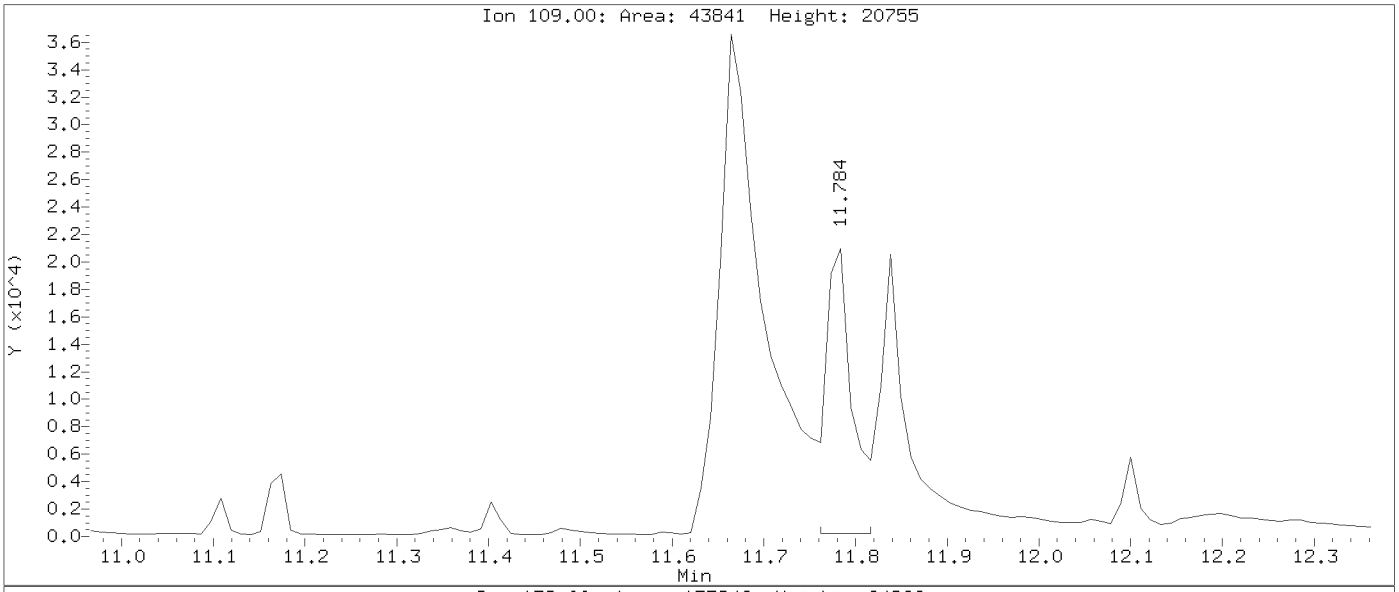
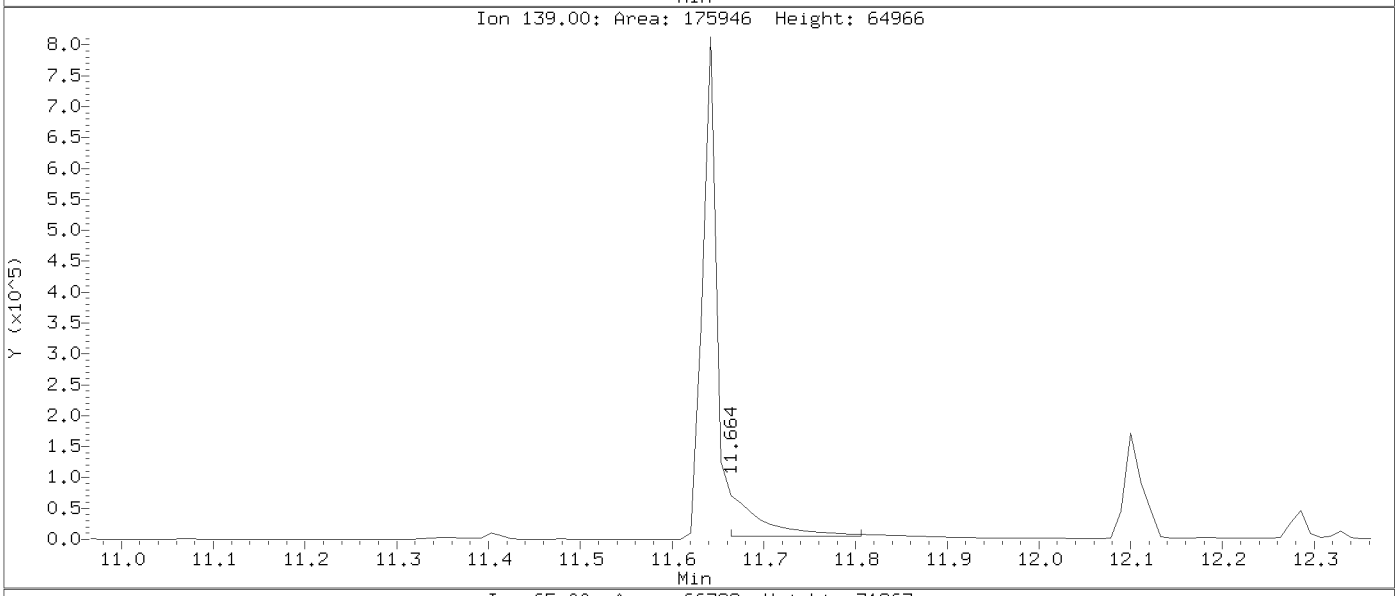
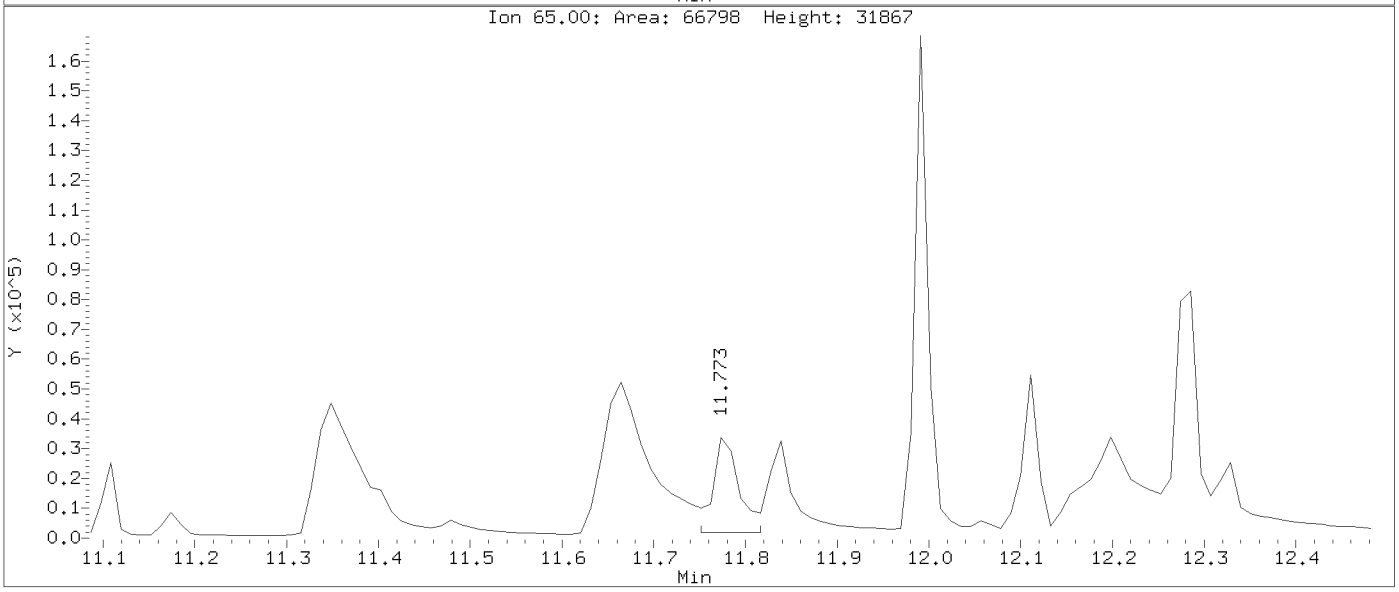
Client Sample ID:

Compound: 4-Nitrophenol
CAS Number: 100-02-7

BEFORE MANUAL INTEGRATION







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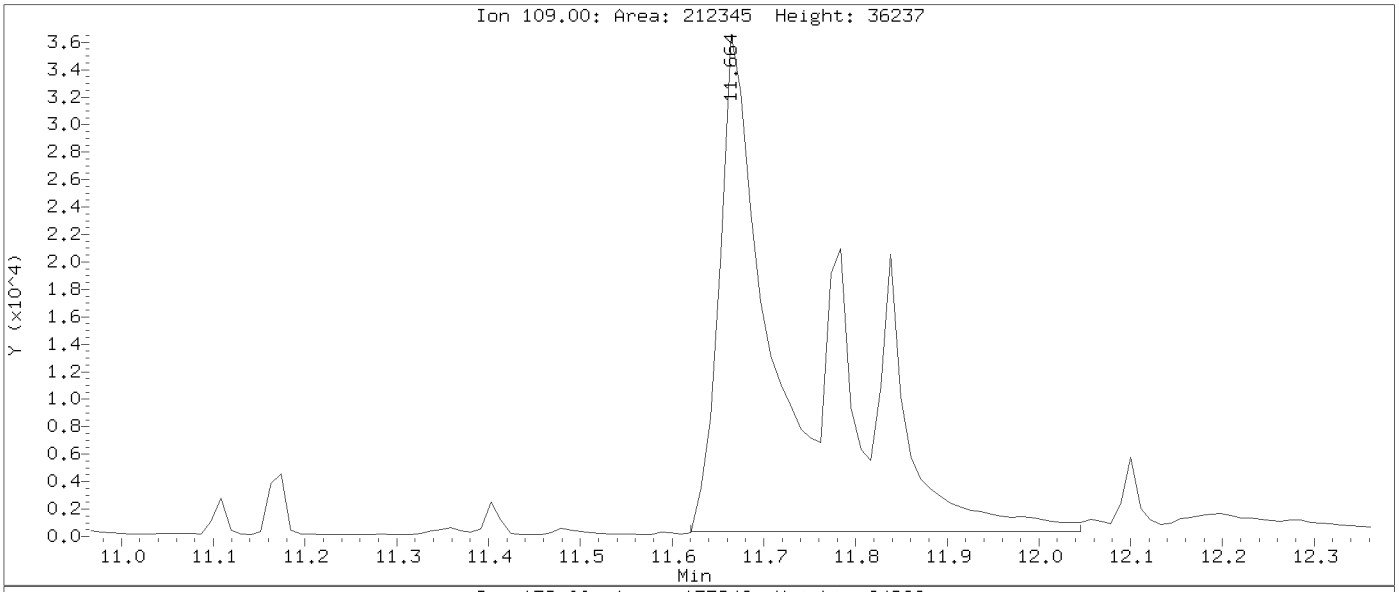
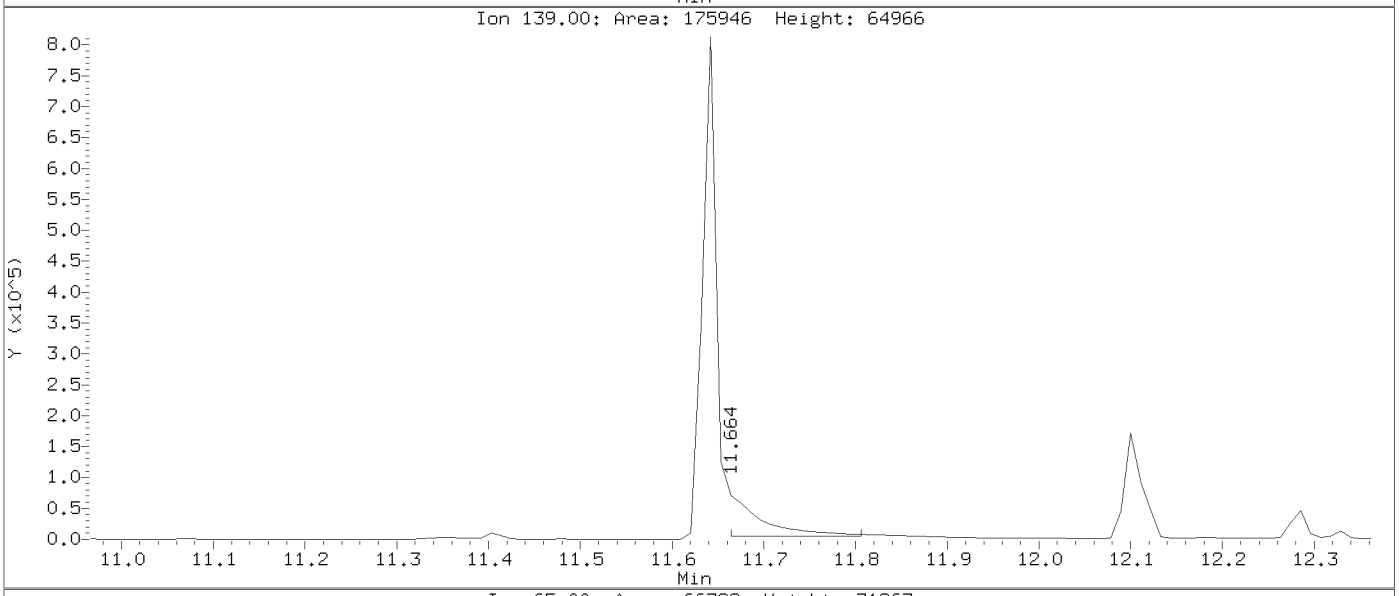
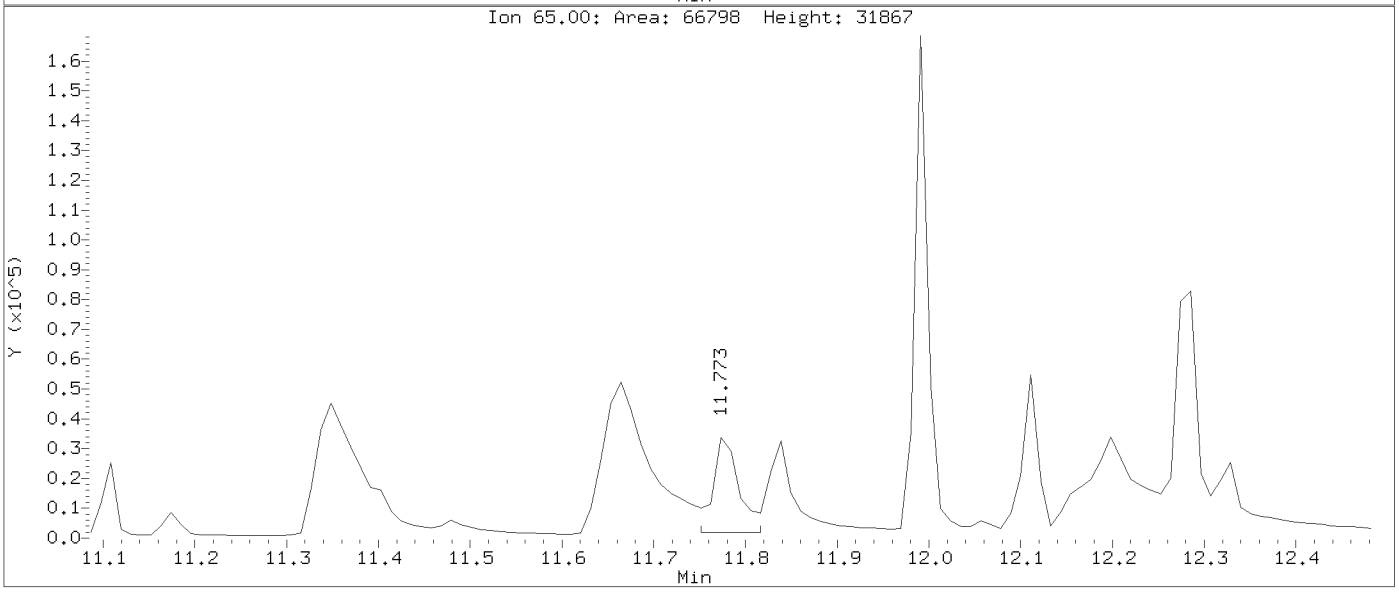
Client Sample ID:

Compound: 4-Nitrophenol
CAS Number: 100-02-7

AFTER MANUAL INTEGRATION







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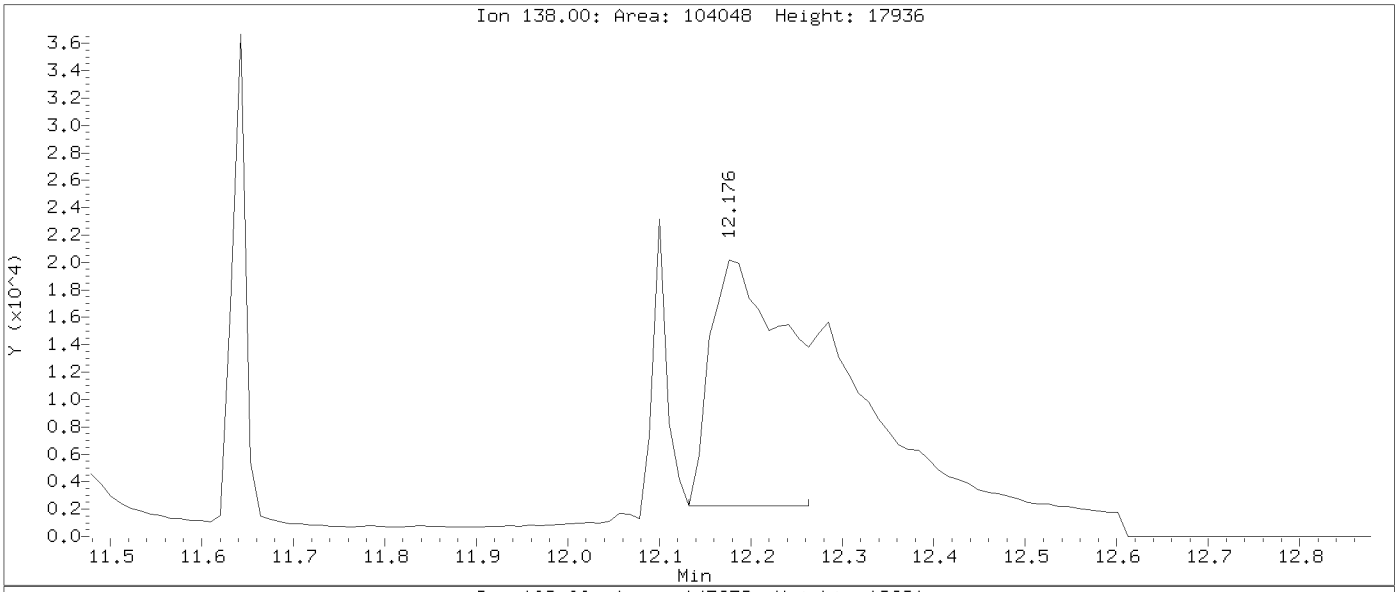
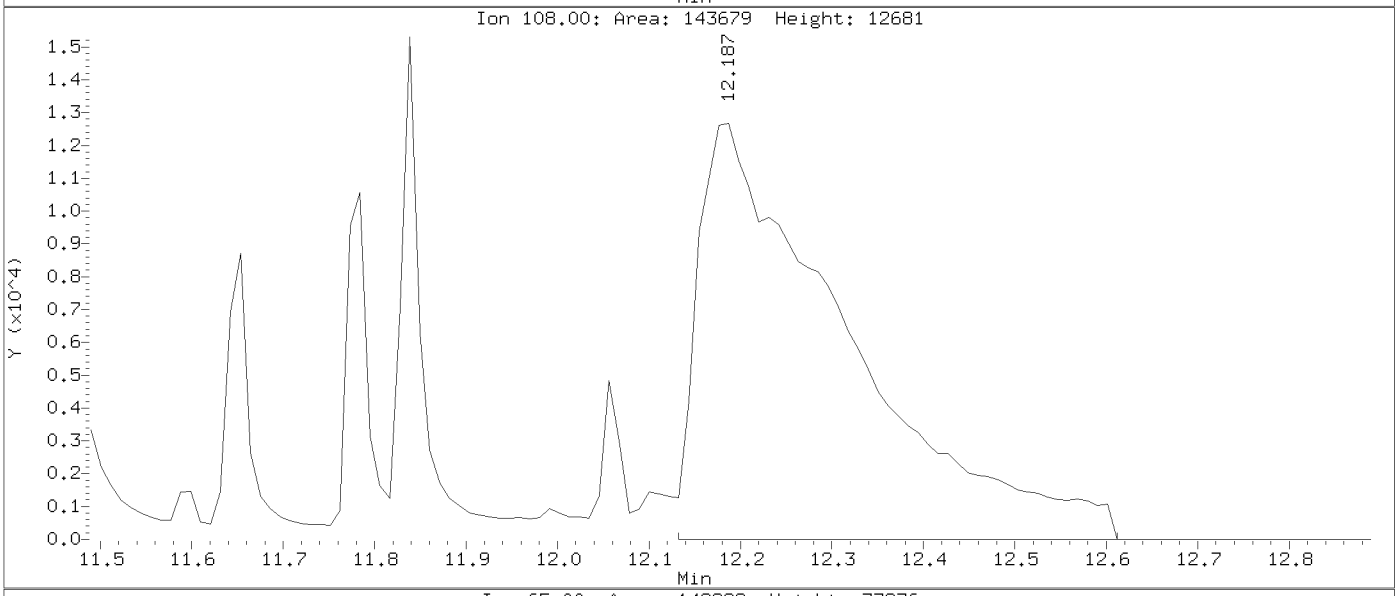
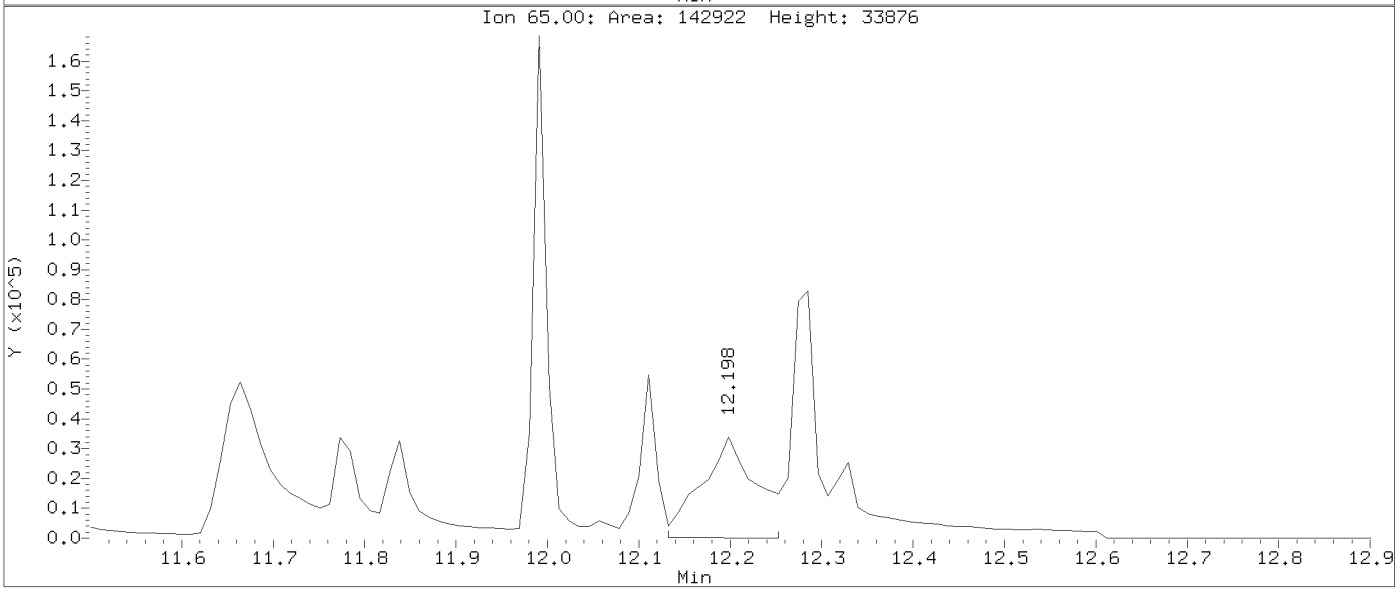
Injection Date: 28-JUL-2021 17:52
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitroaniline
CAS Number: 100-01-6

BEFORE MANUAL INTEGRATION







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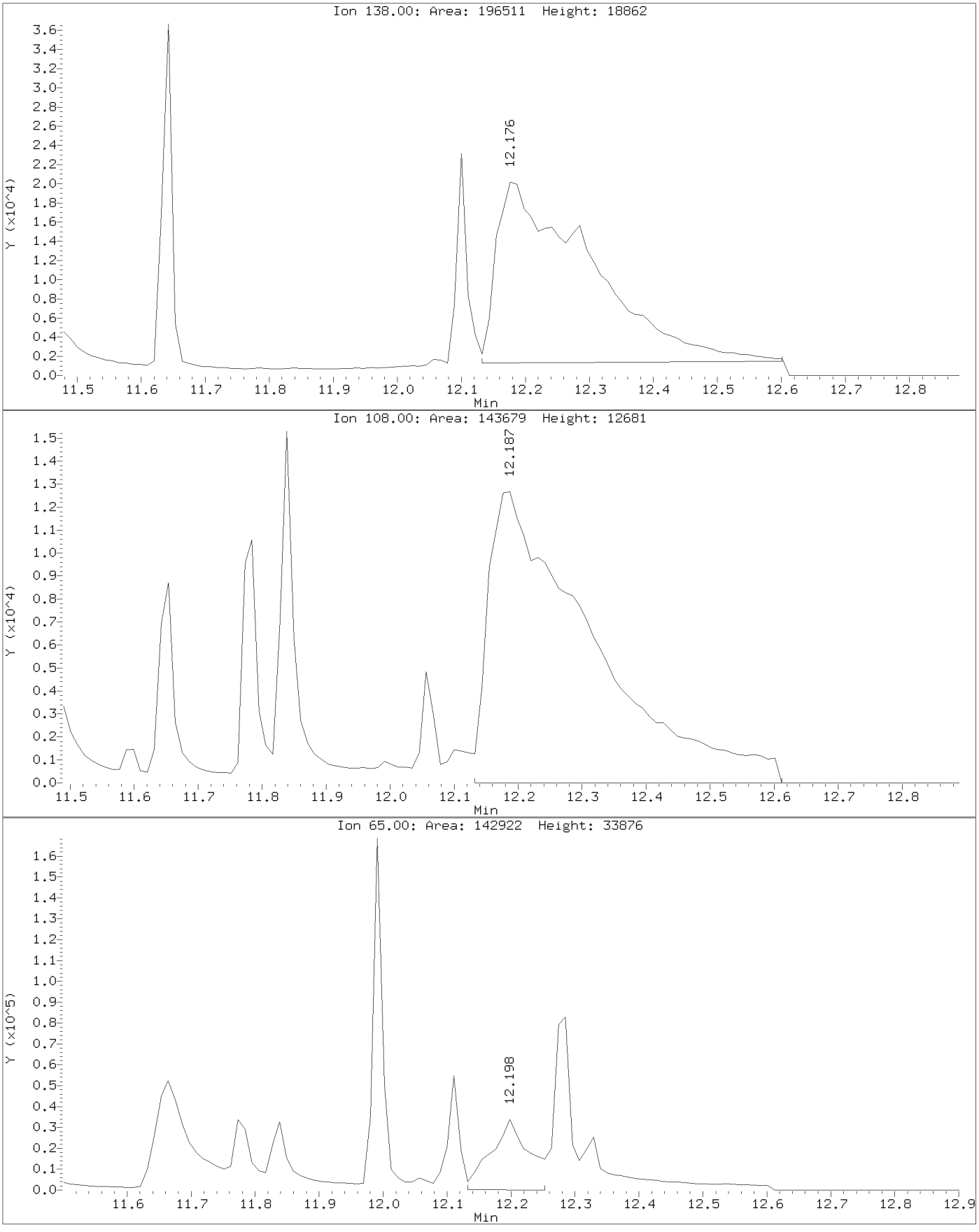
Client Sample ID:

Compound: 4-Nitroaniline
CAS Number: 100-01-6

AFTER MANUAL INTEGRATION



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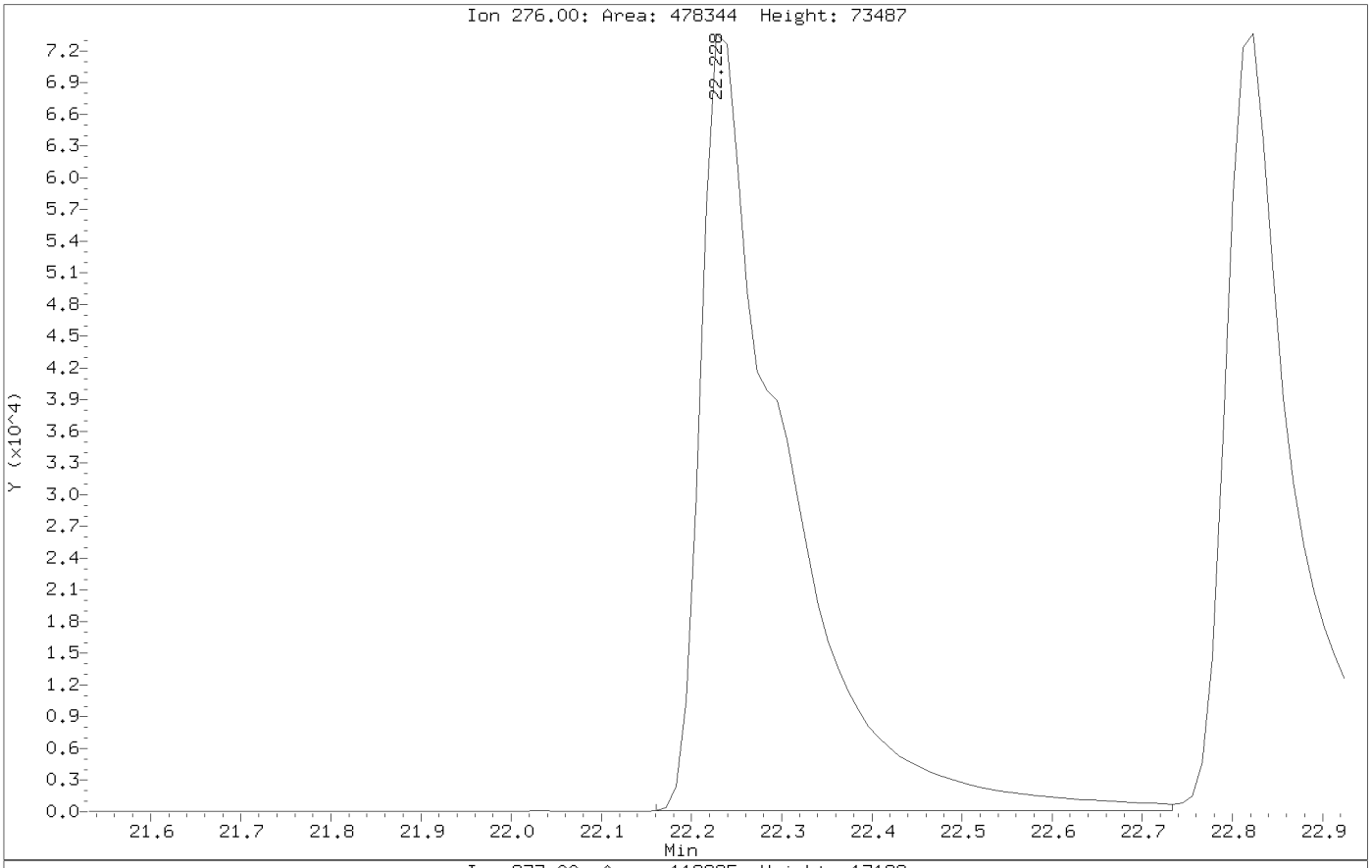
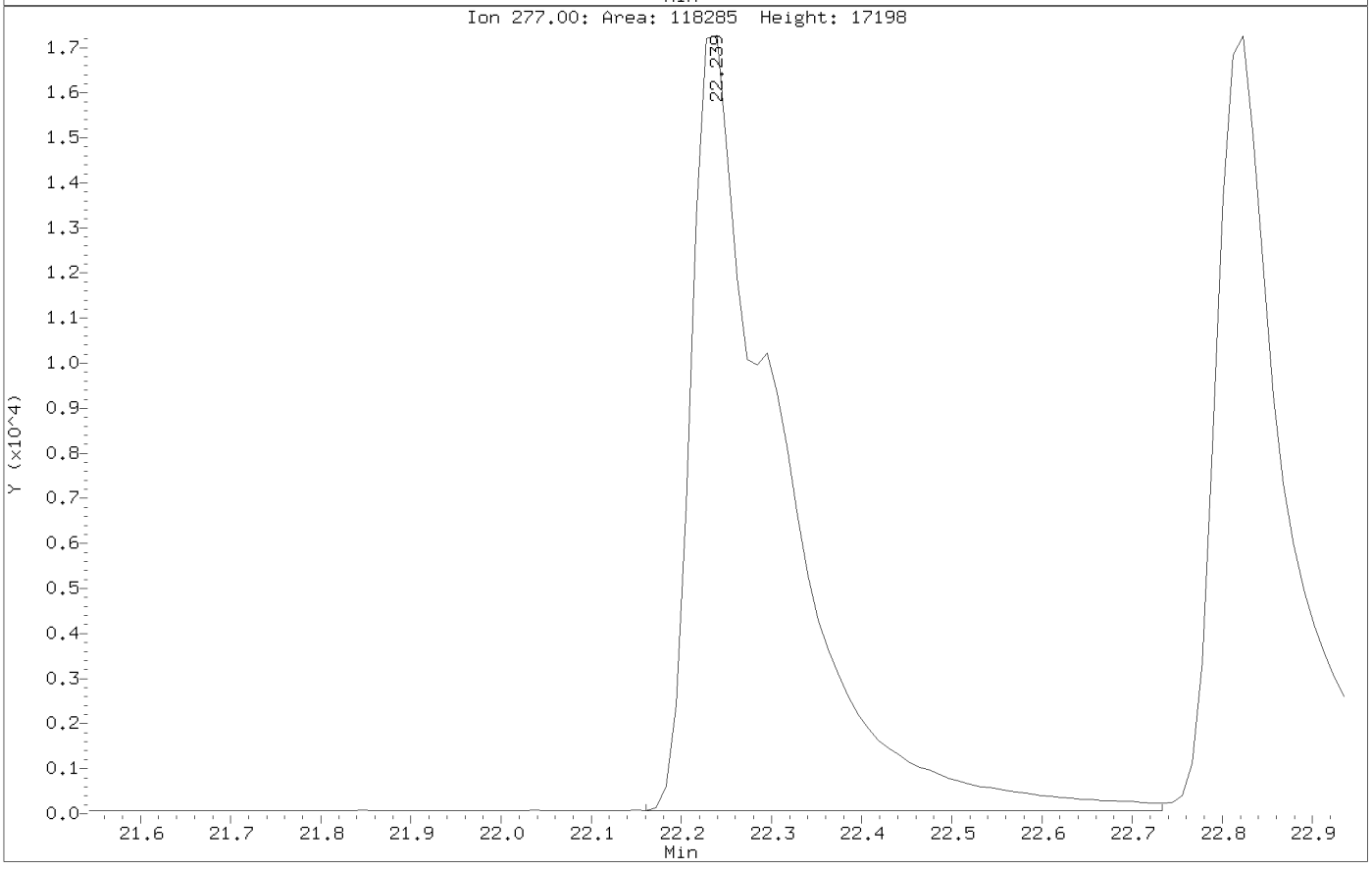
Injection Date: 28-JUL-2021 17:52
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

BEFORE MANUAL INTEGRATION





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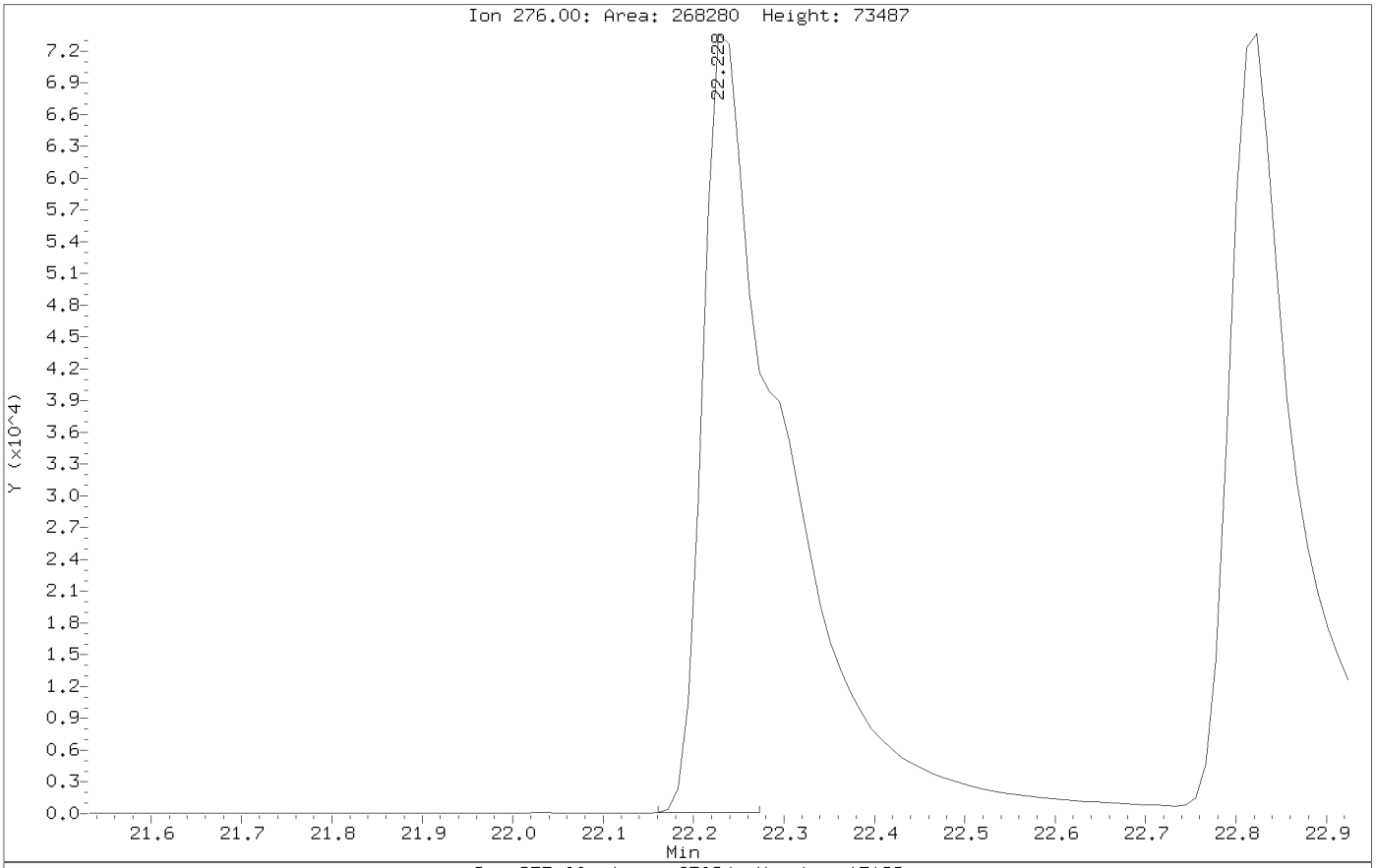
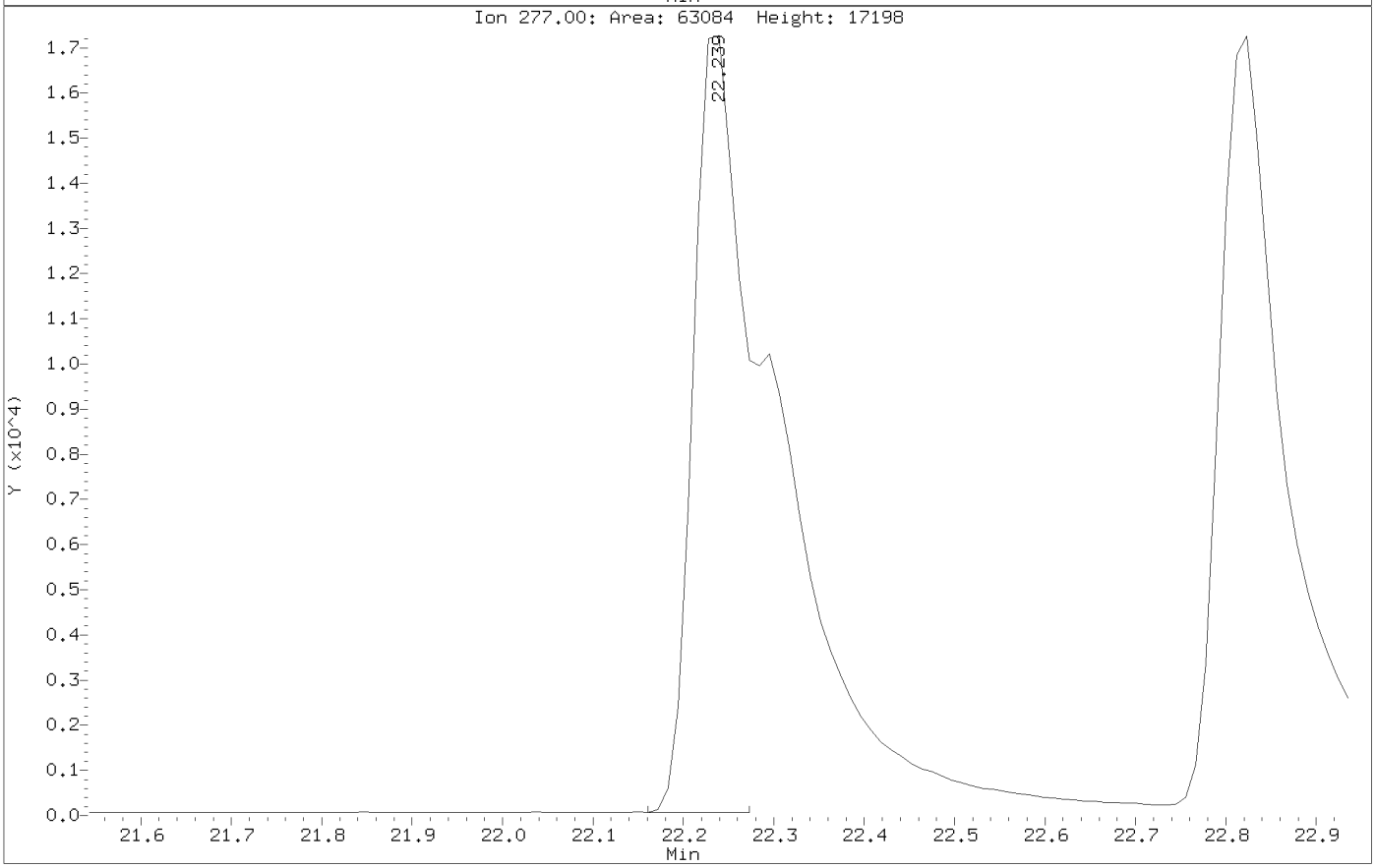
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

AFTER MANUAL INTEGRATION





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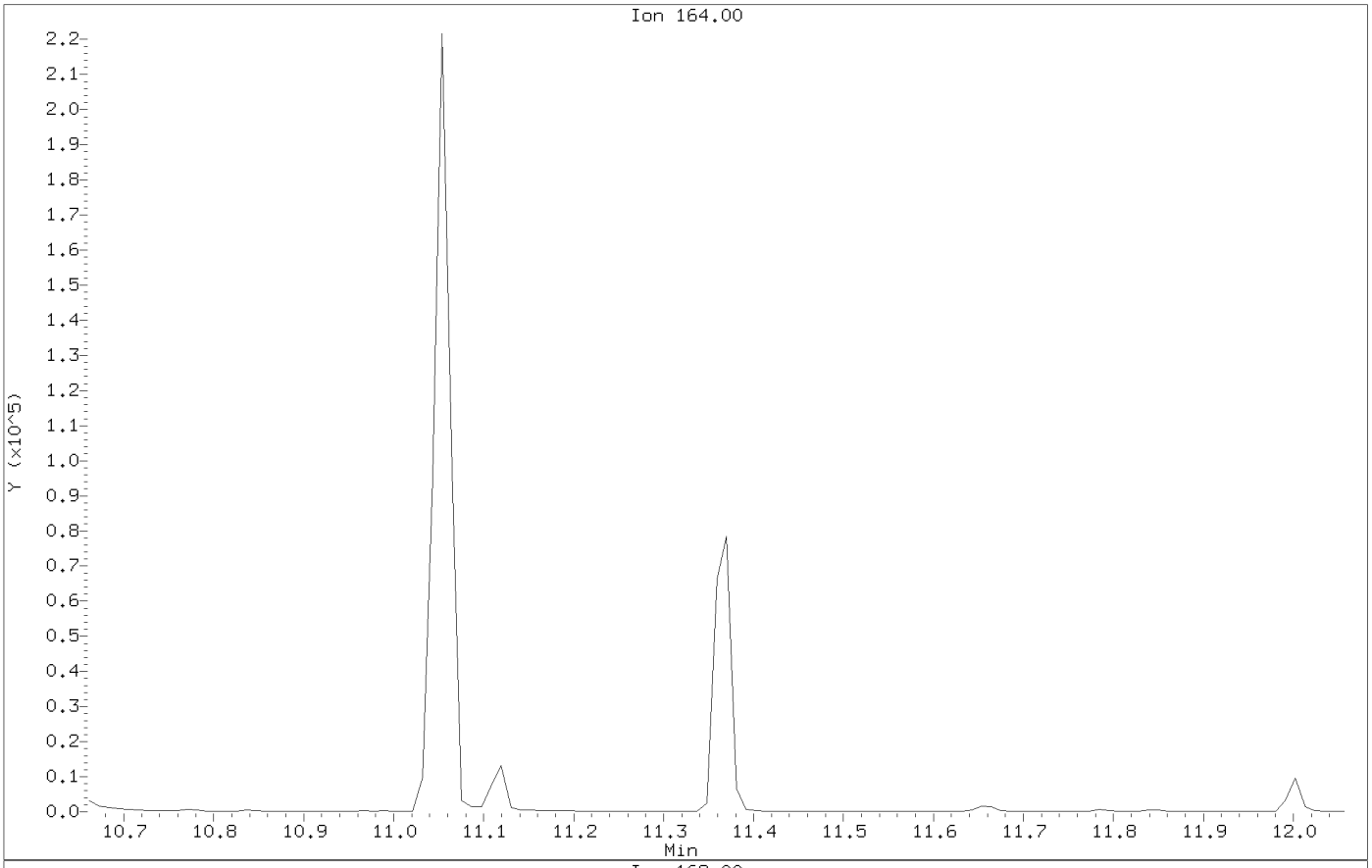
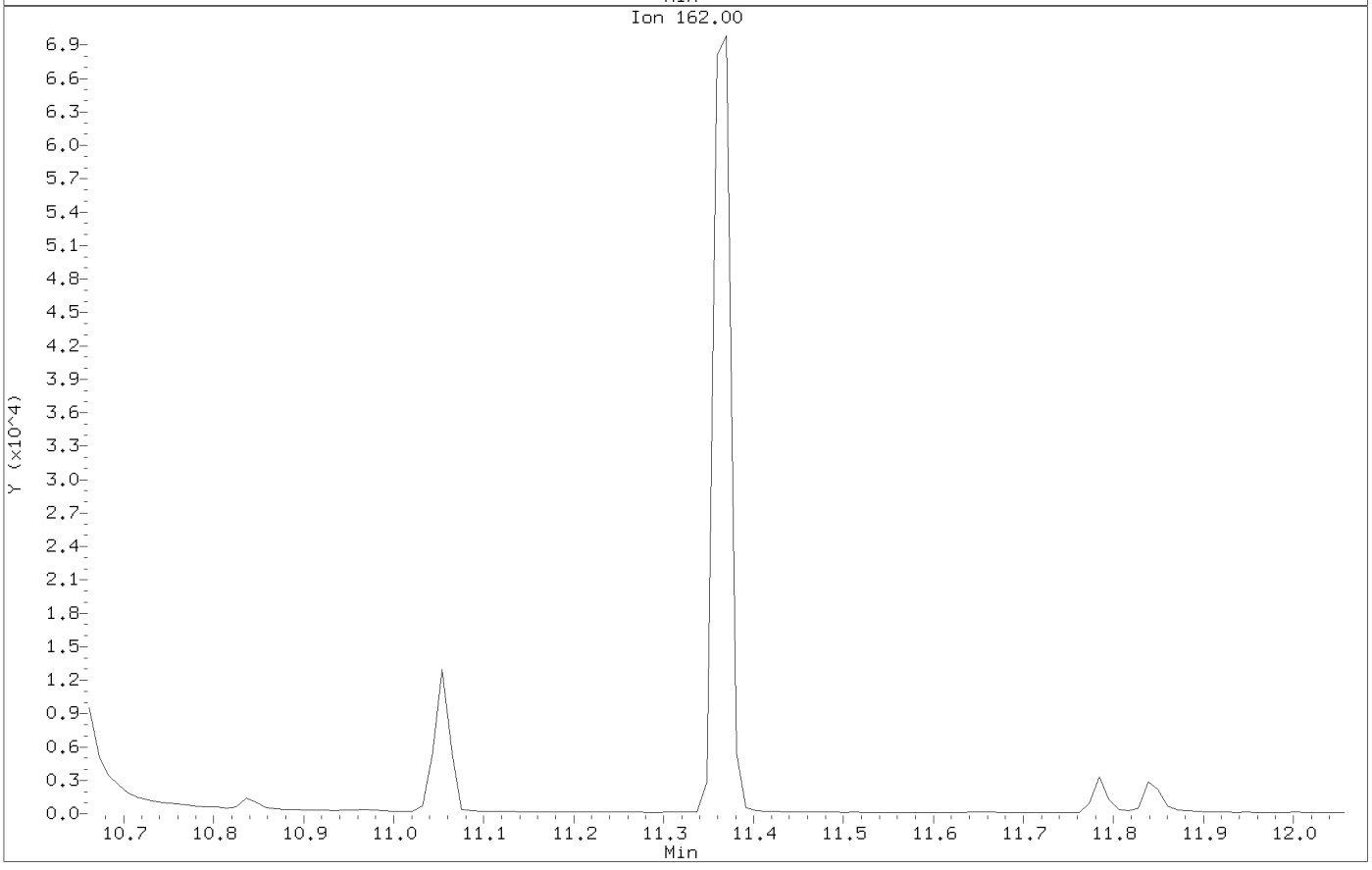
Injection Date: 28-JUL-2021 18:27
Instrument: gcms-n.i
Client Sample ID:

Compound: Acenaphthene-D10
CAS Number: 15067-26-2

BEFORE MANUAL INTEGRATION





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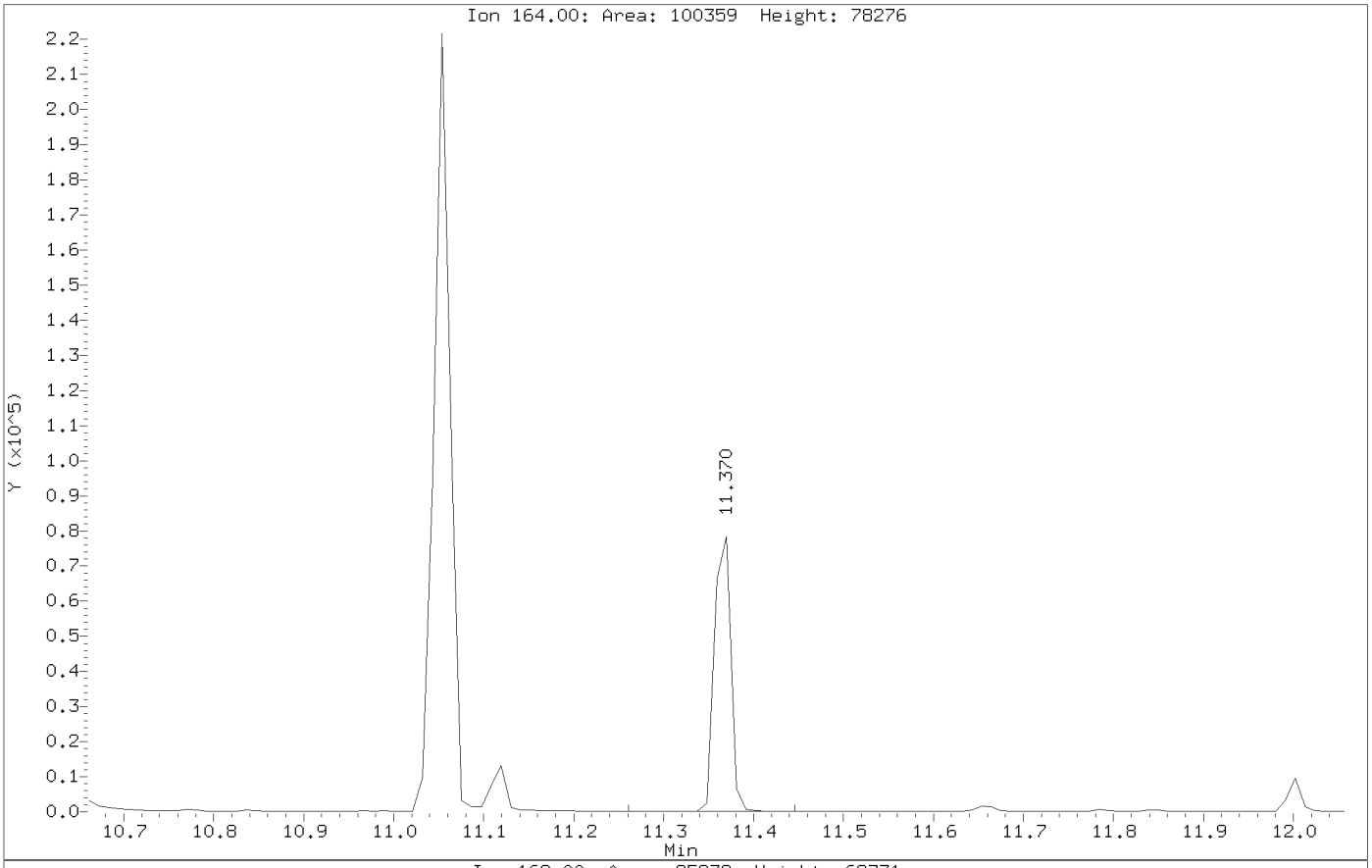
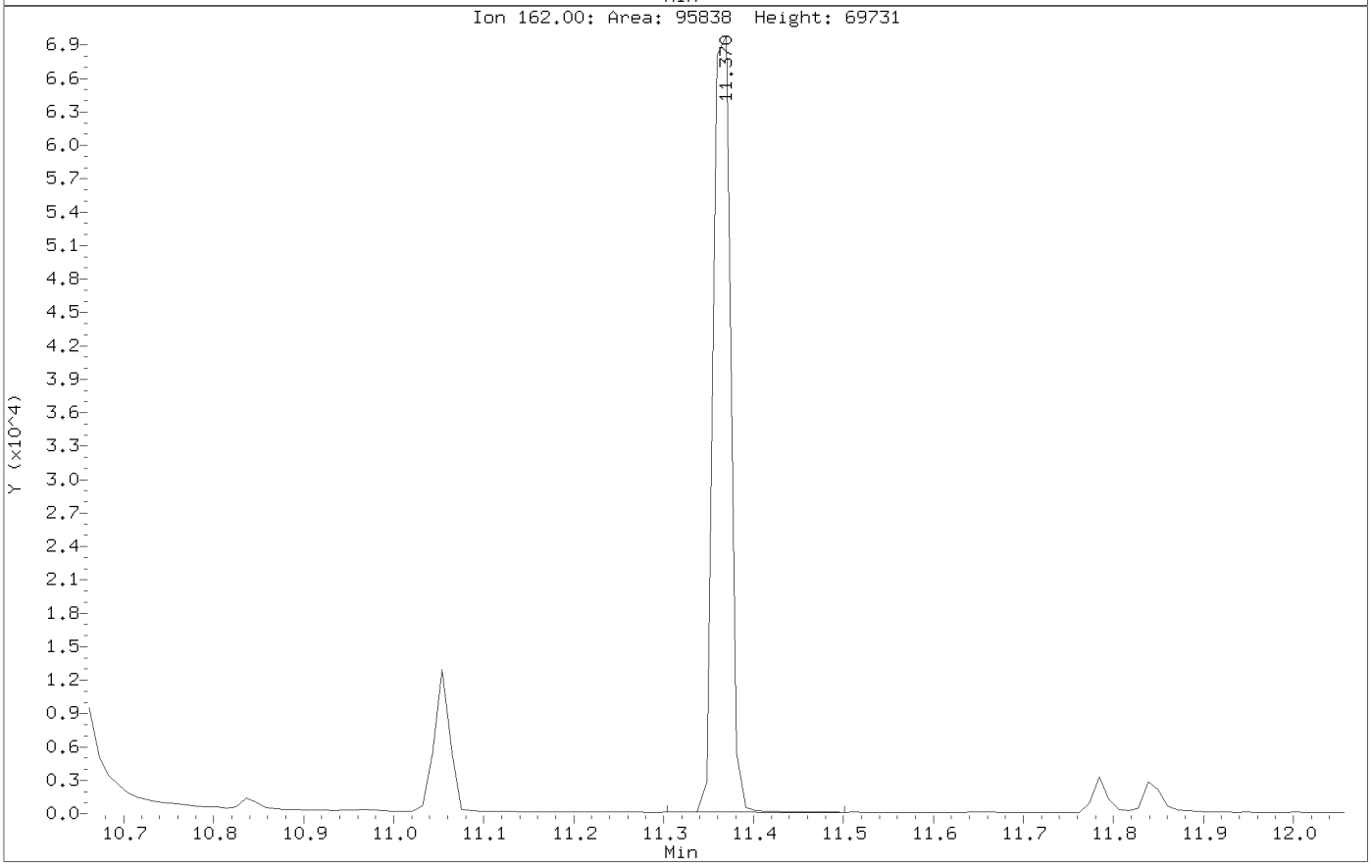
Compound: Acenaphthene-D10
CAS Number: 15067-26-2

AFTER MANUAL INTEGRATION





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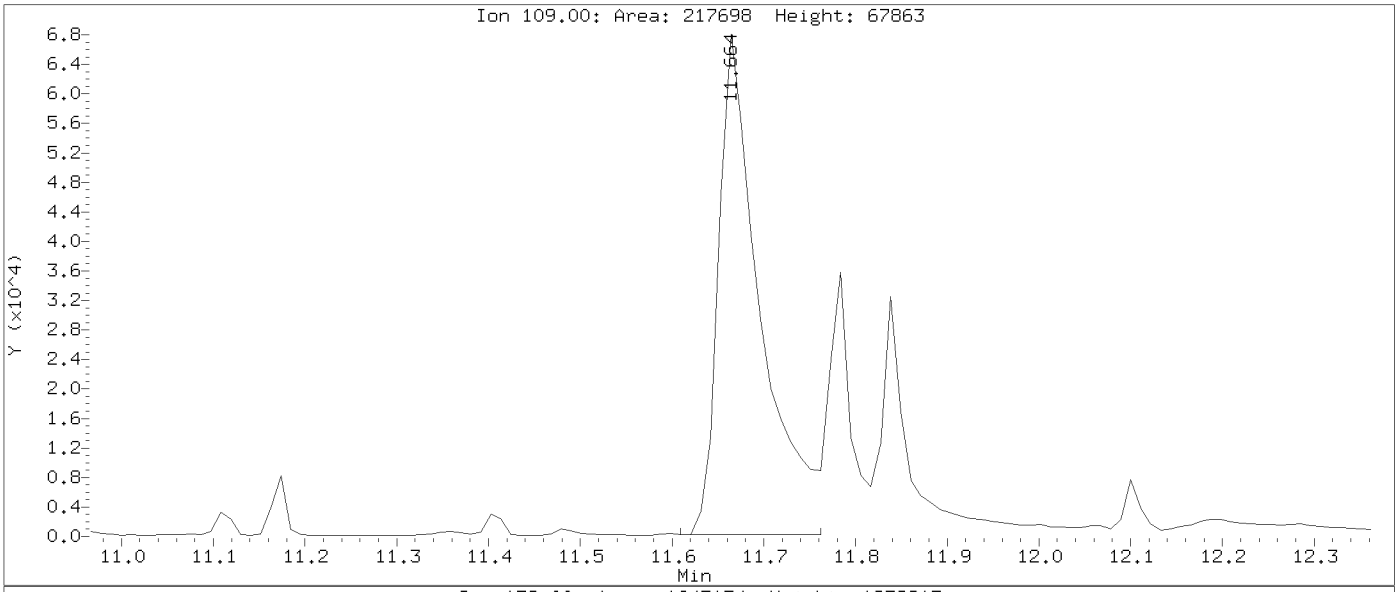
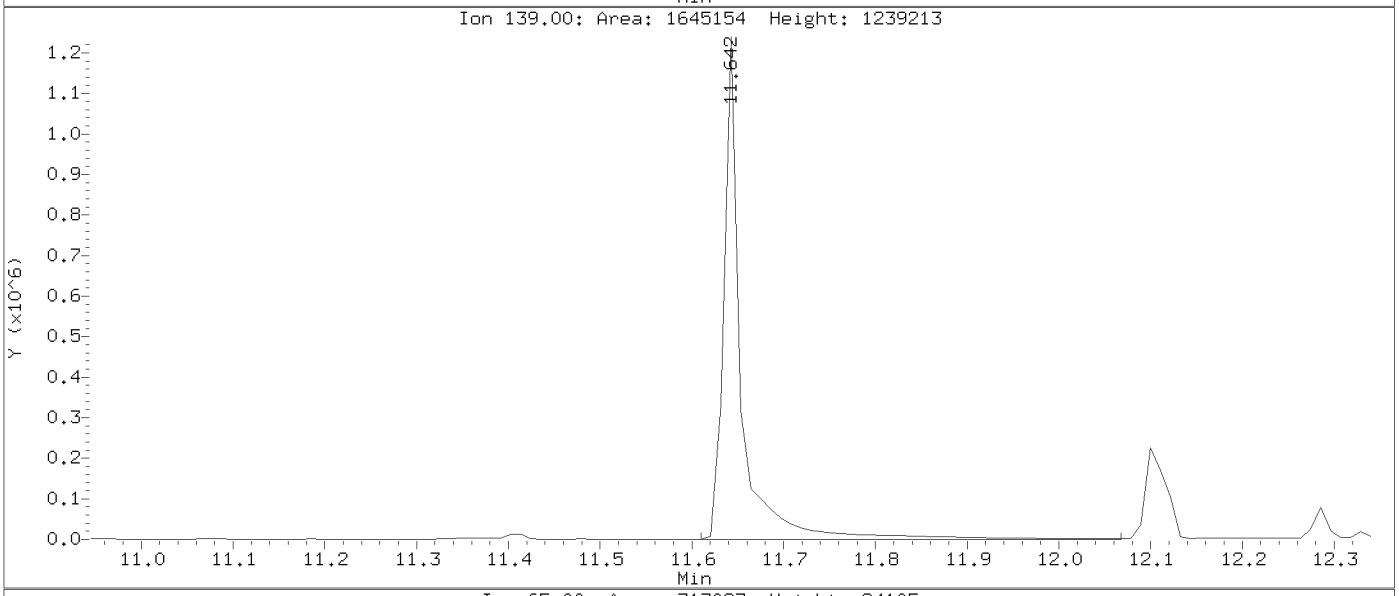
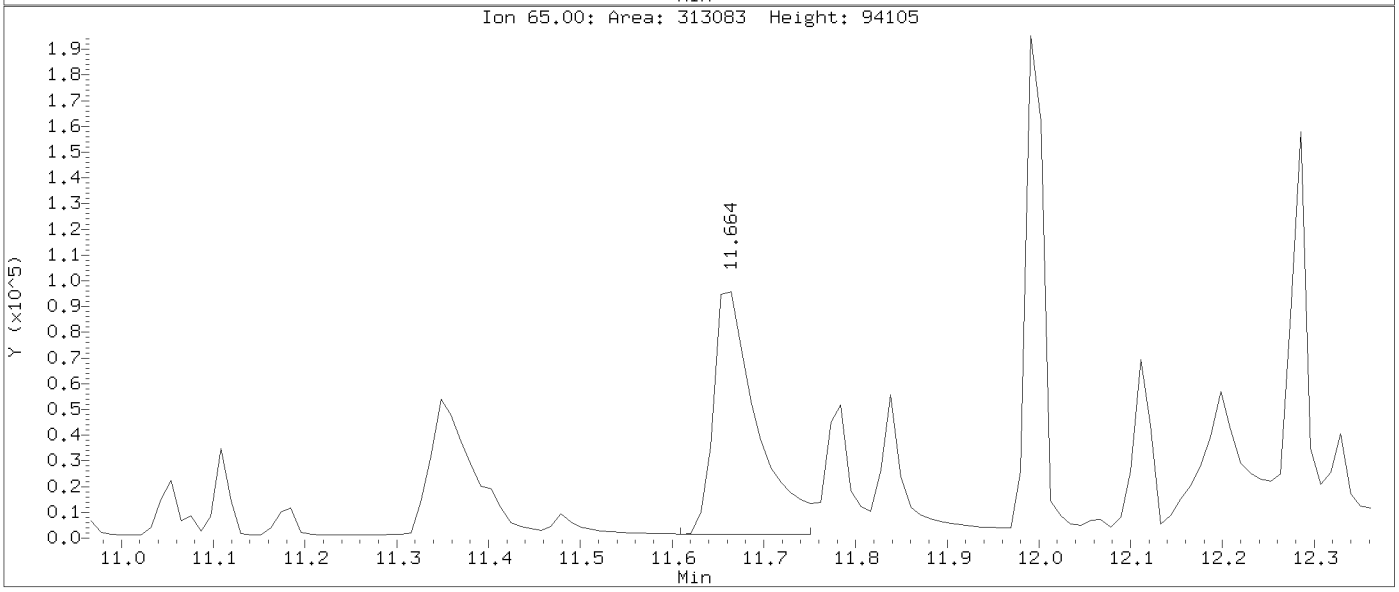
Injection Date: 28-JUL-2021 18:27
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitrophenol
CAS Number: 100-02-7

BEFORE MANUAL INTEGRATION







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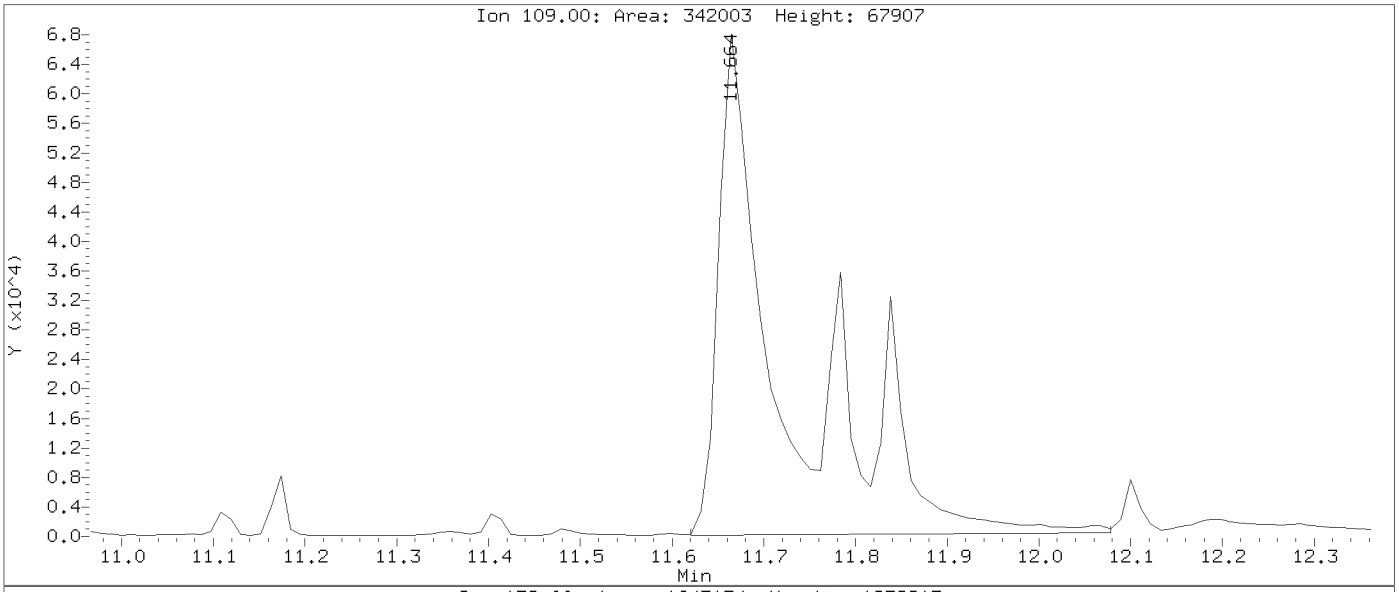
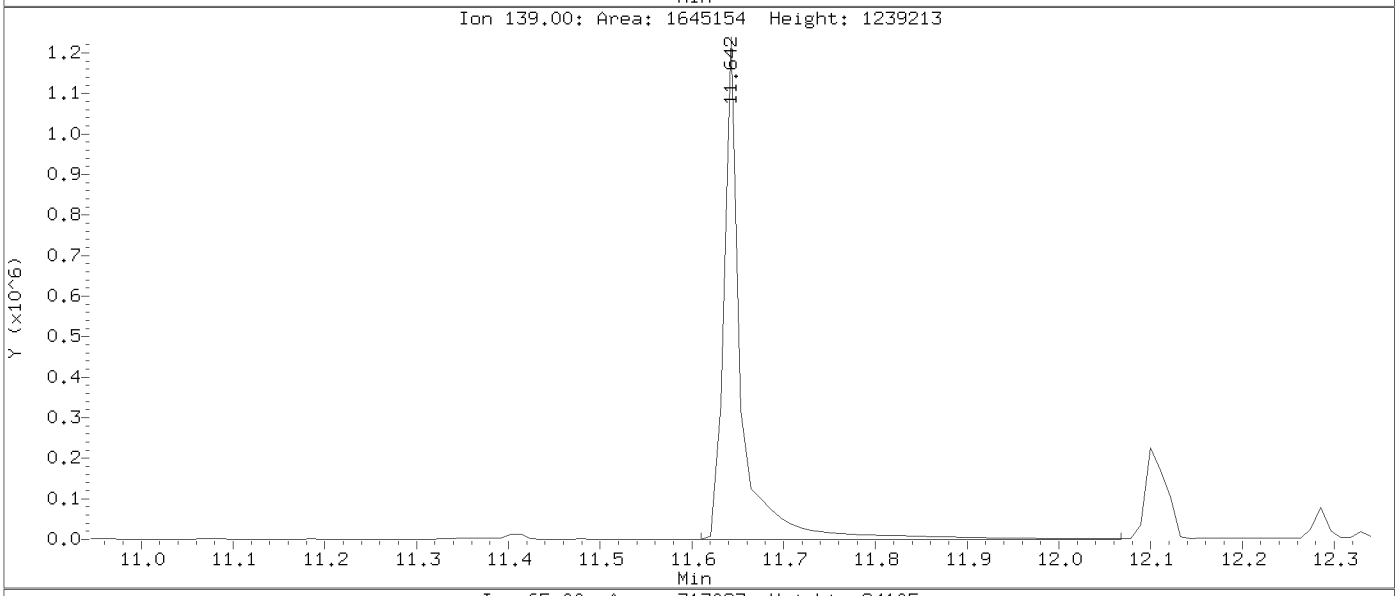
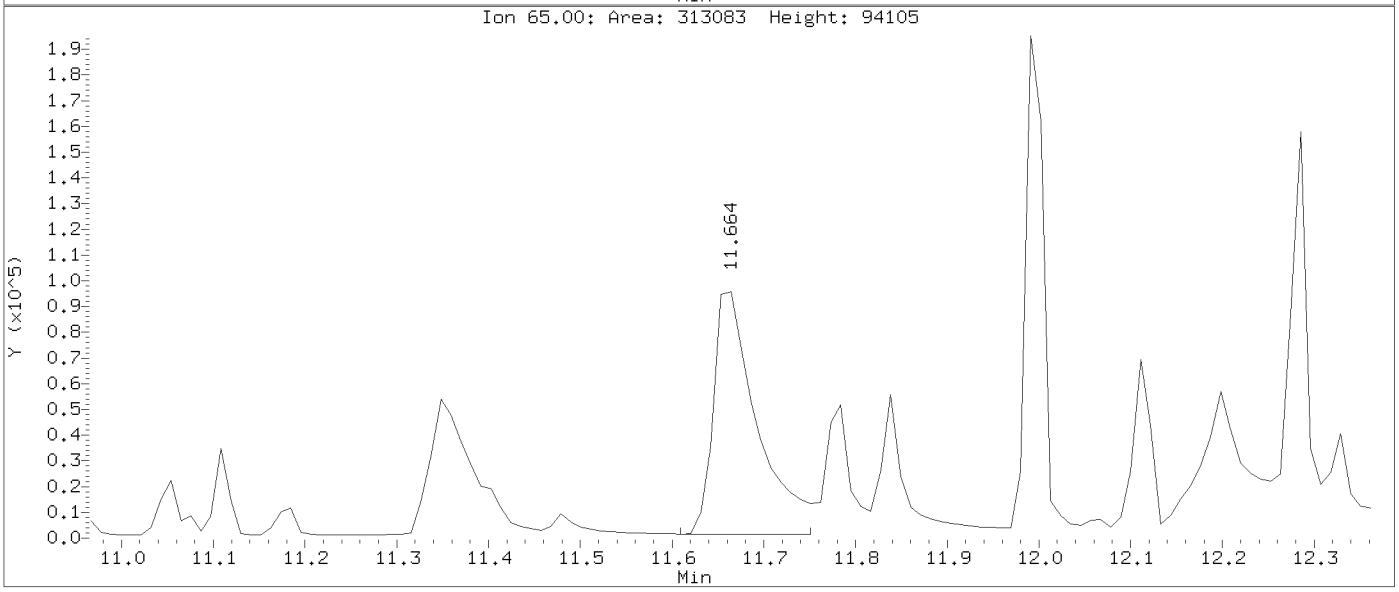
Client Sample ID:

Compound: 4-Nitrophenol
CAS Number: 100-02-7

AFTER MANUAL INTEGRATION







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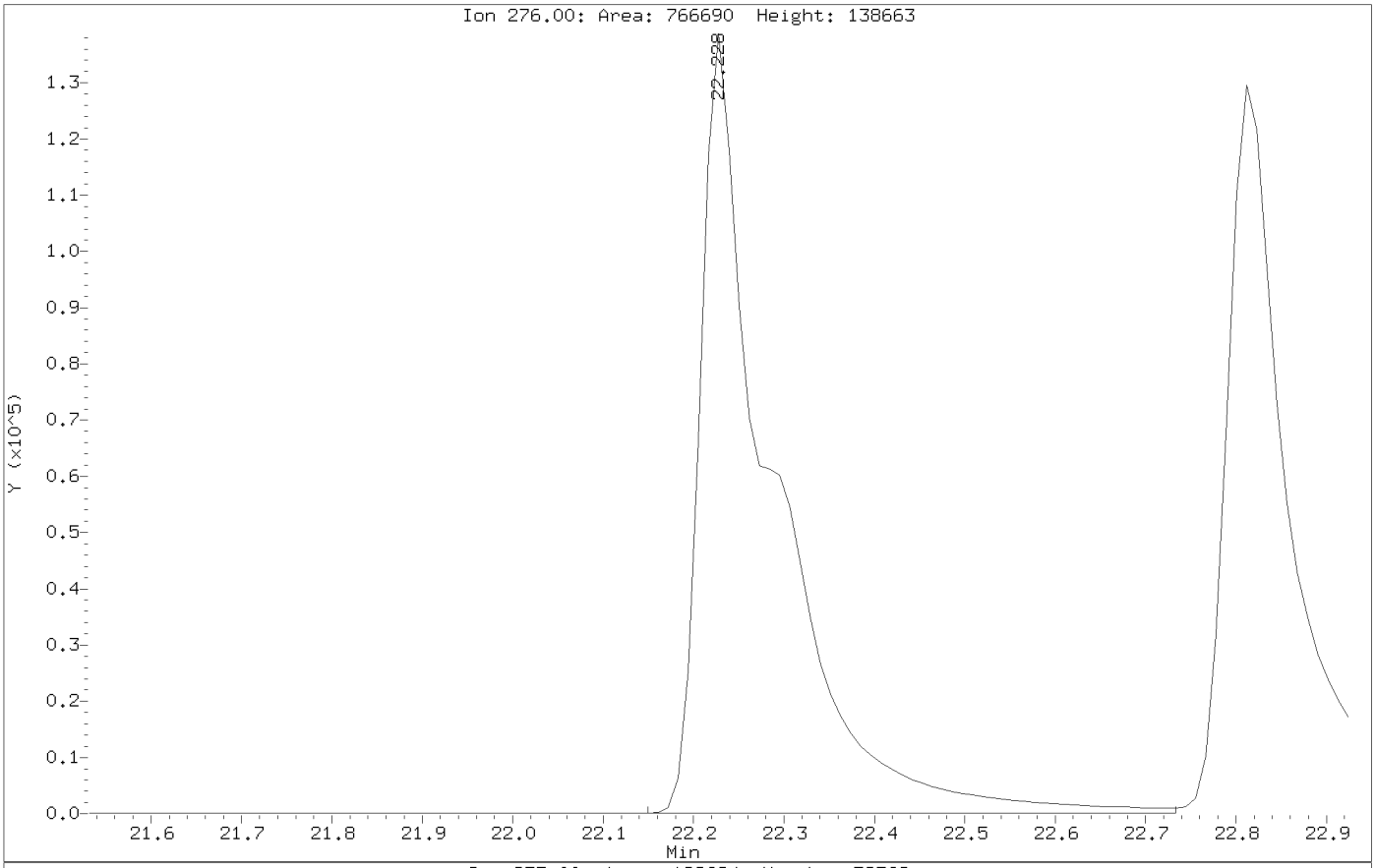
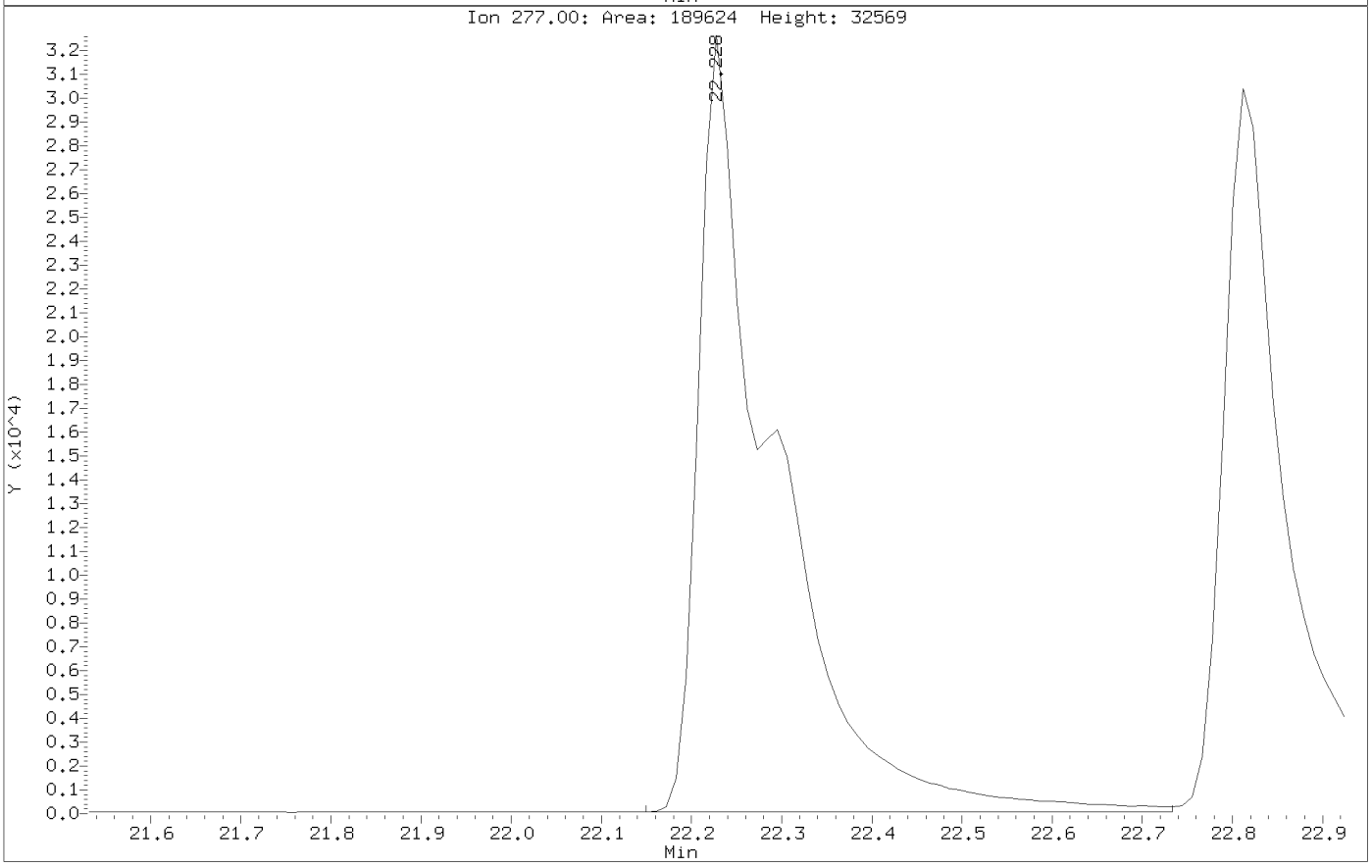
Injection Date: 28-JUL-2021 18:27
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

BEFORE MANUAL INTEGRATION





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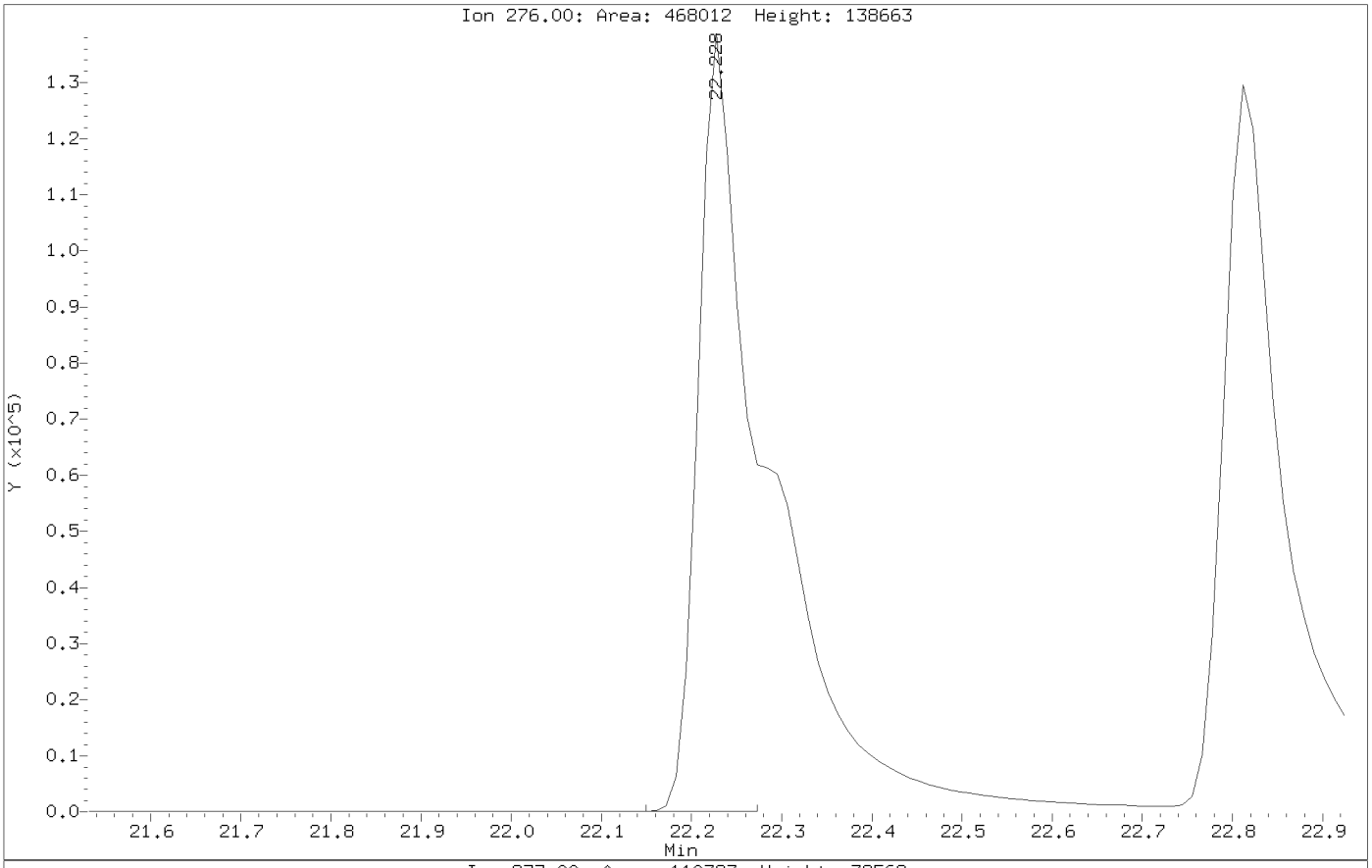
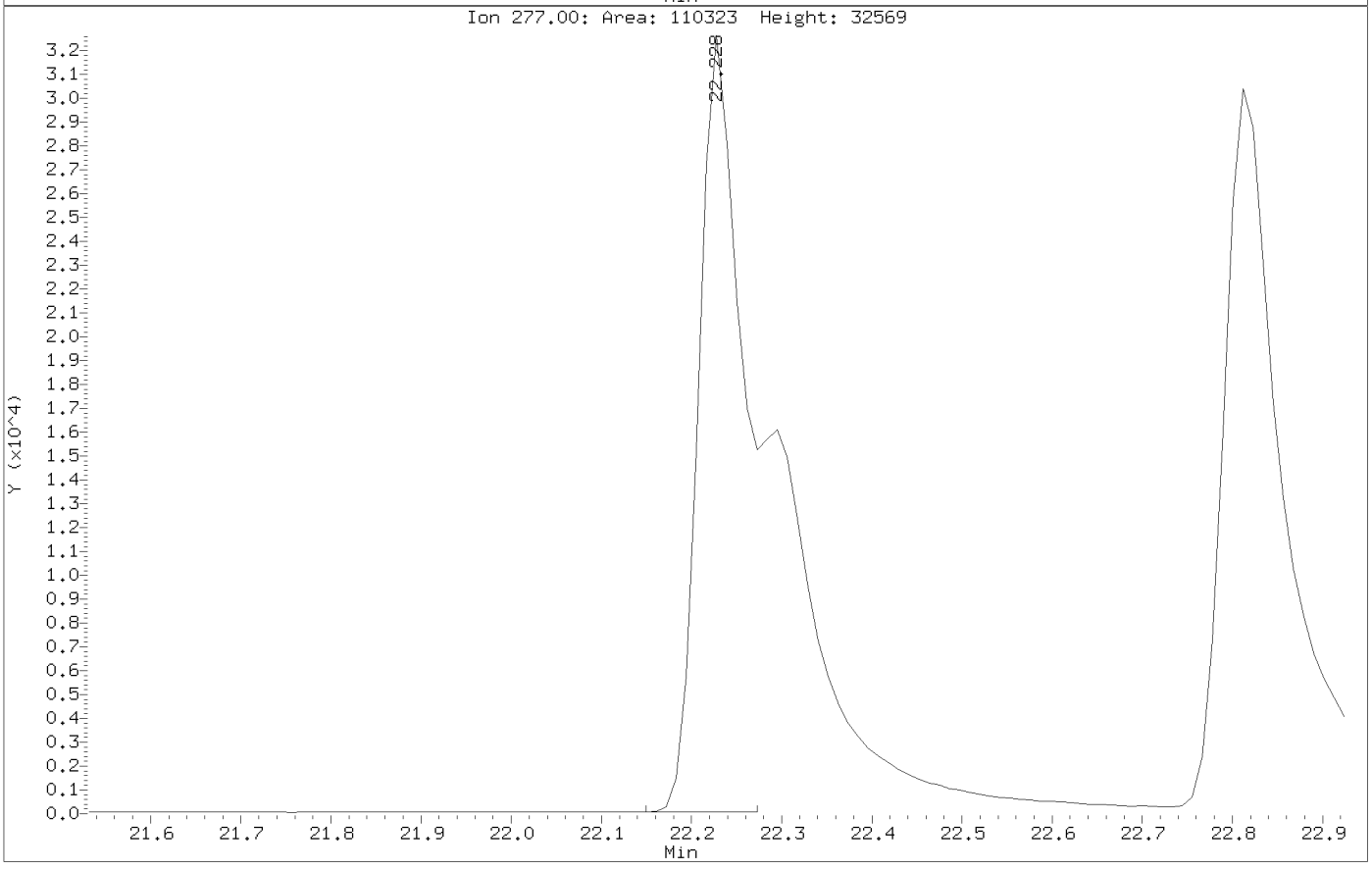
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

AFTER MANUAL INTEGRATION





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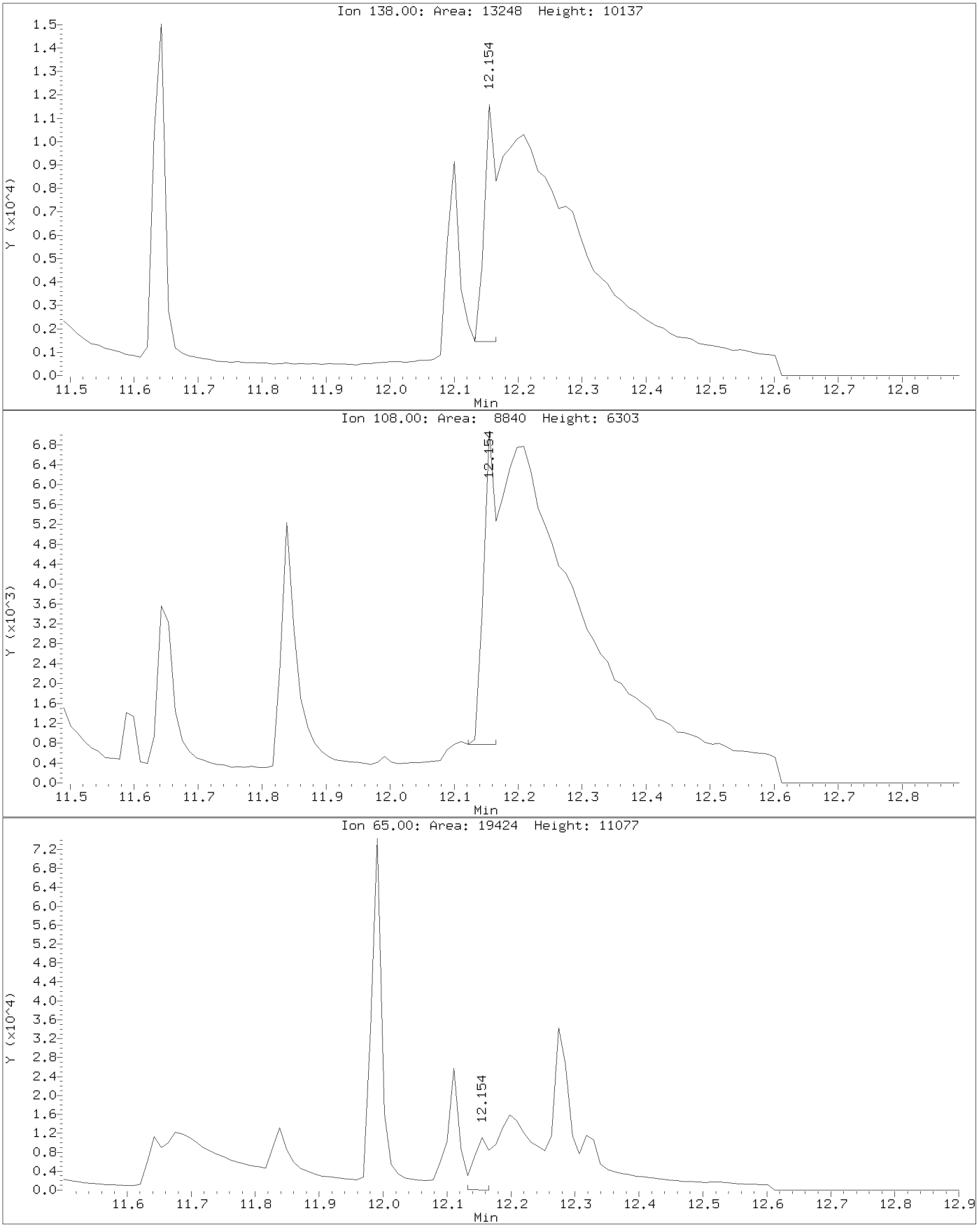
Injection Date: 28-JUL-2021 19:02
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitroaniline
CAS Number: 100-01-6

BEFORE MANUAL INTEGRATION



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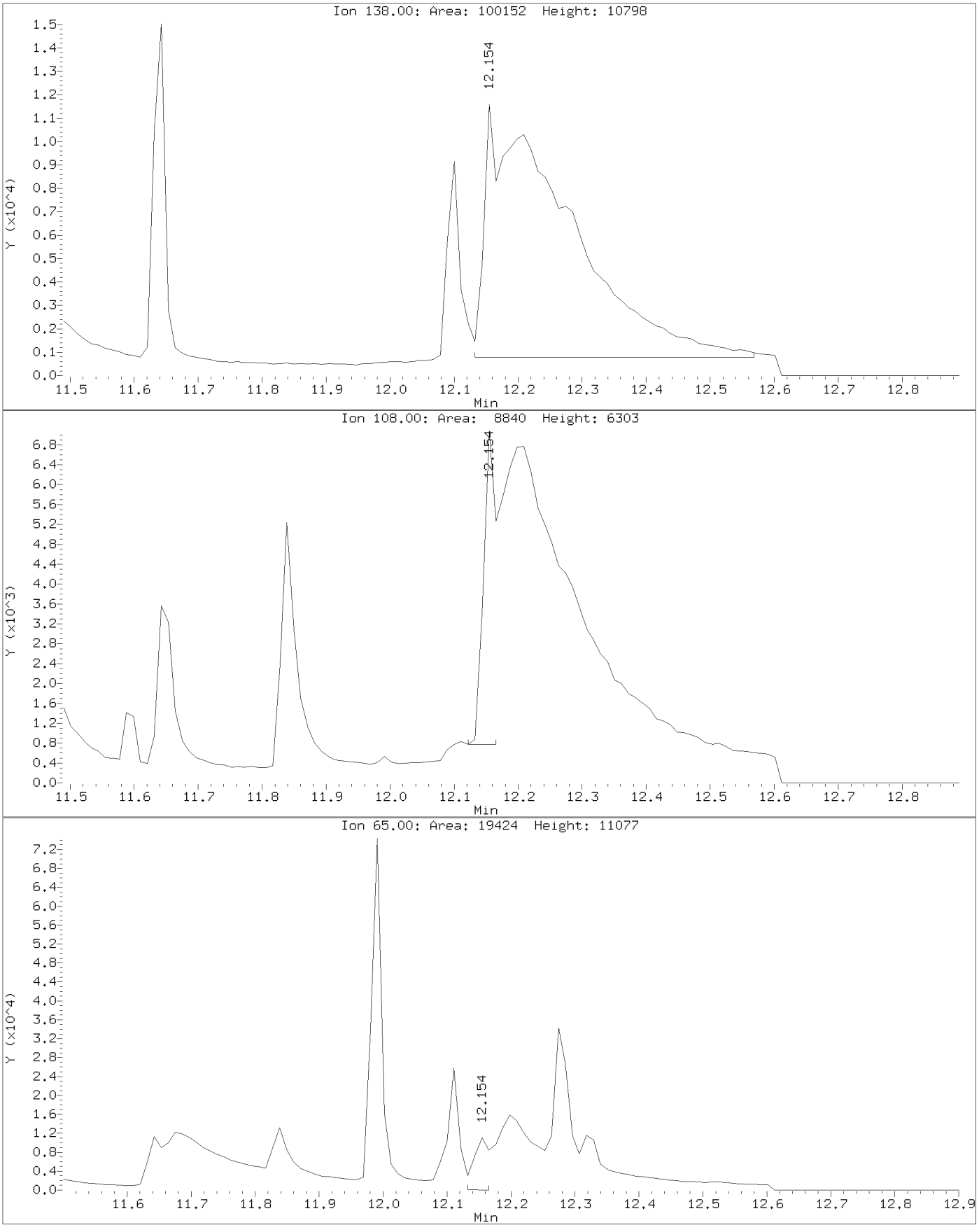
Injection Date: 28-JUL-2021 19:02
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitroaniline
CAS Number: 100-01-6

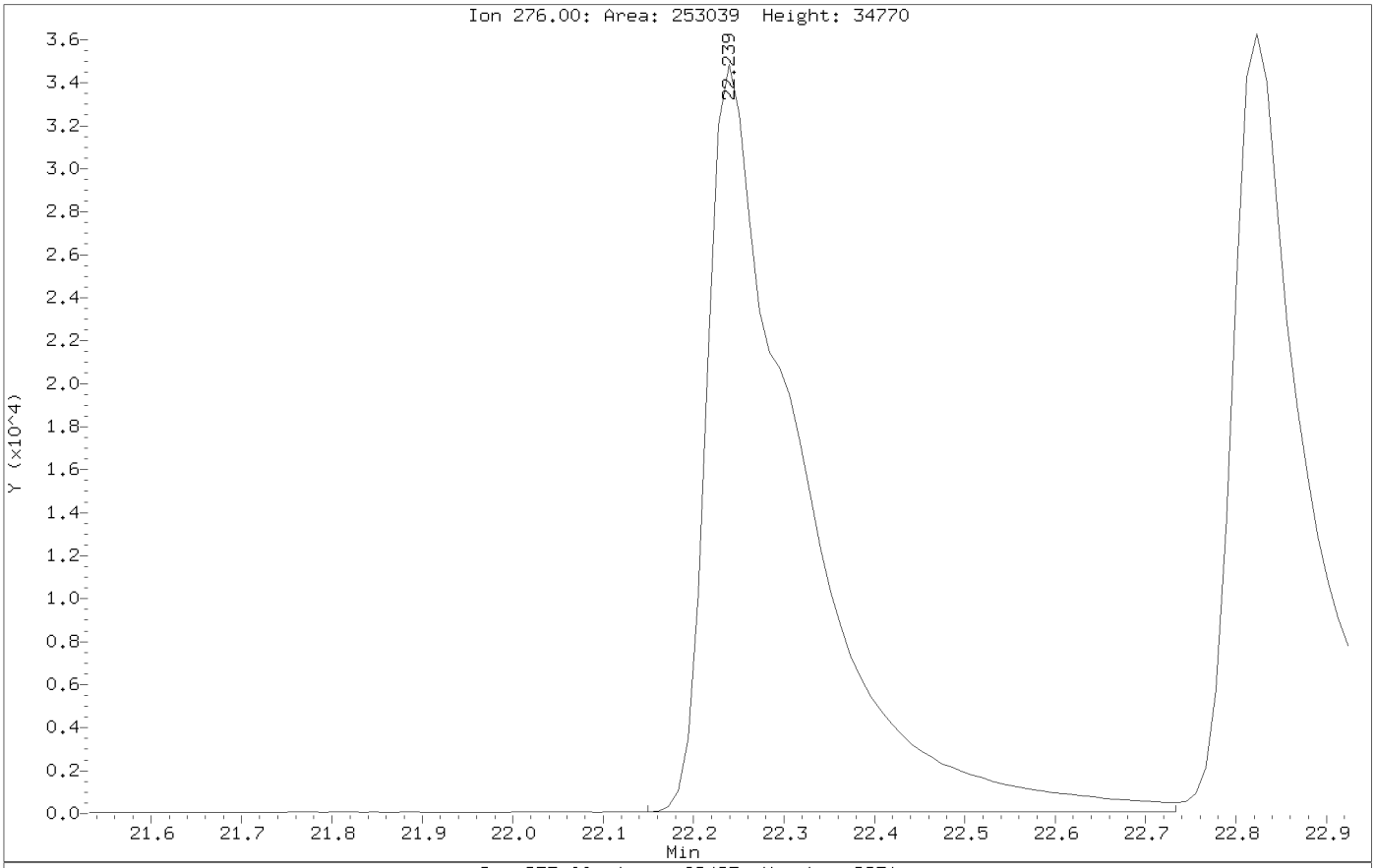
AFTER MANUAL INTEGRATION

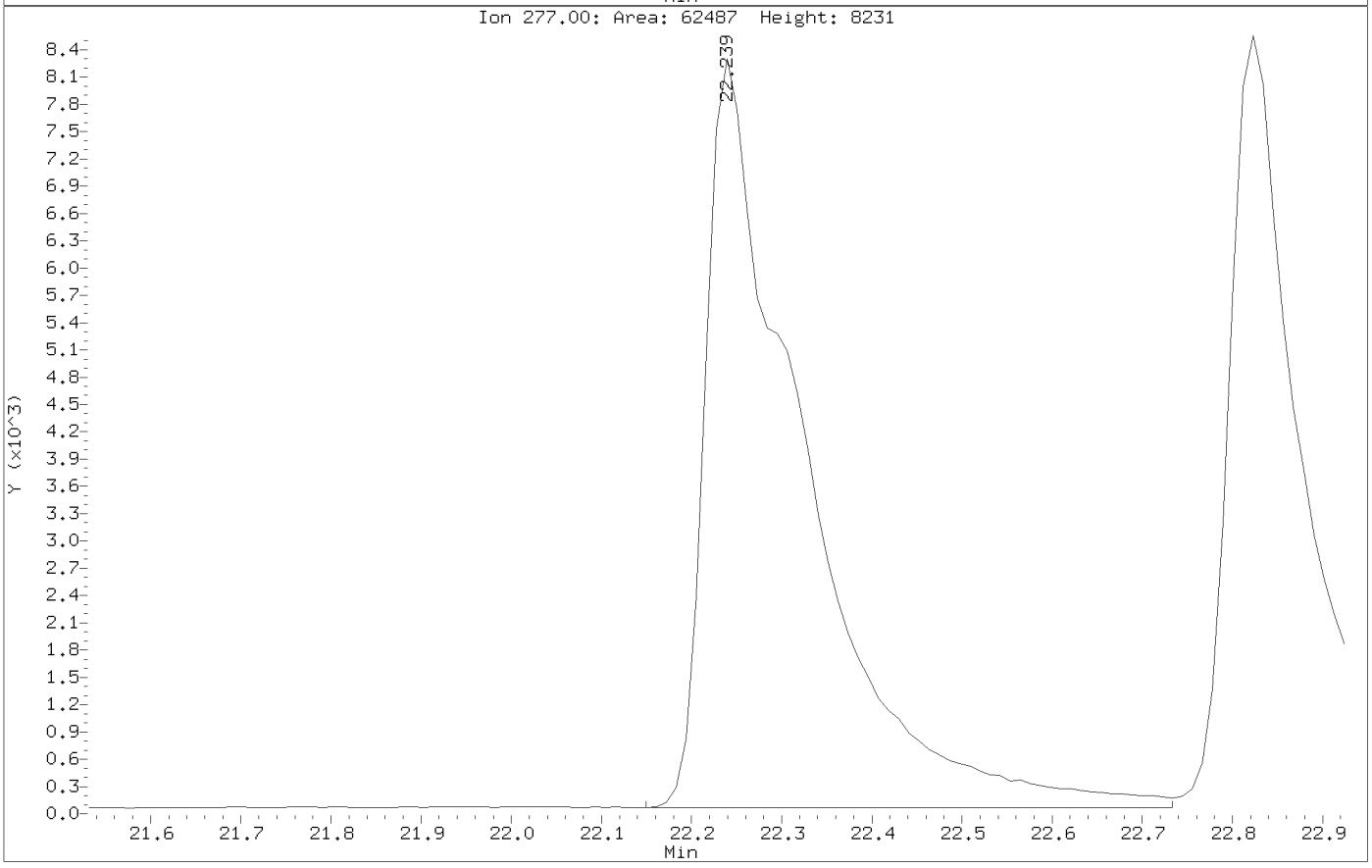


BEFORE MANUAL INTEGRATION

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3624.D
Injection Date: 28-JUL-2021 19:02
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5





AFTER MANUAL INTEGRATION

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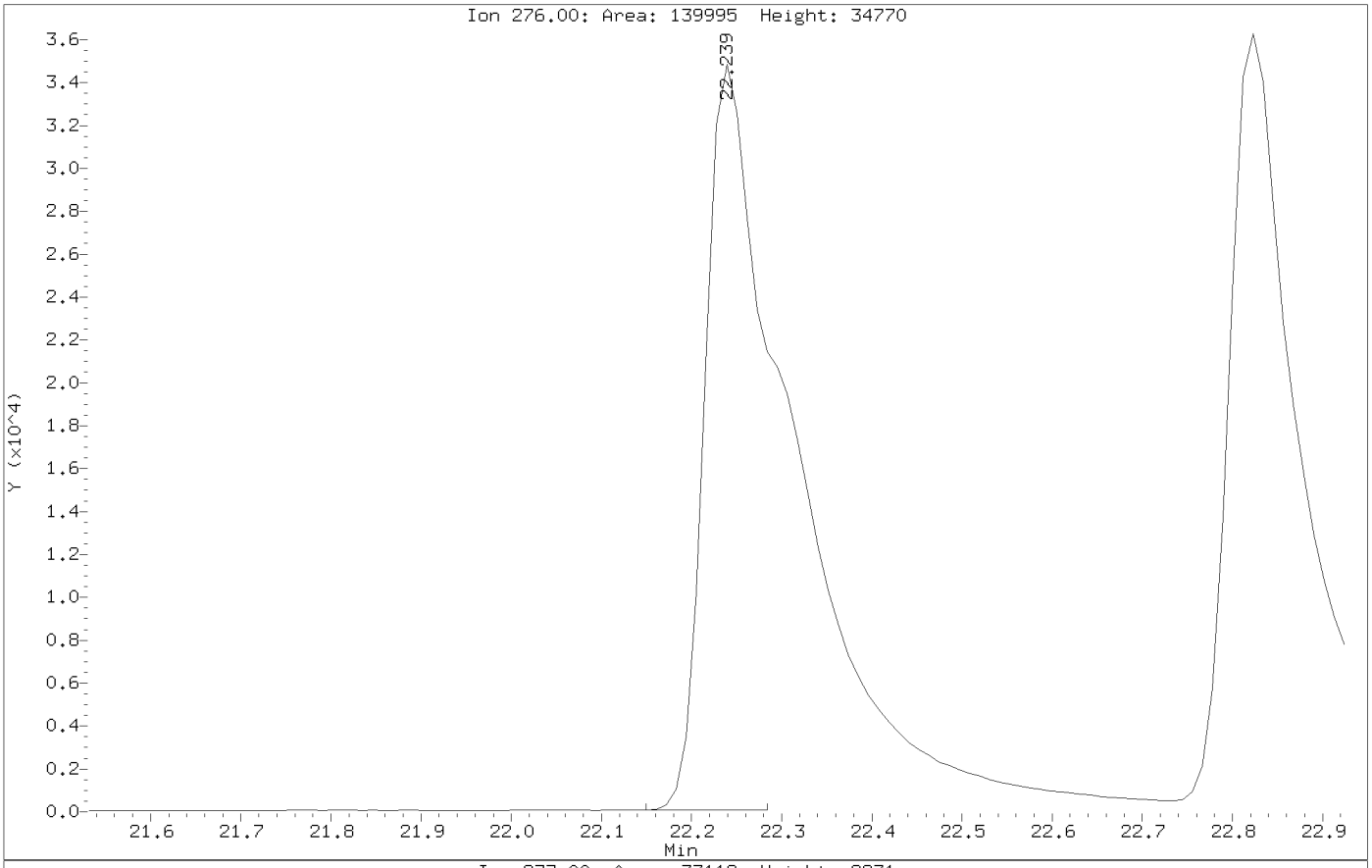
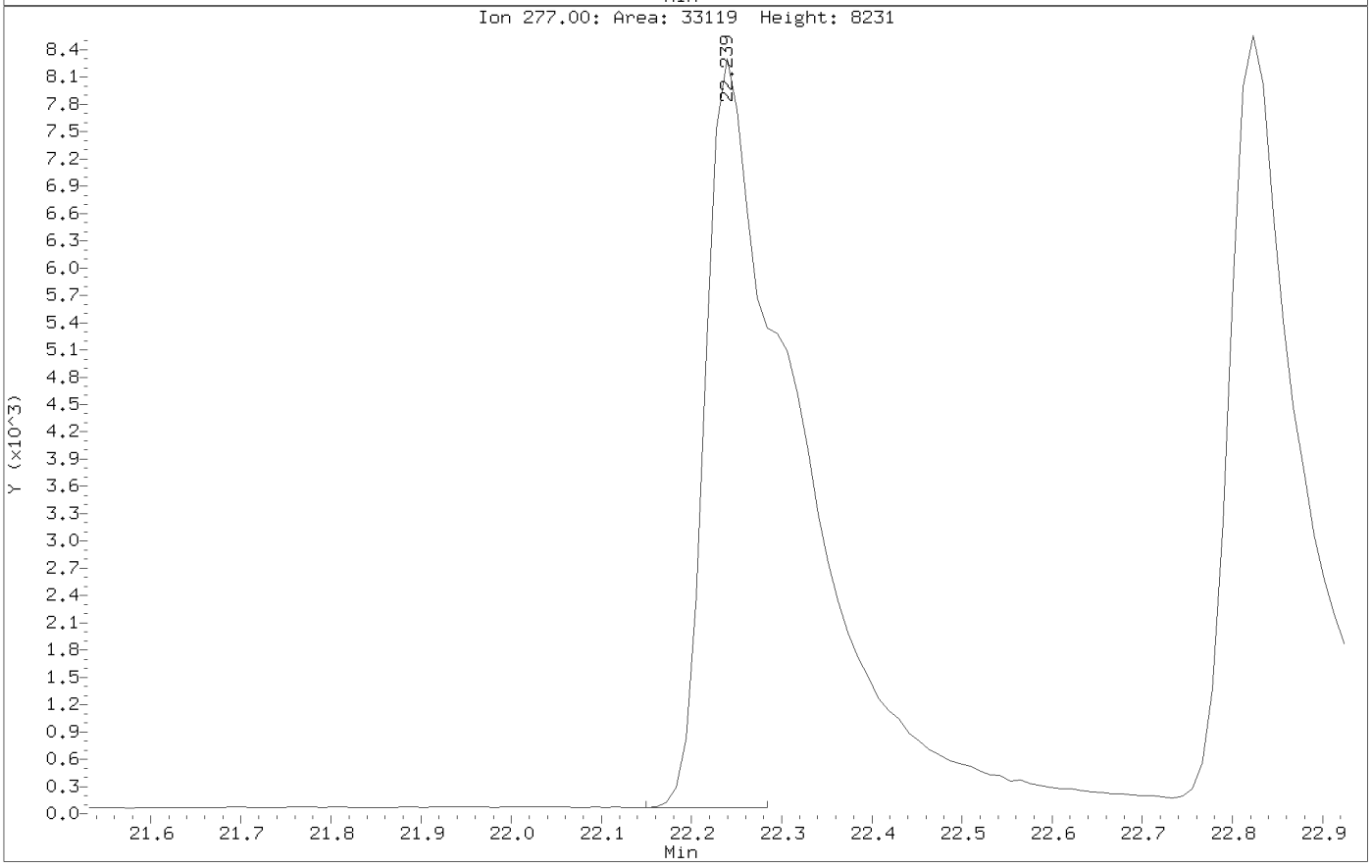
Injection Date: 28-JUL-2021 19:02
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5





Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site **SDG:** SO4723
Lab ID : WG303306-9 **Analytical Date:** 07/29/21 03:02
Lab File ID : N3638.D **Instrument ID:** GCMS-N
Initial Calibration Date(s): 07/28/21 15:35 07/28/21 18:27 **Column ID:**

	Compound	$\overline{RRF}$/Amount	RF2	CCAL RRF2	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
28	Naphthalene	1.03736	1.07687	1.07687	0.010	3.80875	20.00000	Averaged	
34	2-Methylnaphthalene	0.75682	0.72211	0.72211	0.010	-4.58612	20.00000	Averaged	
35	1-Methylnaphthalene	0.68030	0.68922	0.68922	0.010	1.31101	20.00000	Averaged	
46	Acenaphthylene	2.06533	2.11421	2.11421	0.010	2.36689	20.00000	Averaged	
49	Acenaphthene	1.26345	1.27657	1.27657	0.010	1.03770	20.00000	Averaged	
57	Fluorene	1.33864	1.37718	1.37718	0.010	2.87937	20.00000	Averaged	
67	Phenanthrene	1.10372	1.13848	1.13848	0.010	3.14963	20.00000	Averaged	
68	Anthracene	1.30278	1.25579	1.25579	0.010	-3.60714	20.00000	Averaged	
72	Fluoranthene	1.06273	1.12250	1.12250	0.010	5.62431	20.00000	Averaged	
74	Pyrene	2.40840	2.27965	2.27965	0.010	-5.34599	20.00000	Averaged	
77	Benzo(a)anthracene	1.26478	1.20807	1.20807	0.010	-4.48363	20.00000	Averaged	
79	Chrysene	1.58606	1.66875	1.66875	0.010	5.21367	20.00000	Averaged	
82	Benzo(b)fluoranthene	1.19415	1.18814	1.18814	0.010	-0.50367	20.00000	Averaged	
83	Benzo(k)fluoranthene	1.93405	2.00664	2.00664	0.010	3.75319	20.00000	Averaged	
84	Benzo(a)pyrene	1.19493	1.20562	1.20562	0.010	0.89457	20.00000	Averaged	
86	Indeno(1,2,3-cd)pyrene	2.00000	1.42495	0.22400	0.010	-28.75233	20.00000	Linear	*
87	Dibenzo(a,h)anthracene	0.63876	0.53823	0.53823	0.010	-15.73916	20.00000	Averaged	
88	Benzo(g,h,i)perylene	0.81153	0.70160	0.70160	0.010	-13.54583	20.00000	Averaged	
33	2-Methylnaphthalene-D10	0.53225	0.57902	0.57902	0.010	8.78768	20.00000	Averaged	
56	Fluorene-D10	0.94012	0.94792	0.94792	0.010	0.82982	20.00000	Averaged	
73	Pyrene-D10	1.51629	1.45352	1.45352	0.010	-4.14032	20.00000	Averaged	

*** = Compound out of QC criteria**

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://katahdinlab.com
sales@katahdinlab.com

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3638.D
Report Date: 29-Jul-2021 15:15

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3638.D
Lab Smp Id: WG303306-9
Inj Date : 29-JUL-2021 03:02
Operator : JCG   Inst ID: gcms-n.i
Smp Info : WG303306-9,SO4723
Misc Info : WG303306,WG303306,WG303306-4,SO4723-1
Comment   :
Method   : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 09:00 cgomez   Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27   Cal File: N3623.D
Als bottle: 22   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: sw8270sim+1mn.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	7.390	7.390	(1.000)	62005	0.80000	(a)	
*	27 Naphthalene-D8	136	9.022	9.022	(1.000)	217432	0.80000	(a)	
	28 Naphthalene	128	9.054	9.054	(1.004)	585367	2.00000	2.08	
$	33 2-Methylnaphthalene-D10	152	9.937	9.937	(1.101)	314746	2.00000	2.18	
	34 2-Methylnaphthalene	142	9.977	9.977	(1.106)	392524	2.00000	1.91	
	35 1-Methylnaphthalene	142	10.105	10.105	(1.120)	374646	2.00000	2.03	
	46 Acenaphthylene	152	11.173	11.173	(0.984)	621515	2.00000	2.05	
*	48 Acenaphthene-D10	164	11.359	11.369	(1.000)	117588	0.80000	(a)	
	49 Acenaphthene	153	11.402	11.413	(1.004)	375272	2.00000	2.02	
$	56 Fluorene-D10	174	12.056	12.067	(1.061)	278661	2.00000	2.02	
	57 Fluorene	166	12.100	12.110	(1.065)	404851	2.00000	2.06	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	178035	0.80000	(a)	
	67 Phenanthrene	178	13.385	13.385	(1.003)	506724	2.00000	2.06	
	68 Anthracene	178	13.442	13.454	(1.007)	558936	2.00000	1.93	
	72 Fluoranthene	202	14.985	14.985	(1.122)	499612	2.00000	2.11	
$	73 Pyrene-D10	212	15.262	15.262	(0.891)	330900	2.00000	1.92	
	74 Pyrene	202	15.285	15.285	(0.892)	518974	2.00000	1.89	
	77 Benzo(a)anthracene	228	17.117	17.117	(0.999)	275024	2.00000	1.91	
*	78 Chrysene-D12	240	17.139	17.139	(1.000)	91062	0.80000	(a)	
	79 Chrysene	228	17.183	17.183	(1.003)	379900	2.00000	2.10	

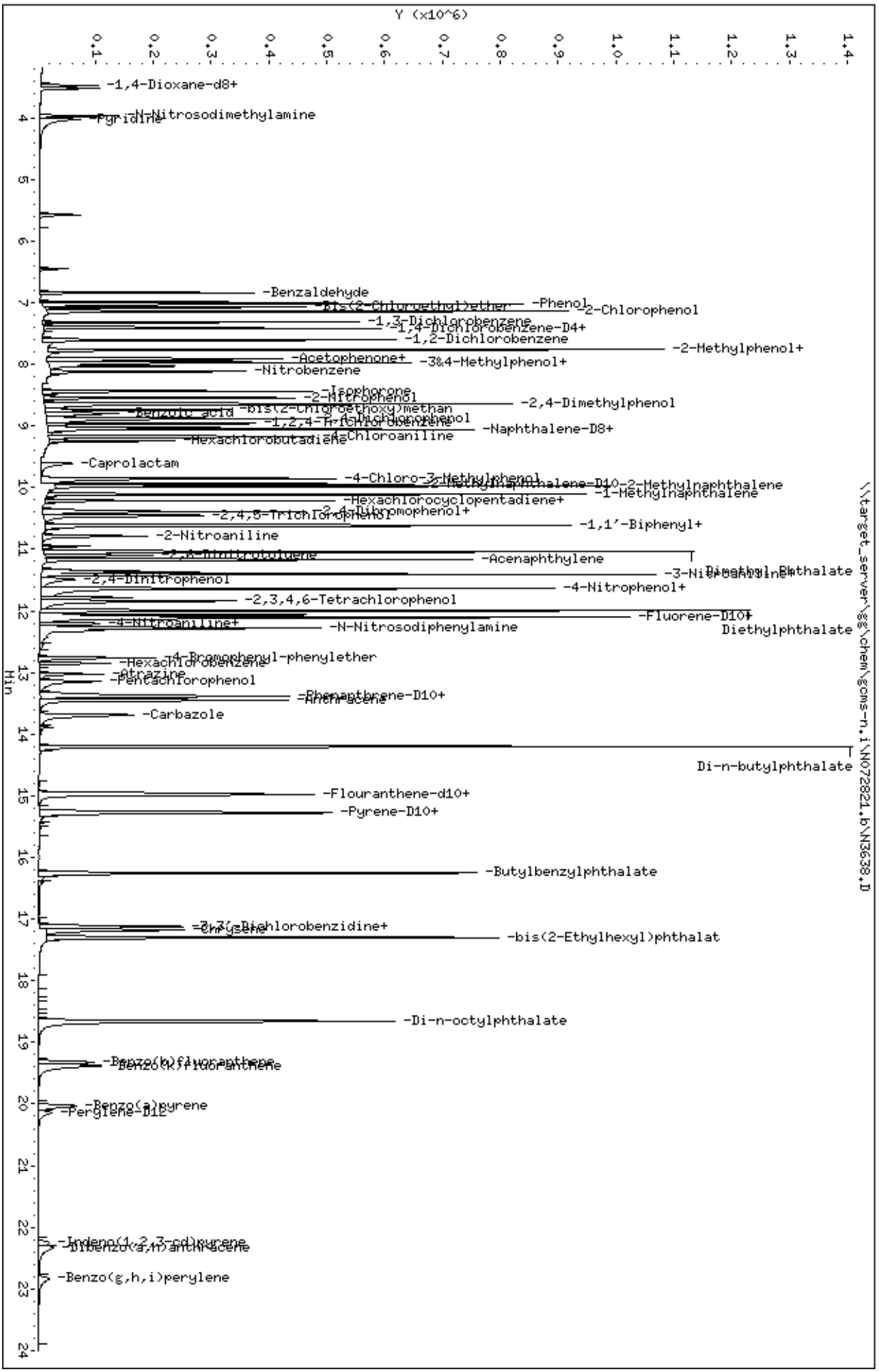
Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3638.D
Report Date: 29-Jul-2021 15:15

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
82	Benzo(b)fluoranthene	252	19.320	19.320	(0.959)	174558	2.00000	1.99	
83	Benzo(k)fluoranthene	252	19.387	19.376	(0.962)	294811	2.00000	2.08(H)	
84	Benzo(a)pyrene	252	20.027	20.016	(0.994)	177126	2.00000	2.02	
* 85	Perylene-D12	264	20.150	20.139	(1.000)	58767	0.80000	(a)	
86	Indeno(1,2,3-cd)pyrene	276	22.250	22.227	(1.298)	50995	2.00000	1.42(M)	M3
87	Dibenzo(a,h)anthracene	278	22.328	22.306	(1.108)	79075	2.00000	1.68	
88	Benzo(g,h,i)perylene	276	22.834	22.811	(1.133)	103078	2.00000	1.73	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

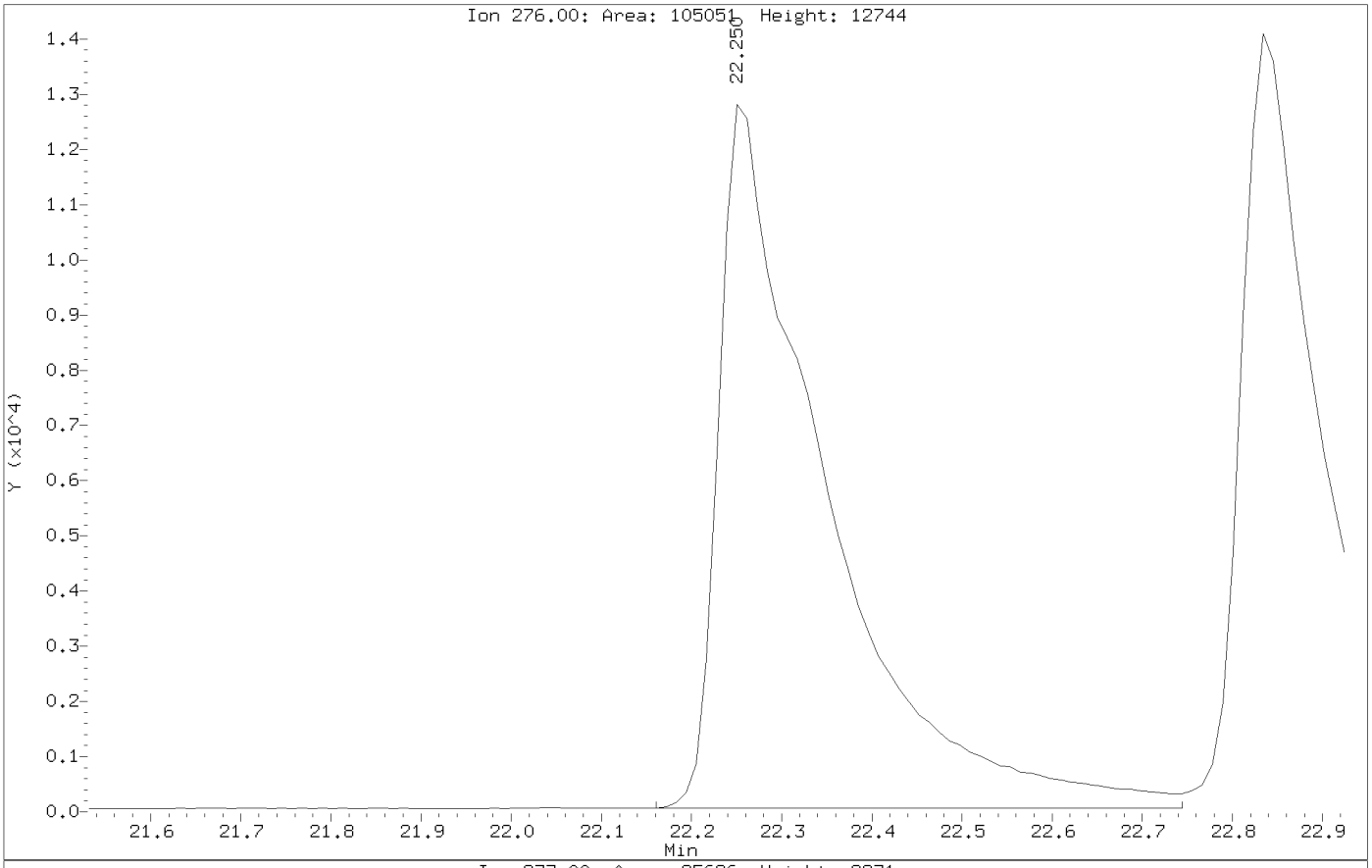
3:29 pm, Jul 29, 2021

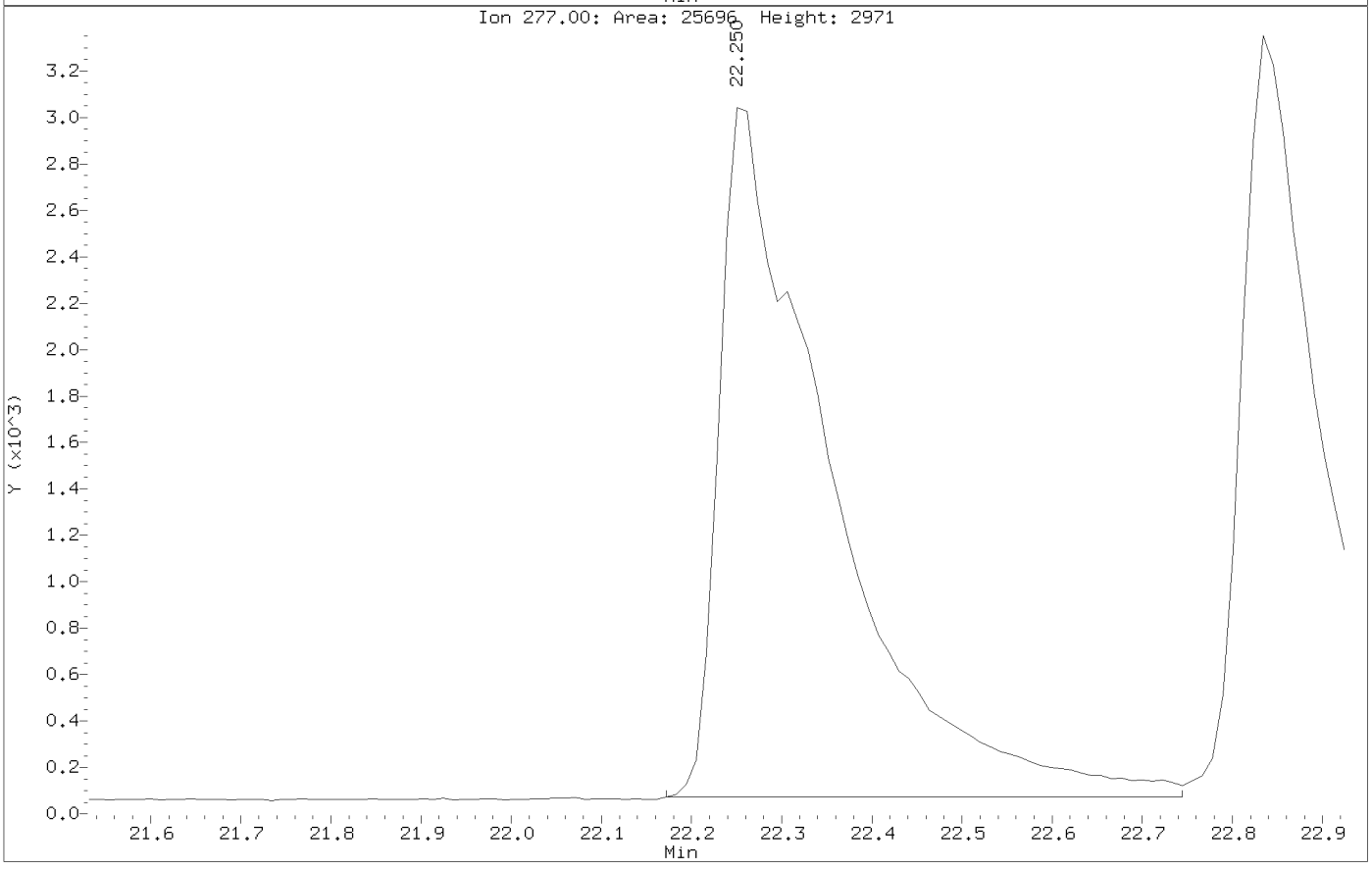

Data File: \\target_server\gg\chem\gcms-n,i\N072821,b\N3638,D
Date : 29-JUL-2021 03:02
Client ID:
Sample Info: WG303306-9,SD4723
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N072821,b\N3638,D
Y (x10^6)
Min
-1,4-Dioxane-d8+
-Pyridine
-N-Nitrosodimethylamine
-Benzaldehyde
-Phenol
-2-Chlorophenol
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-2-Methylphenol+
-Acetophenone+
-3&4-Methylphenol+
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-2,4-Dimethylphenol
-Benzoic acid
-bis(2-Chloroethoxy)methan
-2,4-Dichlorophenol
-1,2,4-Trichlorobenzene
-Naphthalene-D8+
-4-Chloroaniline
-Hexachlorobutadiene
-Caprolactam
-4-Chloro-3-Methylphenol
-2-Methylnaphthalene-D10
-2-Methylnaphthalene
-1-Methylnaphthalene
-Hexachlorocyclopentadiene+
-2,4,6-Trichlorophenol
-2,4-Dibromophenol+
-1,1'-Biphenyl+
-2-Nitroaniline
-2,6-Dinitrotoluene
-Acenaphthylene
-3-Nitroaniline
-Dimethyl Phthalate
-2,4-Dinitrophenol
-4-Nitrophenol+
-2,3,4,6-Tetrachlorophenol
-Fluorene-D10+
-4-Nitroaniline+
-N-Nitrosodiphenylamine
Diethylphthalate
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
Di-n-butylphthalate
-Flouranthene-d10+
-Pyrene-D10+
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-Chrysene
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene
-Benzo(k)fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene
-Dibenzo(a,h)anthracene
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3638.D
Injection Date: 29-JUL-2021 03:02
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

BEFORE MANUAL INTEGRATION





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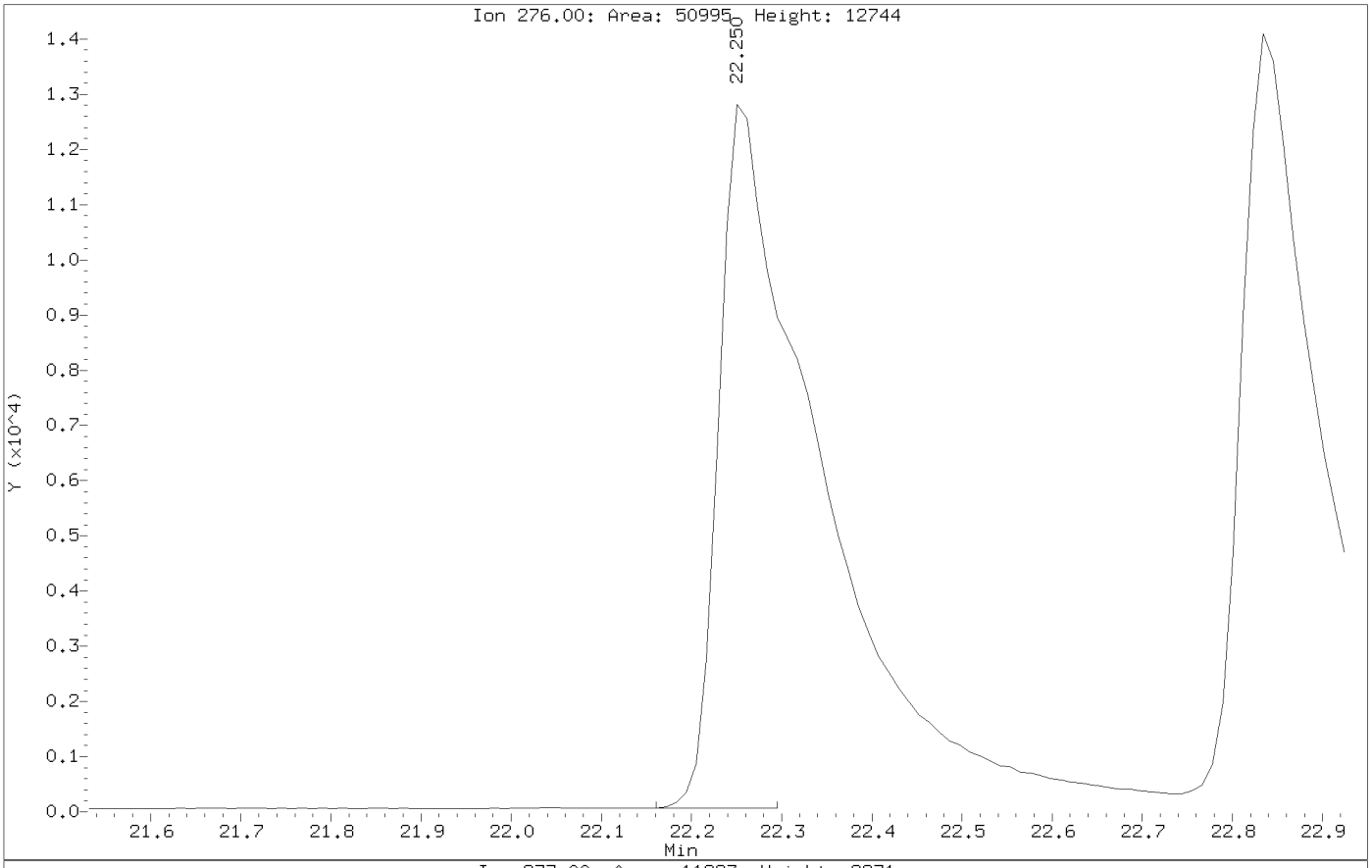
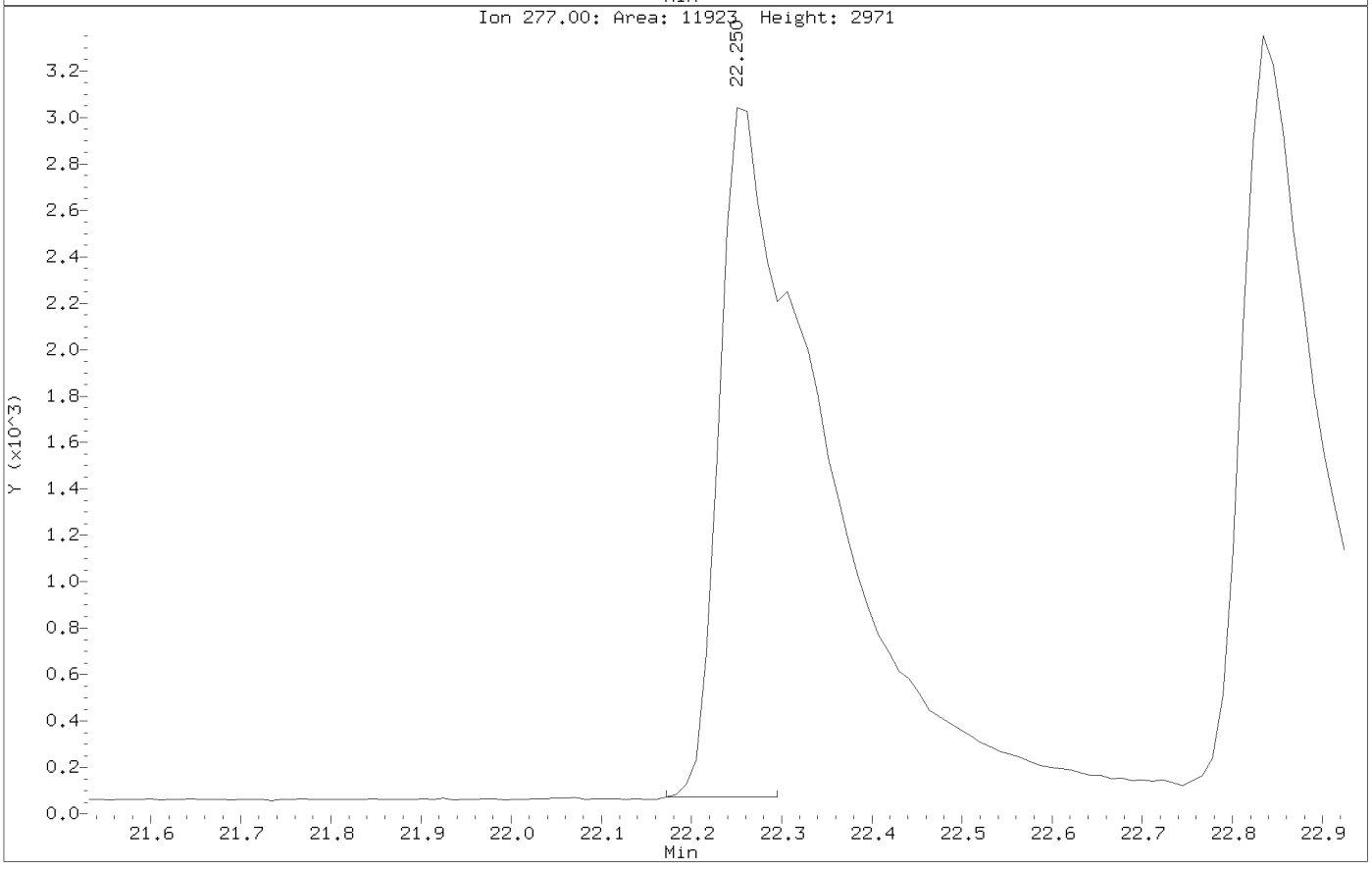
Injection Date: 29-JUL-2021 03:02
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

AFTER MANUAL INTEGRATION





Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\ND198.D

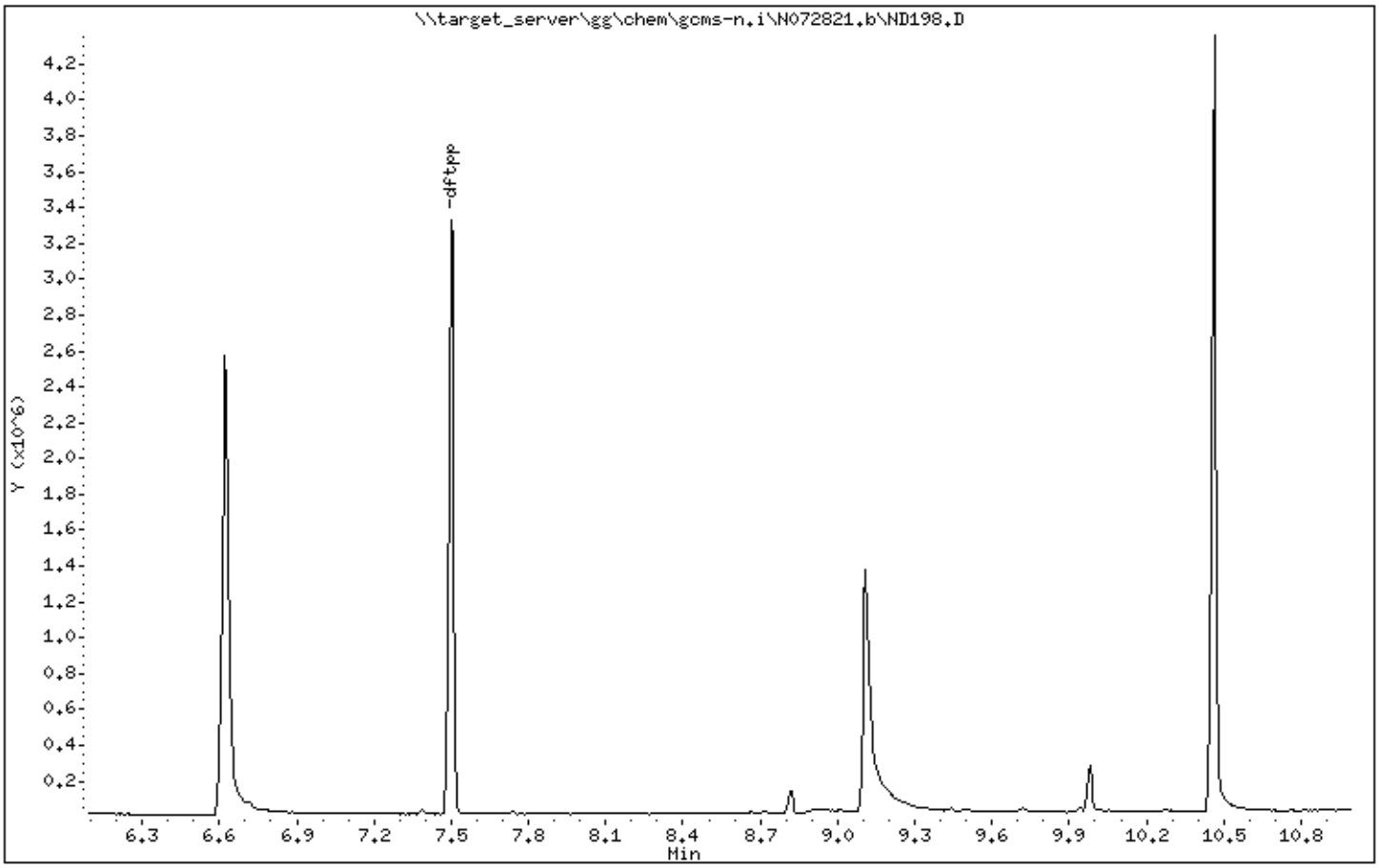
Date : 28-JUL-2021 15:17

Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG303306-1,SO4723

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25



Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\ND198.D

Date : 28-JUL-2021 15:17

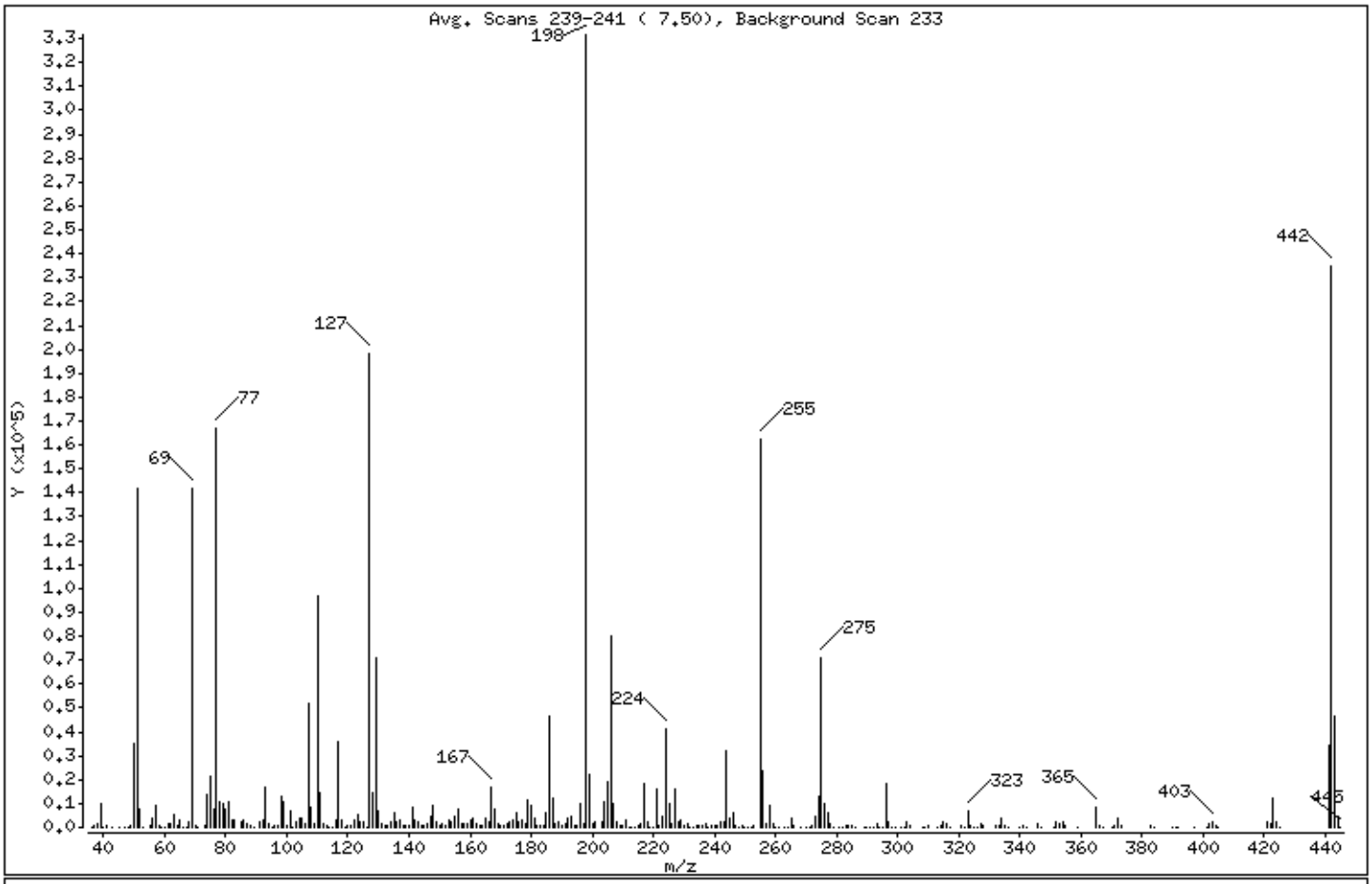
Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG303306-1,SO4723

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	42.71
68	Less than 2.00% of mass 69	0.70 (1.64)
69	Less than 100.00% of mass 198	42.79
70	Less than 2.00% of mass 69	0.27 (0.62)
127	40.00 - 60.00% of mass 198	59.85
197	Less than 1.00% of mass 198	0.42
199	5.00 - 9.00% of mass 198	6.74
275	10.00 - 30.00% of mass 198	21.44
365	1.00 - 100.00% of mass 198	2.59
441	0.01 - 100.00% of mass 443	10.36 (73.64)
442	40.00 - 100.00% of mass 198	70.91
443	17.00 - 23.00% of mass 442	14.08 (19.85)

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\ND198.D

Date : 28-JUL-2021 15:17

Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG303306-1,SO4723

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

Data File: ND198.D
Spectrum: Avg. Scans 239-241 (7.50), Background Scan 233
Location of Maximum: 198.00
Number of points: 313

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	156	122.00	3028	201.00	2111	286.00	179
37.00	522	123.00	5164	203.00	2179	289.00	265
38.00	1652	124.00	2305	204.00	10611	290.00	201
39.00	9812	125.00	2219	205.00	18888	291.00	108
40.00	381	126.00	157	206.00	80040	292.00	305
41.00	383	127.00	198464	207.00	10016	293.00	1550
43.00	178	128.00	14840	208.00	2406	294.00	373
45.00	195	129.00	71208	209.00	797	295.00	303
47.00	134	130.00	6541	210.00	768	296.00	18200
48.00	28	131.00	1184	211.00	2936	297.00	2631
49.00	595	132.00	534	212.00	206	298.00	166
50.00	34704	133.00	647	213.00	301	299.00	53
51.00	141632	134.00	2050	214.00	53	301.00	381
52.00	7455	135.00	6133	215.00	685	302.00	265
53.00	279	136.00	2323	216.00	1681	303.00	2445
55.00	686	137.00	2690	217.00	18528	304.00	589
56.00	4069	138.00	704	218.00	2515	308.00	284
57.00	9263	139.00	395	219.00	296	309.00	176
58.00	436	140.00	798	220.00	209	310.00	396
59.00	202	141.00	8491	221.00	15651	313.00	131
60.00	70	142.00	2767	222.00	806	314.00	991
61.00	1770	143.00	2264	223.00	4738	315.00	2321
62.00	1870	144.00	573	224.00	40800	316.00	1241
63.00	5363	145.00	563	225.00	10278	317.00	209
64.00	749	146.00	1560	226.00	1217	321.00	681
65.00	3180	147.00	4398	227.00	15804	322.00	368
66.00	304	148.00	9308	228.00	2318	323.00	6620
67.00	163	149.00	2144	229.00	3305	324.00	1141
68.00	2329	150.00	584	230.00	504	325.00	111
69.00	141888	151.00	1306	231.00	1545	326.00	189
70.00	885	152.00	484	232.00	270	327.00	1369
71.00	36	153.00	2779	233.00	347	328.00	569
73.00	1060	154.00	2199	234.00	951	332.00	404
74.00	13882	155.00	4782	235.00	1101	333.00	784
75.00	21520	156.00	7556	236.00	769	334.00	3999

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\ND198.D

Date : 28-JUL-2021 15:17

Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG303306-1,SO4723

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

Data File: ND198.D
Spectrum: Avg. Scans 239-241 (7.50), Background Scan 233
Location of Maximum: 198.00
Number of points: 313

m/z	Y	m/z	Y	m/z	Y	m/z	Y
76.00	7807	157.00	1764	237.00	1553	335.00	1029
77.00	166656	158.00	1474	238.00	262	336.00	104
78.00	10940	159.00	1220	239.00	803	340.00	70
79.00	9615	160.00	2709	240.00	451	341.00	808
80.00	7660	161.00	4094	241.00	932	342.00	246
81.00	11052	162.00	1234	242.00	2132	346.00	1243
82.00	2777	163.00	416	243.00	2305	347.00	232
83.00	2851	164.00	505	244.00	31960	351.00	50
85.00	1977	165.00	3594	245.00	4042	352.00	1976
86.00	3042	166.00	2409	246.00	5972	353.00	1598
87.00	1252	167.00	16688	247.00	1114	354.00	2072
88.00	695	168.00	7666	248.00	239	355.00	514
89.00	350	169.00	1490	249.00	1043	359.00	62
91.00	2236	170.00	593	250.00	223	365.00	8582
92.00	3071	171.00	726	251.00	247	366.00	1124
93.00	16912	172.00	1456	252.00	323	367.00	68
94.00	1287	173.00	2144	253.00	745	370.00	205
95.00	289	174.00	3352	255.00	162176	371.00	515
96.00	691	175.00	6159	256.00	23992	372.00	3626
97.00	636	176.00	1977	257.00	1708	373.00	863
98.00	12973	177.00	2951	258.00	8852	383.00	1086
99.00	10698	178.00	1147	259.00	1478	384.00	211
100.00	1055	179.00	11595	260.00	209	390.00	304
101.00	6676	180.00	8768	261.00	157	391.00	330
102.00	358	181.00	4070	263.00	69	392.00	197
103.00	2104	182.00	688	264.00	341	397.00	71
104.00	4172	183.00	440	265.00	3466	401.00	155
105.00	4079	184.00	790	266.00	455	402.00	1442
106.00	1296	185.00	6253	268.00	97	403.00	2164
107.00	51624	186.00	46512	270.00	163	404.00	636
108.00	8254	187.00	12127	271.00	352	405.00	59
109.00	1668	188.00	1315	272.00	504	421.00	2225
110.00	96904	189.00	2483	273.00	4779	422.00	1672
111.00	14502	190.00	543	274.00	13015	423.00	12560
112.00	1581	191.00	1362	275.00	71080	424.00	2609

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\ND198.D

Date : 28-JUL-2021 15:17

Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG303306-1,SO4723

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

Data File: ND198.D
Spectrum: Avg. Scans 239-241 (7.50), Background Scan 233
Location of Maximum: 198.00
Number of points: 313

m/z	Y	m/z	Y	m/z	Y	m/z	Y
113.00	660	192.00	3491	276.00	9827	425.00	188
114.00	129	193.00	4201	277.00	5795	441.00	34368
115.00	78	194.00	832	278.00	1286	442.00	235136
116.00	2738	195.00	685	279.00	193	443.00	46672
117.00	35568	196.00	9640	281.00	58	444.00	4256
118.00	2766	197.00	1395	282.00	208	445.00	226
119.00	353	198.00	331584	283.00	827		
120.00	667	199.00	22336	284.00	496		
121.00	461	200.00	1592	285.00	1125		

Raw QC Data Section

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Lab ID: WG303222-1
Client ID: Method Blank
SDG: SO4723
Lab File ID: N3626.D

Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222
% Solids: NA

Analysis Date: 28-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
Report Date: 29-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.10	ug/L	1	.2	0.20	0.064	0.10
2-Methylnaphthalene	U	0.10	ug/L	1	.2	0.20	0.077	0.10
1-Methylnaphthalene	U	0.10	ug/L	1	.2	0.20	0.068	0.10
Acenaphthylene	U	0.10	ug/L	1	.2	0.20	0.054	0.10
Acenaphthene	U	0.10	ug/L	1	.2	0.20	0.064	0.10
Fluorene	U	0.10	ug/L	1	.2	0.20	0.061	0.10
Phenanthrene	U	0.10	ug/L	1	.2	0.20	0.051	0.10
Anthracene	U	0.10	ug/L	1	.2	0.20	0.044	0.10
Fluoranthene	U	0.10	ug/L	1	.2	0.20	0.073	0.10
Pyrene	U	0.10	ug/L	1	.2	0.20	0.059	0.10
Benzo(a)anthracene	U	0.10	ug/L	1	.2	0.20	0.046	0.10
Chrysene	U	0.10	ug/L	1	.2	0.20	0.036	0.10
Benzo(b)Fluoranthene	U	0.10	ug/L	1	.2	0.20	0.089	0.10
Benzo(k)fluoranthene	U	0.10	ug/L	1	.2	0.20	0.049	0.10
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.20	0.066	0.10
Indeno(1,2,3-cd)pyrene	U	0.10	ug/L	1	.2	0.20	0.052	0.10
Dibenzo(a,h)anthracene	U	0.10	ug/L	1	.2	0.20	0.070	0.10
Benzo(g,h,i)perylene	U	0.10	ug/L	1	.2	0.20	0.065	0.10
2-Methylnaphthalene-D10		70.0	%					
Fluorene-D10		70.8	%					
Pyrene-D10		82.4	%					

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Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3626.D
Report Date: 29-Jul-2021 15:14

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3626.D
Lab Smp Id: WG303222-1 Client Smp ID: WG303222-Blank
Inj Date : 28-JUL-2021 20:12
Operator : JCG Inst ID: gcms-n.i
Smp Info : WG303222-1,SO4723
Misc Info : WG303306,WG303222,WG303306-4,SO4723-1
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 09:00 cgomez Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27 Cal File: N3623.D
Als bottle: 10 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: sw8270sim+1mn.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

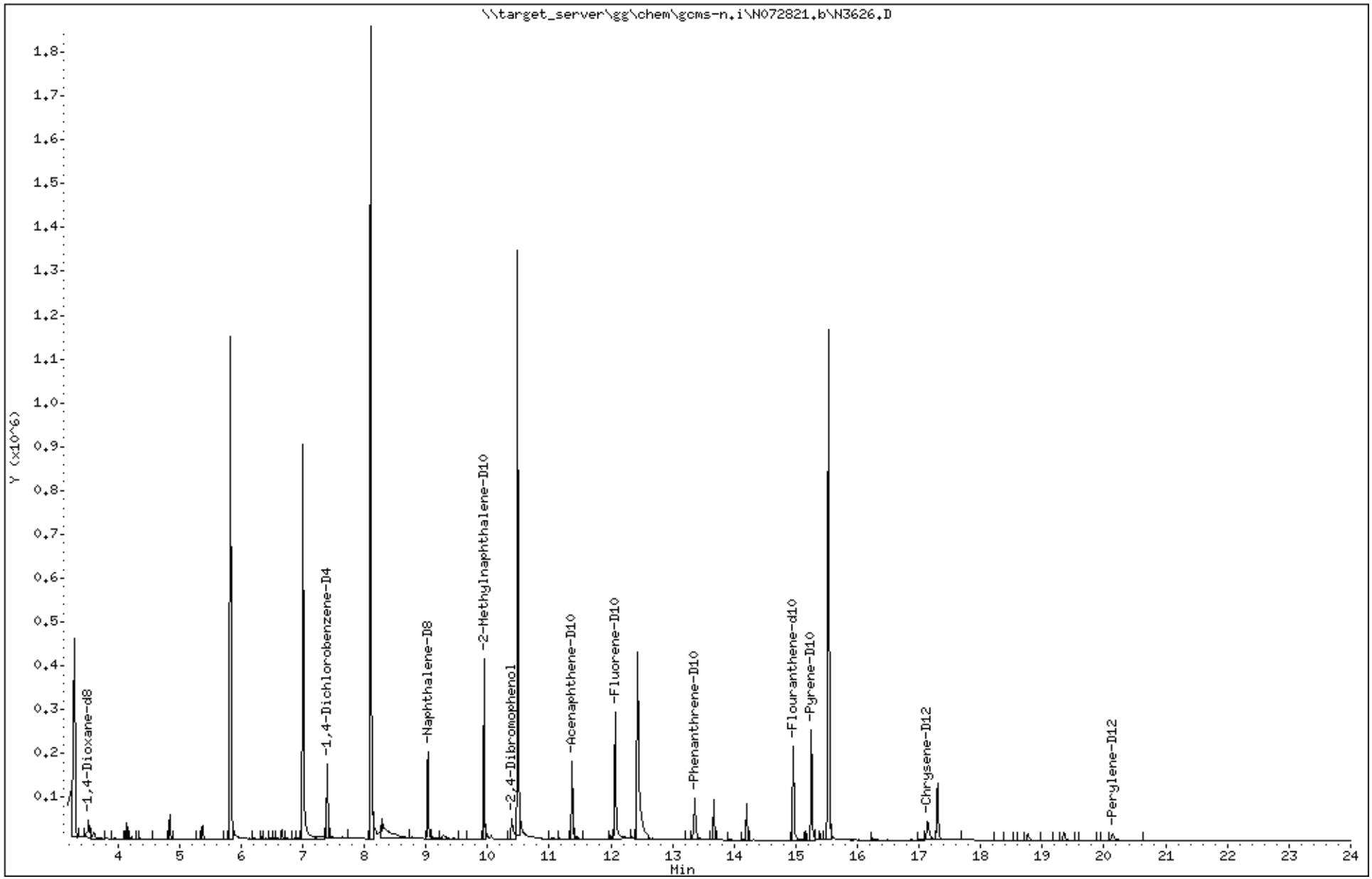
Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	7.400	7.390	(1.000)	59337	0.80000	(aQ)	
*	27 Naphthalene-D8	136	9.033	9.022	(1.000)	221580	0.80000	(a)	
$	33 2-Methylnaphthalene-D10	152	9.938	9.937	(1.100)	206393	1.40003	1.40	
*	48 Acenaphthene-D10	164	11.370	11.369	(1.000)	114900	0.80000	(a)	
$	56 Fluorene-D10	174	12.067	12.067	(1.061)	191312	1.41686	1.42	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	165454	0.80000	(a)	
$	73 Pyrene-D10	212	15.251	15.262	(0.890)	218027	1.64837	1.65	
*	78 Chrysene-D12	240	17.139	17.139	(1.000)	69785	0.80000	(a)	
*	85 Perylene-D12	264	20.139	20.139	(1.000)	42876	0.80000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3626.D
Date : 28-JUL-2021 20:12
Client ID: WG303222-Blank
Instrument: gcms-n.i
Sample Info: WG303222-1,S04723
Volume Injected (uL): 1.0
Operator: JCG
Column phase: ZB5-MS
Column diameter: 0.25



Katahdin Analytical Services 2000141

Katahdin
ANALYTICAL SERVICES

LCS Recovery Report

Lab ID: WG303222-2
Client ID: LCS
SDG: SO4723
LCS File ID: N3625.D
Report Date: 29-JUL-21

Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 28-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Naphthalene	74.5	2.00	1.49	ug/L	43-114
2-Methylnaphthalene	66.0	2.00	1.32	ug/L	39-114
1-Methylnaphthalene	69.0	2.00	1.38	ug/L	41-115
Acenaphthylene	62.0	2.00	1.24	ug/L	35-121
Acenaphthene	70.0	2.00	1.40	ug/L	48-114
Fluorene	74.0	2.00	1.48	ug/L	50-118
Phenanthrene	80.5	2.00	1.61	ug/L	53-115
Anthracene	73.0	2.00	1.46	ug/L	53-119
Fluoranthene	84.5	2.00	1.69	ug/L	58-120
Pyrene	87.0	2.00	1.74	ug/L	53-121
Benzo(a)anthracene	90.5	2.00	1.81	ug/L	59-120
Chrysene	79.5	2.00	1.59	ug/L	57-120
Benzo(b)Fluoranthene	97.0	2.00	1.94	ug/L	53-126
Benzo(k)fluoranthene	71.0	2.00	1.42	ug/L	54-125
Benzo(a)pyrene	71.0	2.00	1.42	ug/L	53-120
Indeno(1,2,3-cd)pyrene	65.0	2.00	1.30	ug/L	48-130
Dibenzo(a,h)anthracene	74.5	2.00	1.49	ug/L	44-131
Benzo(g,h,i)perylene	74.5	2.00	1.49	ug/L	44-128
2-Methylnaphthalene-D10	83.6				43-92
Fluorene-D10	72.2				29-101
Pyrene-D10	86.5				53-166

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Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3625.D
Report Date: 29-Jul-2021 15:14

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3625.D
Lab Smp Id: WG303222-2 Client Smp ID: WG303222-LCS
Inj Date : 28-JUL-2021 19:37
Operator : JCG Inst ID: gcms-n.i
Smp Info : WG303222-2,SO4723
Misc Info : WG303306,WG303222,WG303306-4,SO4723-1
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 09:00 cgomez Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27 Cal File: N3623.D
Als bottle: 9 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: sw8270sim+1mn.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	7.390	7.390	(1.000)	60059	0.80000	(aQ)	
*	27 Naphthalene-D8	136	9.022	9.022	(1.000)	207662	0.80000	(a)	
	28 Naphthalene	128	9.054	9.054	(1.004)	400768	1.48832	1.49	
$	33 2-Methylnaphthalene-D10	152	9.938	9.937	(1.101)	231096	1.67266	1.67	
	34 2-Methylnaphthalene	142	9.977	9.977	(1.106)	260395	1.32548	1.32	
	35 1-Methylnaphthalene	142	10.105	10.105	(1.120)	242851	1.37522	1.38	
	46 Acenaphthylene	152	11.173	11.173	(0.984)	364978	1.24352	1.24	
*	48 Acenaphthene-D10	164	11.359	11.369	(1.000)	113688	0.80000	(a)	
	49 Acenaphthene	153	11.402	11.413	(1.004)	251924	1.40309	1.40	
$	56 Fluorene-D10	174	12.067	12.067	(1.062)	192970	1.44438	1.44	
	57 Fluorene	166	12.100	12.110	(1.065)	282318	1.48406	1.48	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	169228	0.80000	(a)	
	67 Phenanthrene	178	13.385	13.385	(1.003)	376814	1.61394	1.61	
	68 Anthracene	178	13.454	13.454	(1.008)	401853	1.45819	1.46	
	72 Fluoranthene	202	14.985	14.985	(1.122)	379766	1.68931	1.69	
$	73 Pyrene-D10	212	15.251	15.262	(0.890)	237758	1.73009	1.73	
	74 Pyrene	202	15.274	15.285	(0.891)	380715	1.74416	1.74	
	77 Benzo(a)anthracene	228	17.117	17.117	(0.999)	207452	1.80975	1.81	
*	78 Chrysene-D12	240	17.139	17.139	(1.000)	72506	0.80000	(a)	
	79 Chrysene	228	17.183	17.183	(1.003)	228114	1.58689	1.59	

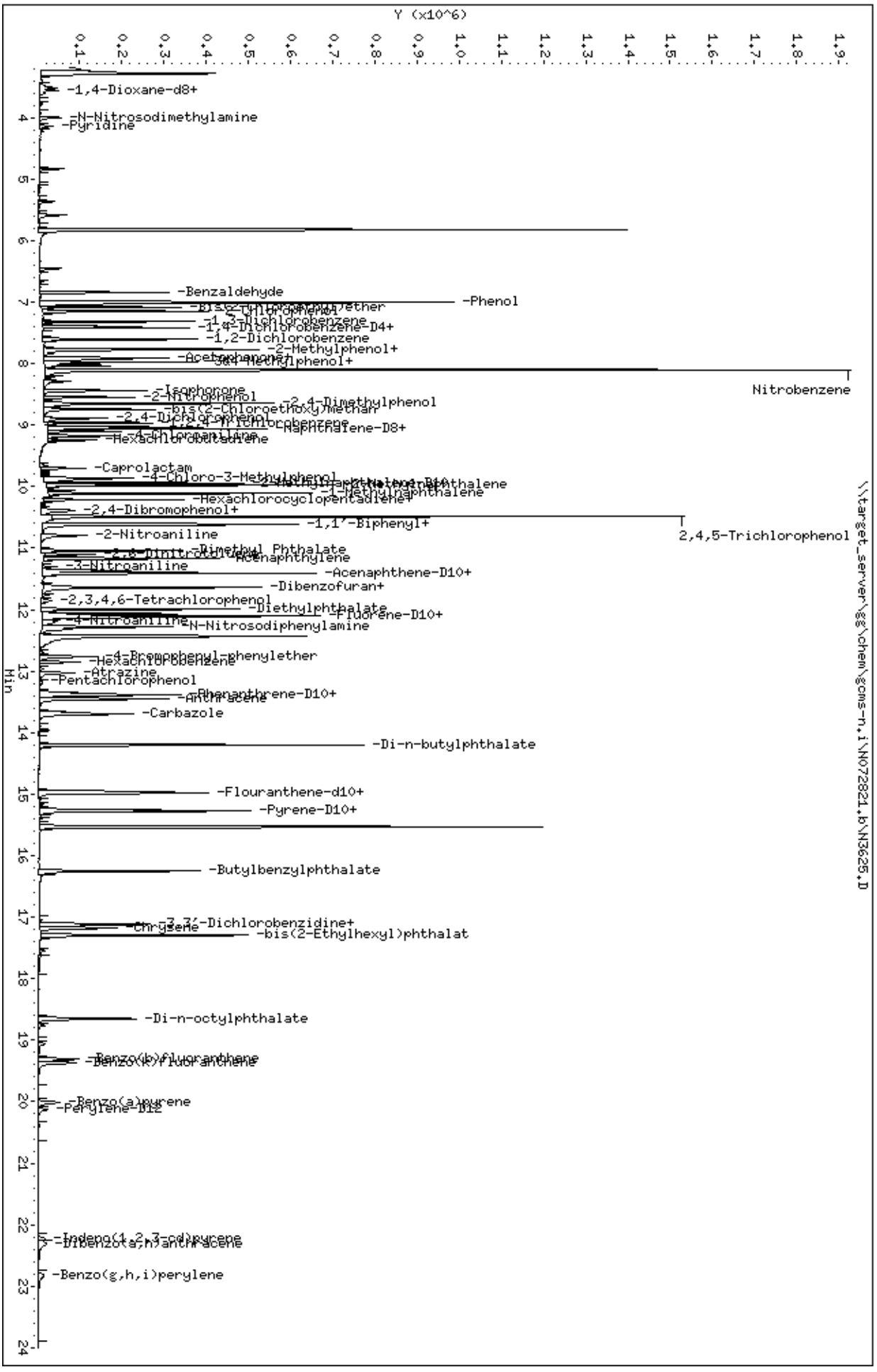
Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3625.D
Report Date: 29-Jul-2021 15:14

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
82	Benzo(b)fluoranthene	252	19.308	19.320	(0.959)	133240	1.94428	1.94	
83	Benzo(k)fluoranthene	252	19.365	19.376	(0.962)	158188	1.42524	1.42(H)	
84	Benzo(a)pyrene	252	20.016	20.016	(0.994)	97531	1.42228	1.42	
* 85	Perylene-D12	264	20.128	20.139	(1.000)	45910	0.80000	(a)	
86	Indeno(1,2,3-cd)pyrene	276	22.239	22.227	(1.298)	37161	1.30414	1.30(M)	M3
87	Dibenzo(a,h)anthracene	278	22.306	22.306	(1.108)	54621	1.49006	1.49	
88	Benzo(g,h,i)perylene	276	22.823	22.811	(1.134)	69277	1.48753	1.49	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

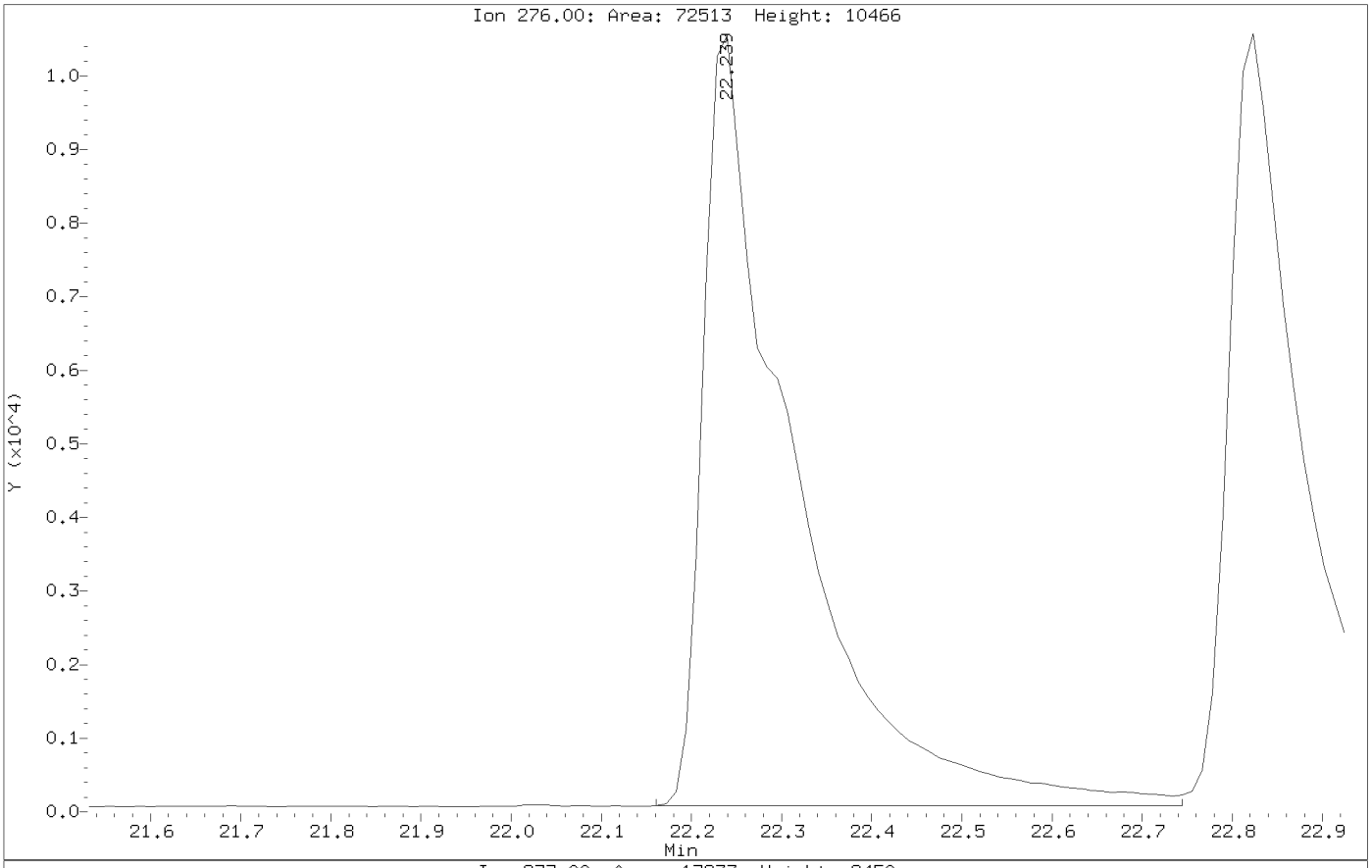
3:30 pm, Jul 29, 2021

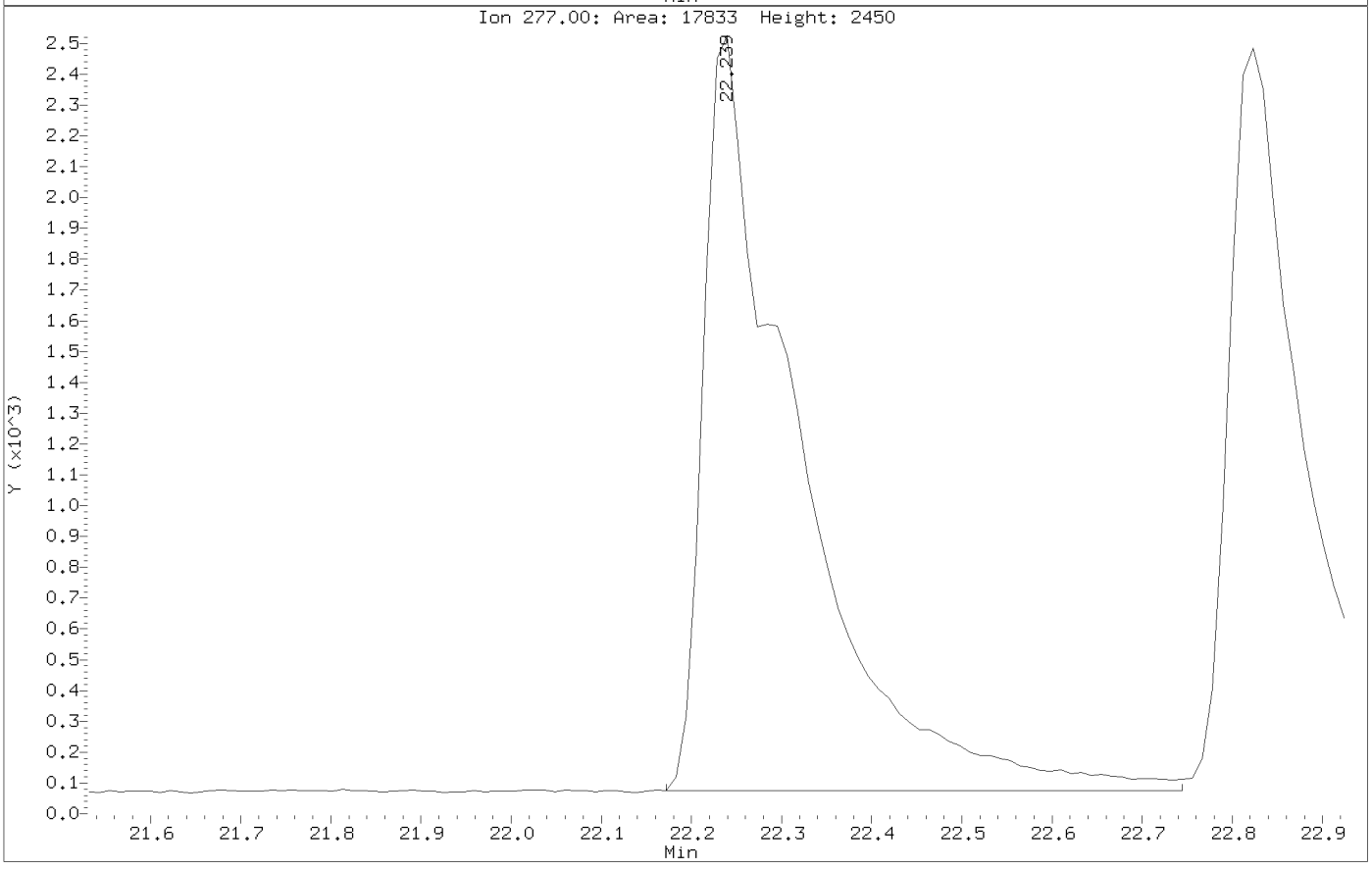

Data File: \\target_server\gg\chem\gcms-n,i\N072821,b\N3625,D
Date : 28-JUL-2021 19:37
Client ID: WG303222-LCS
Sample Info: WG303222-2,SD4723
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N072821,b\N3625,D
Y (x10^6)
Min
-1,4-Dioxane-d8+
-N-Nitrosodimethylamine
-Pyridine
-Benzaldehyde
-Phenol
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-2-Methylphenol+
-Acetophenone
-3&4-Methylphenol+
Nitrobenzene
-Isophorone
-2-Nitrophenol
-2,4-Dimethylphenol
-bis(2-Chloroethoxy)methan
-2,4-Dichlorophenol
-1,2,4-Trichlorobenzene
Naphthalene-D8+
-4-Chloroaniline
-Hexachlorobutadiene
-Caprolactam
-4-Chloro-3-Methylphenol
-1-Methylnaphthalene
-Hexachlorocyclopentadiene+
-2,4-Dibromophenol+
-1,1'-Biphenyl+
2,4,5-Trichlorophenol
-2-Nitroaniline
-Dimethyl Phthalate
-Acenaphthylene
-3-Nitroaniline
-Acenaphthene-D10+
-Dibenzofuran+
-2,3,4,6-Tetrachlorophenol
-Diethylphthalate
-Fluorene-D10+
-4-Nitroaniline
-N-Nitrosodiphenylamine
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
-Di-n-butylphthalate
-Flouranthene-d10+
-Pyrene-D10+
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-Chrysene
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene
-Benzo(k)Fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene
-Dibenz(a,h)anthracene
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3625.D
Injection Date: 28-JUL-2021 19:37
Instrument: gcms-n.i
Client Sample ID: WG303222-LCS

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

BEFORE MANUAL INTEGRATION





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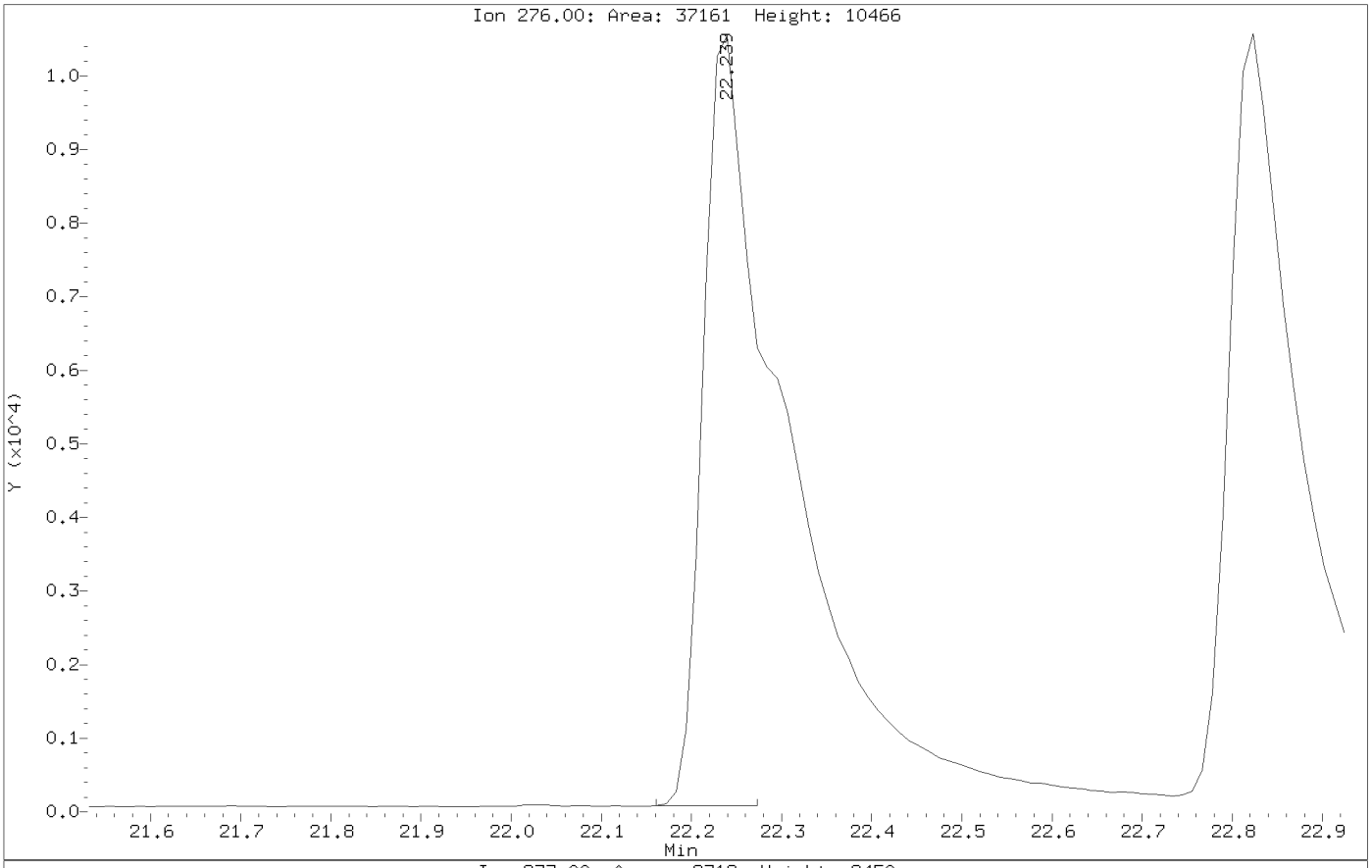
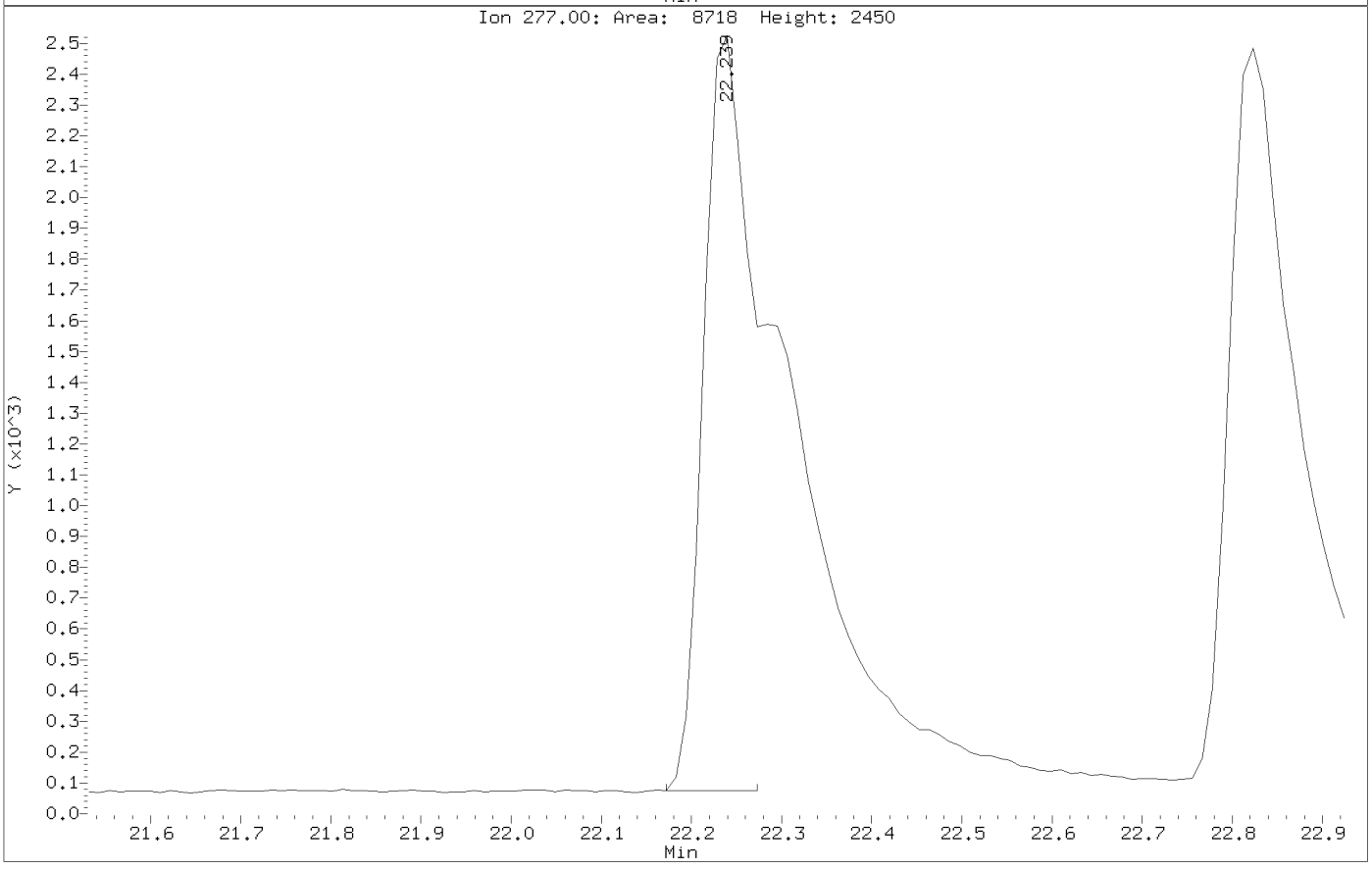
Injection Date: 28-JUL-2021 19:37
Instrument: gcms-n.i
Client Sample ID: WG303222-LCS

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

AFTER MANUAL INTEGRATION





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ANALYTICAL SERVICES

MS/MSD Recovery Report

MS ID: WG303222-3
MSD ID: WG303222-4
Sample ID: SO4723-1
Client ID: MW-01-SUMMER2021
SDG: SO4723
MS File ID: N3628.D

Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222
Report Date: 29-JUL-21
MSD File ID: N3629.D

Analysis Date: 28-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
Naphthalene	2.08	2.22	ug/L	U0.11	1.4	1.4	69.6	60.8	7	20	43-114
2-Methylnaphthalene	2.08	2.22	ug/L	U0.11	1.3	1.2	62.4	53.6	9	20	39-114
1-Methylnaphthalene	2.08	2.22	ug/L	U0.11	1.3	1.2	62.9	54.0	9	20	41-115
Acenaphthylene	2.08	2.22	ug/L	U0.11	1.2	1.1	59.5	48.6	14	20	35-121
Acenaphthene	2.08	2.22	ug/L	U0.11	1.4	1.3	67.2	57.2	10	20	48-114
Fluorene	2.08	2.22	ug/L	U0.11	1.5	1.2	70.1	55.4	17	20	50-118
Phenanthrene	2.08	2.22	ug/L	U0.11	1.6	1.4	77.8	63.9	13	20	53-115
Anthracene	2.08	2.22	ug/L	U0.11	1.4	1.3	67.2	58.5	7	20	53-119
Fluoranthene	2.08	2.22	ug/L	U0.11	1.7	1.5	82.1	65.7	16	20	58-120
Pyrene	2.08	2.22	ug/L	U0.11	1.9	1.5	90.2	66.6	24*	20	53-121
Benzo(a)anthracene	2.08	2.22	ug/L	UM0.11	1.7	1.3	81.1	56.7*	29*	20	59-120
Chrysene	2.08	2.22	ug/L	U0.11	1.5	1.3	70.1	58.5	12	20	57-120
Benzo(b)Fluoranthene	2.08	2.22	ug/L	UM0.11	1.4	1.2	69.6	51.8*	23*	20	53-126
Benzo(k)fluoranthene	2.08	2.22	ug/L	UMM0.11	1.1	0.90	52.8*	40.5*	20	20	54-125
Benzo(a)pyrene	2.08	2.22	ug/L	UMM0.11	1.0	0.89	49.9*	40.0*	16	20	53-120
Indeno(1,2,3-cd)pyrene	2.08	2.22	ug/L	UMM0.11	0.77	0.74	37.2*	33.2*	5	20	48-130
Dibenzo(a,h)anthracene	2.08	2.22	ug/L	UMM0.11	0.71	0.72	34.3*	32.4*	1	20	44-131
Benzo(g,h,i)perylene	2.08	2.22	ug/L	UMM0.11	0.79	0.77	37.7*	34.6*	2	20	44-128
2-Methylnaphthalene-D10							70.8	64.2			43-92
Fluorene-D10							68.3	57.5			29-101
Pyrene-D10							88.2	68.1			53-166

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029
http://www.katahdinlab.com

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3628.D
Report Date: 29-Jul-2021 15:15

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3628.D
Lab Smp Id: WG303222-3 Client Smp ID: MW-01-SUMMER2021MS
Inj Date : 28-JUL-2021 21:20
Operator : JCG Inst ID: gcms-n.i
Smp Info : WG303222-3,SO4723
Misc Info : WG303306,WG303222,WG303306-4,SO4723-1
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 09:00 cgomez Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27 Cal File: N3623.D
Als bottle: 12 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: sw8270sim+1mn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	0.96000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	7.390	7.390	(1.000)	65072	0.80000	(aQ)	
*	27 Naphthalene-D8	136	9.022	9.022	(1.000)	226138	0.80000	(a)	
	28 Naphthalene	128	9.054	9.054	(1.004)	408702	1.39377	1.45	
$	33 2-Methylnaphthalene-D10	152	9.938	9.937	(1.101)	213169	1.41685	1.48	
	34 2-Methylnaphthalene	142	9.977	9.977	(1.106)	266671	1.24653	1.30	
	35 1-Methylnaphthalene	142	10.105	10.105	(1.120)	242318	1.26009	1.31	
	46 Acenaphthylene	152	11.173	11.173	(0.984)	372598	1.19173	1.24	
*	48 Acenaphthene-D10	164	11.359	11.369	(1.000)	121105	0.80000	(a)	
	49 Acenaphthene	153	11.402	11.413	(1.004)	257146	1.34446	1.40	
$	56 Fluorene-D10	174	12.067	12.067	(1.062)	194532	1.36689	1.42	
	57 Fluorene	166	12.100	12.110	(1.065)	284069	1.40181	1.46	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	187829	0.80000	(a)	
	67 Phenanthrene	178	13.385	13.385	(1.003)	402071	1.55157	1.62	
	68 Anthracene	178	13.454	13.454	(1.008)	411963	1.34683	1.40	
	72 Fluoranthene	202	14.985	14.985	(1.122)	410515	1.64525	1.71	
$	73 Pyrene-D10	212	15.251	15.262	(0.890)	254045	1.76508	1.84	
	74 Pyrene	202	15.274	15.285	(0.891)	412297	1.80350	1.88	
	77 Benzo(a)anthracene	228	17.117	17.117	(0.999)	194753	1.62220	1.69	
*	78 Chrysene-D12	240	17.139	17.139	(1.000)	75937	0.80000	(a)	
	79 Chrysene	228	17.183	17.183	(1.003)	211039	1.40178	1.46	
	82 Benzo(b)fluoranthene	252	19.308	19.320	(0.959)	100227	1.39060	1.45	

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3628.D
Report Date: 29-Jul-2021 15:15

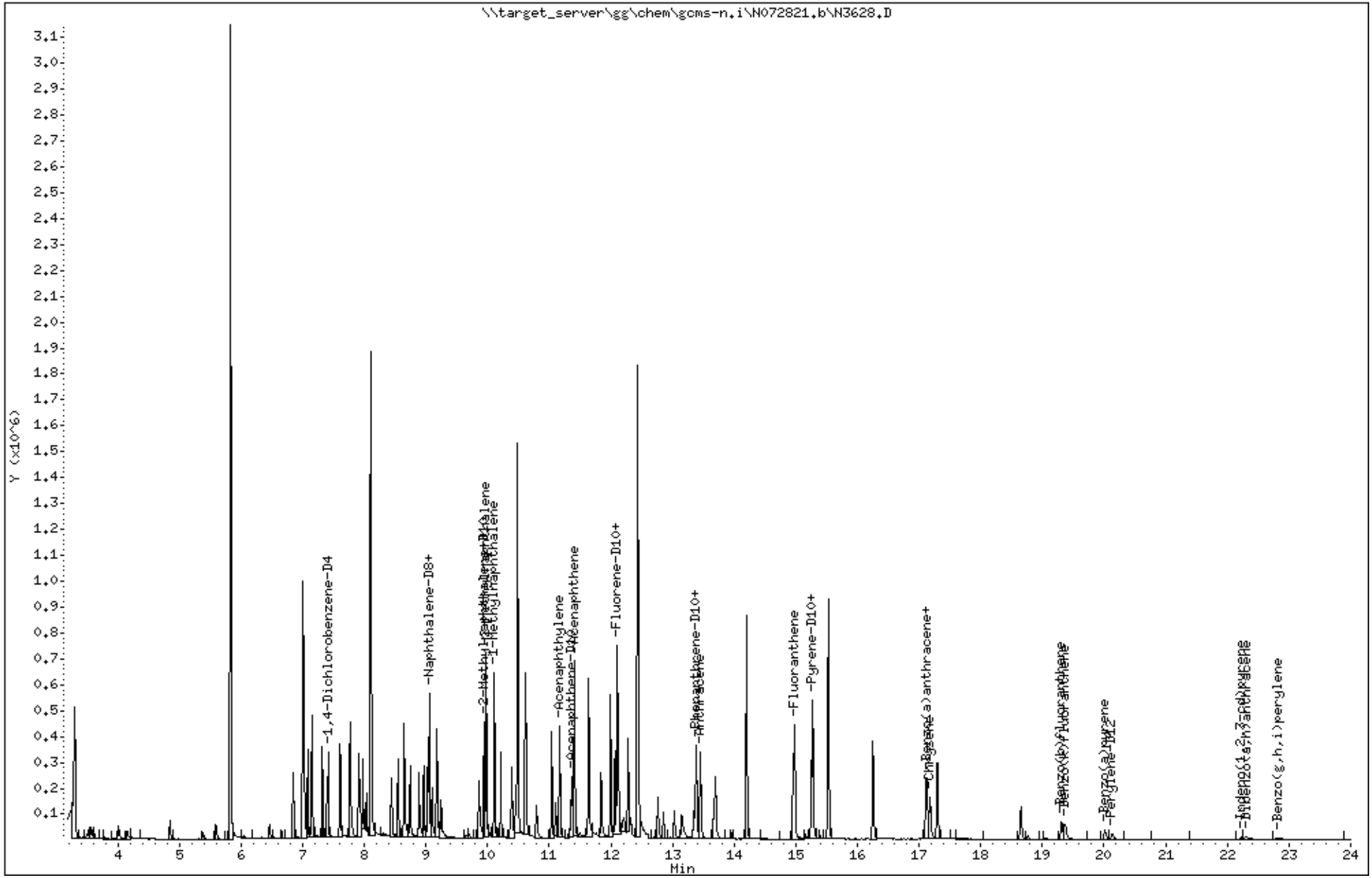
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
83	Benzo(k)fluoranthene	252	19.376	19.376	(0.963)	122807	1.05204	1.10(RH)	
84	Benzo(a)pyrene	252	20.016	20.016	(0.994)	72325	1.00283	1.04(R)	
* 85	Perylene-D12	264	20.128	20.139	(1.000)	48285	0.80000	(a)	
86	Indeno(1,2,3-cd)pyrene	276	22.239	22.227	(1.298)	22188	0.74349	0.774(RM)	M3
87	Dibenzo(a,h)anthracene	278	22.306	22.306	(1.108)	26416	0.68518	0.714(R)	
88	Benzo(g,h,i)perylene	276	22.823	22.811	(1.134)	36936	0.75409	0.786(R)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

3:30 pm, Jul 29, 2021

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3628.D
Date : 28-JUL-2021 21:20
Client ID: MW-01-SUMMER2021MS
Instrument: gcms-n.i
Sample Info: WG303222-3,S04723
Volume Injected (uL): 1.0
Operator: JCG
Column phase: ZB5-MS
Column diameter: 0.25

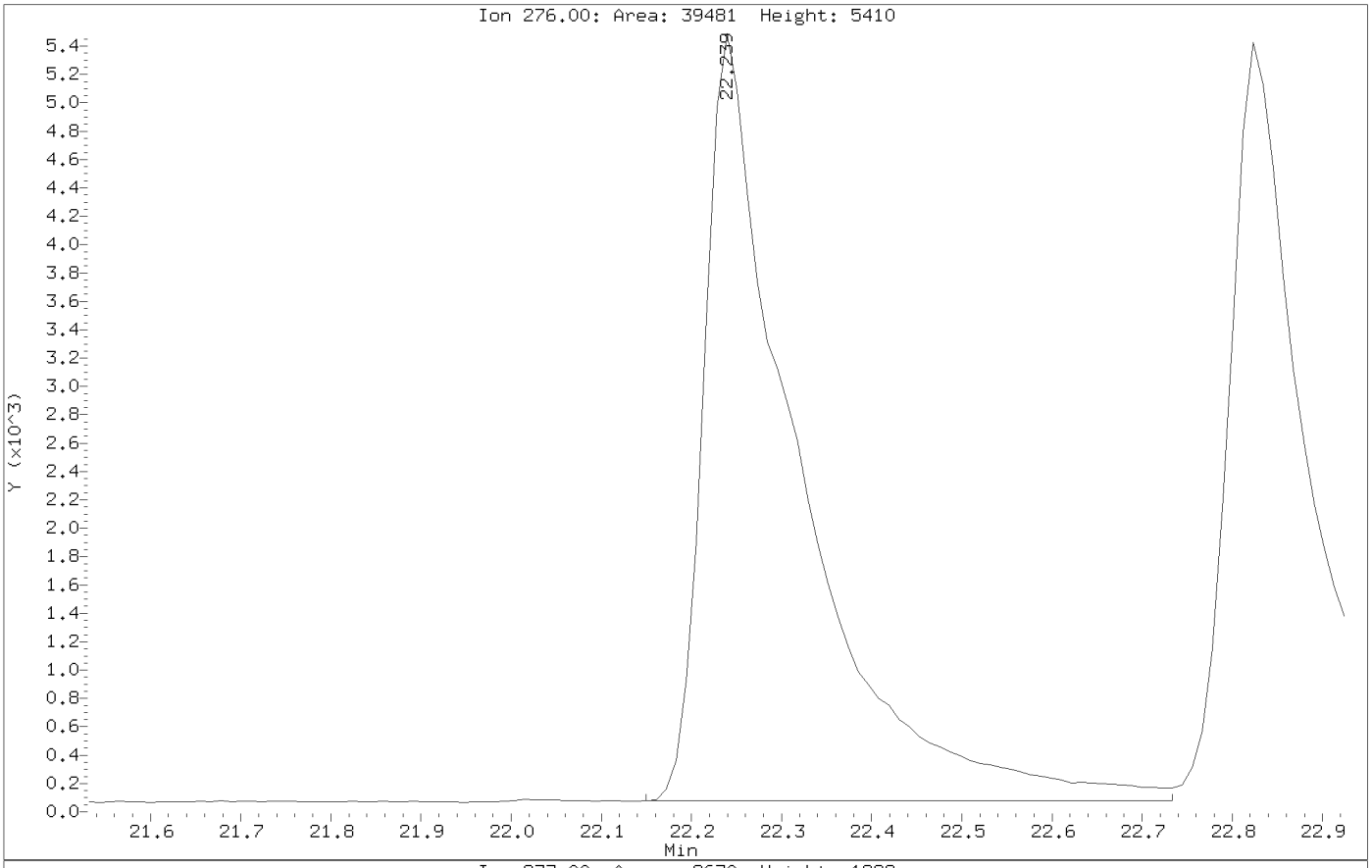


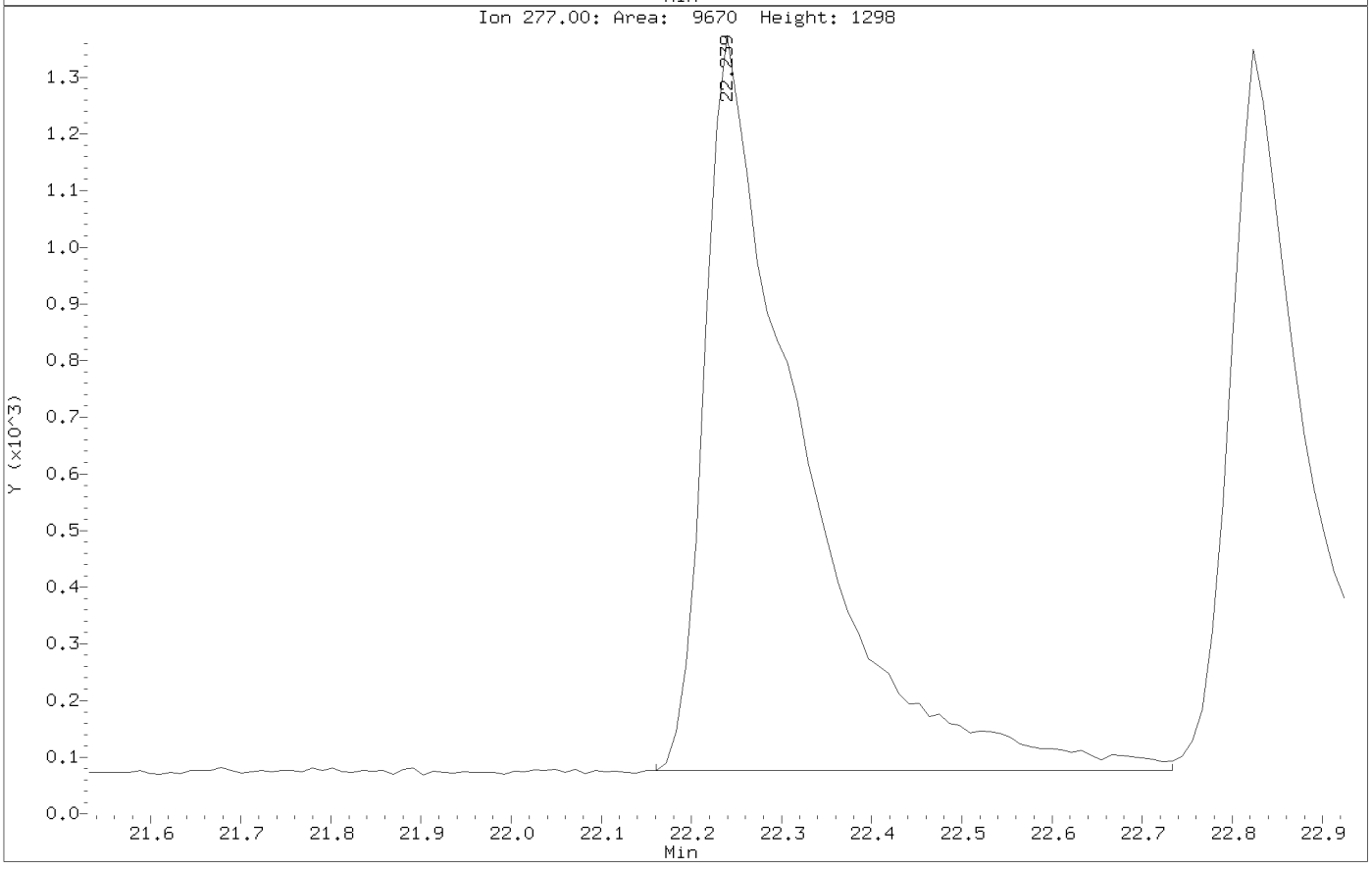
Katahdin Analytical Services 2000151

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3628.D
Injection Date: 28-JUL-2021 21:20
Instrument: gcms-n.i
Client Sample ID: MW-01-SUMMER2021MS

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

BEFORE MANUAL INTEGRATION

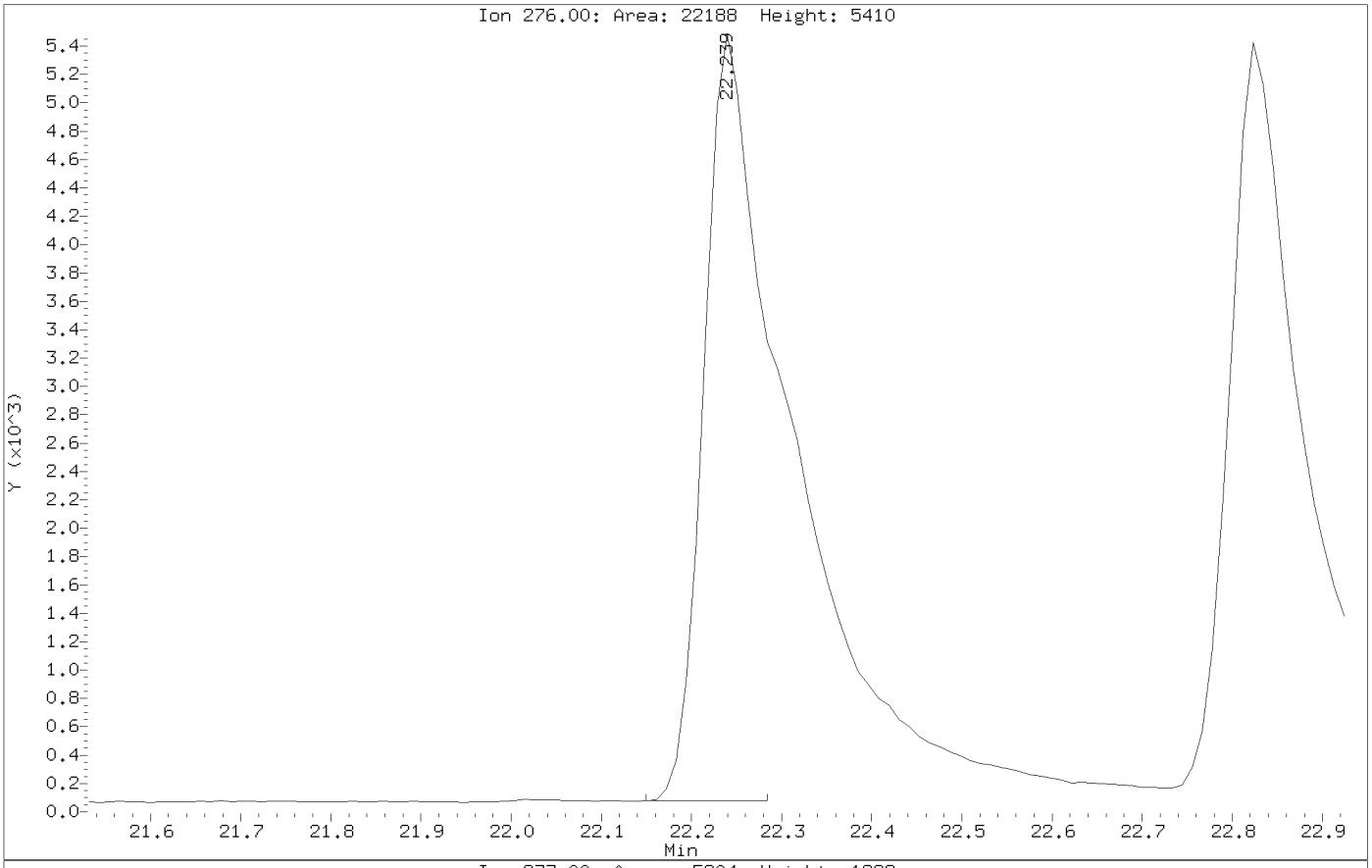


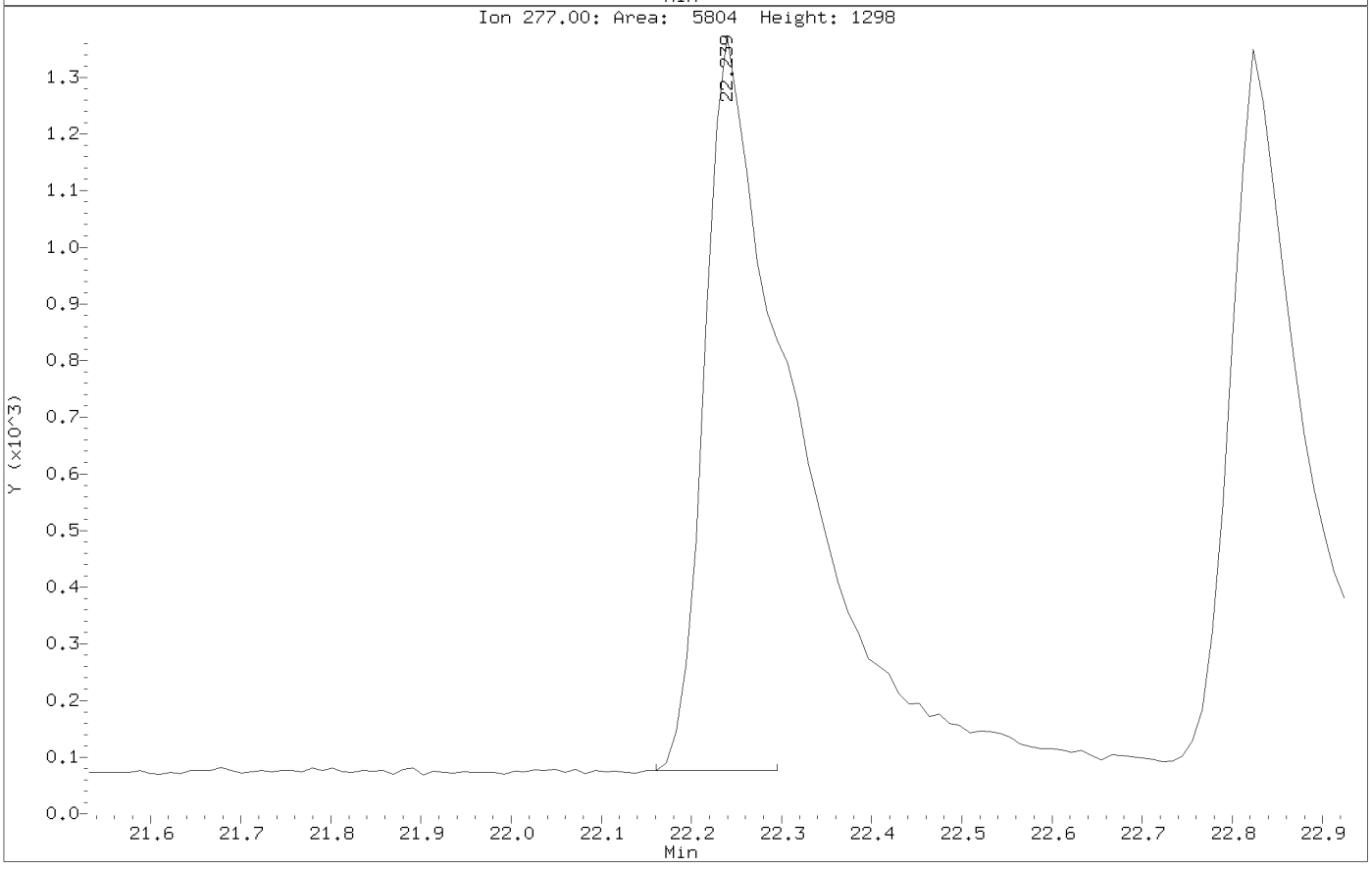


Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3628.D
Injection Date: 28-JUL-2021 21:20
Instrument: gcms-n.i
Client Sample ID: MW-01-SUMMER2021MS

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

AFTER MANUAL INTEGRATION





Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3629.D
Report Date: 29-Jul-2021 15:15

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3629.D
Lab Smp Id: WG303222-4 Client Smp ID: MW-01-SUMMER2021MSD
Inj Date : 28-JUL-2021 21:55
Operator : JCG Inst ID: gcms-n.i
Smp Info : WG303222-4,SO4723
Misc Info : WG303306,WG303222,WG303306-4,SO4723-1
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 09:00 cgomez Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27 Cal File: N3623.D
Als bottle: 13 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: sw8270sim+1mn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	0.90000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	7.390	7.390	(1.000)	62713	0.80000	(aQ)	
*	27 Naphthalene-D8	136	9.022	9.022	(1.000)	210026	0.80000	(a)	
	28 Naphthalene	128	9.054	9.054	(1.004)	330094	1.21206	1.35	
$	33 2-Methylnaphthalene-D10	152	9.937	9.937	(1.101)	179519	1.28473	1.43	
	34 2-Methylnaphthalene	142	9.976	9.977	(1.106)	212461	1.06931	1.19	
	35 1-Methylnaphthalene	142	10.104	10.105	(1.120)	193598	1.08397	1.20	
	46 Acenaphthylene	152	11.173	11.173	(0.983)	292146	0.97052	1.08	
*	48 Acenaphthene-D10	164	11.369	11.369	(1.000)	116599	0.80000	(a)	
	49 Acenaphthene	153	11.401	11.413	(1.003)	210550	1.14338	1.27	
$	56 Fluorene-D10	174	12.066	12.067	(1.061)	157625	1.15037	1.28	
	57 Fluorene	166	12.099	12.110	(1.064)	216666	1.11051	1.23	
*	66 Phenanthrene-D10	188	13.349	13.350	(1.000)	167306	0.80000	(a)	
	67 Phenanthrene	178	13.384	13.385	(1.003)	294962	1.27787	1.42	
	68 Anthracene	178	13.453	13.454	(1.008)	318651	1.16956	1.30	
	72 Fluoranthene	202	14.984	14.985	(1.122)	291506	1.31160	1.46	
$	73 Pyrene-D10	212	15.250	15.262	(0.890)	188448	1.36125	1.51	
	74 Pyrene	202	15.273	15.285	(0.891)	292166	1.32871	1.48	
	77 Benzo(a)anthracene	228	17.116	17.117	(0.999)	131482	1.13862	1.26(R)	
*	78 Chrysene-D12	240	17.138	17.139	(1.000)	73040	0.80000	(a)	
	79 Chrysene	228	17.182	17.183	(1.003)	168789	1.16561	1.30	
	82 Benzo(b)fluoranthene	252	19.319	19.320	(0.959)	74471	1.03430	1.15(R)	

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3629.D
Report Date: 29-Jul-2021 15:15

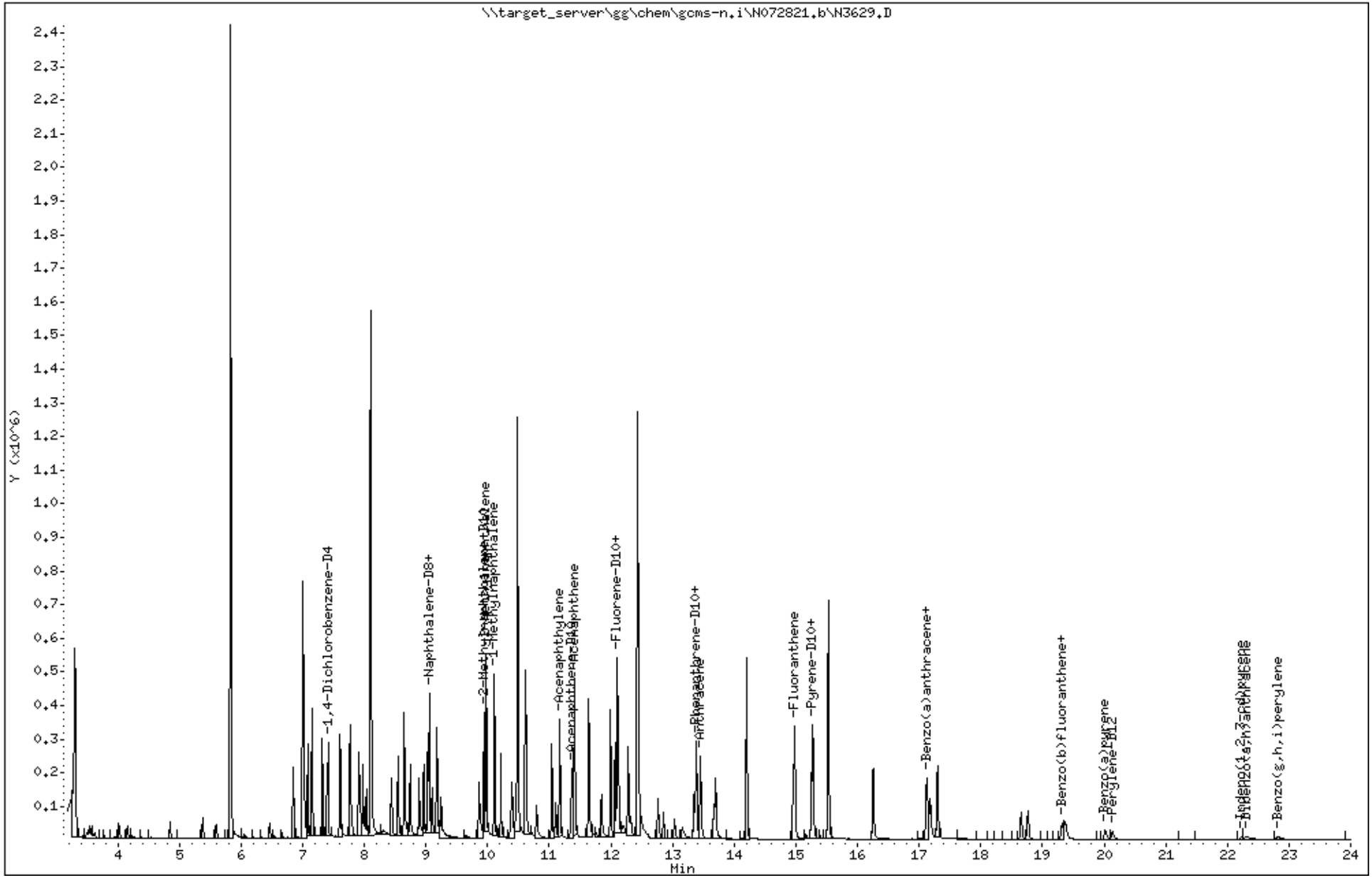
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
83	Benzo(k)fluoranthene	252	19.375	19.376	(0.962)	94499	0.81036	0.900(RH)	
84	Benzo(a)pyrene	252	20.015	20.016	(0.994)	57664	0.80035	0.889(R)	
* 85	Perylene-D12	264	20.138	20.139	(1.000)	48236	0.80000	(a)	
86	Indeno(1,2,3-cd)pyrene	276	22.238	22.227	(1.298)	19043	0.66341	0.737(RM)	M3
87	Dibenzo(a,h)anthracene	278	22.316	22.306	(1.108)	24932	0.64735	0.719(R)	
88	Benzo(g,h,i)perylene	276	22.822	22.811	(1.133)	33899	0.69279	0.770(R)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

3:30 pm, Jul 29, 2021

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3629.D
Date : 28-JUL-2021 21:55
Client ID: MW-01-SUMMER2021MSD
Instrument: gcms-n.i
Sample Info: WG303222-4,S04723
Volume Injected (uL): 1.0
Operator: JCG
Column phase: ZB5-MS
Column diameter: 0.25

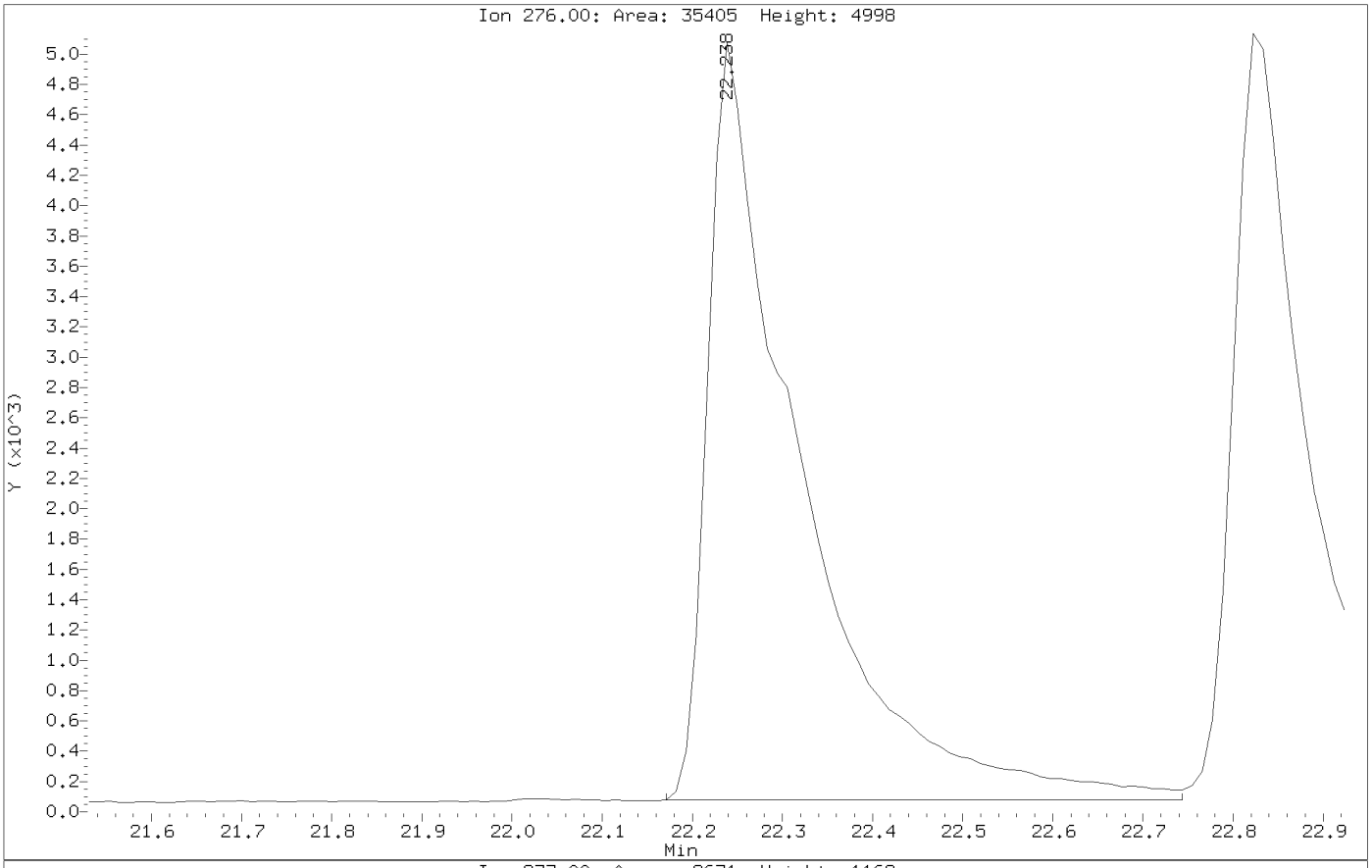


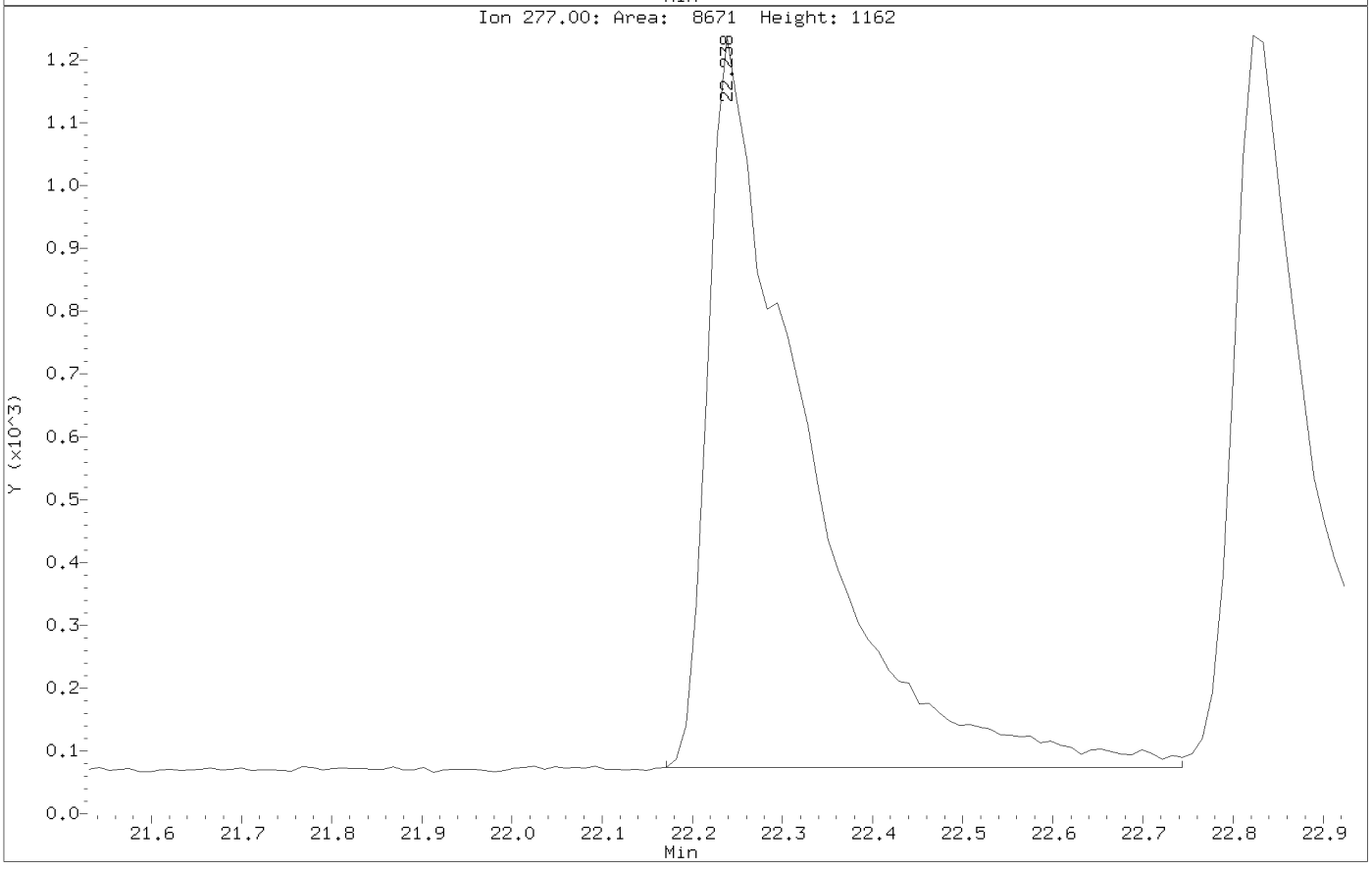
Katahdin Analytical Services 2000156

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3629.D
Injection Date: 28-JUL-2021 21:55
Instrument: gcms-n.i
Client Sample ID: MW-01-SUMMER2021MSD

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

BEFORE MANUAL INTEGRATION

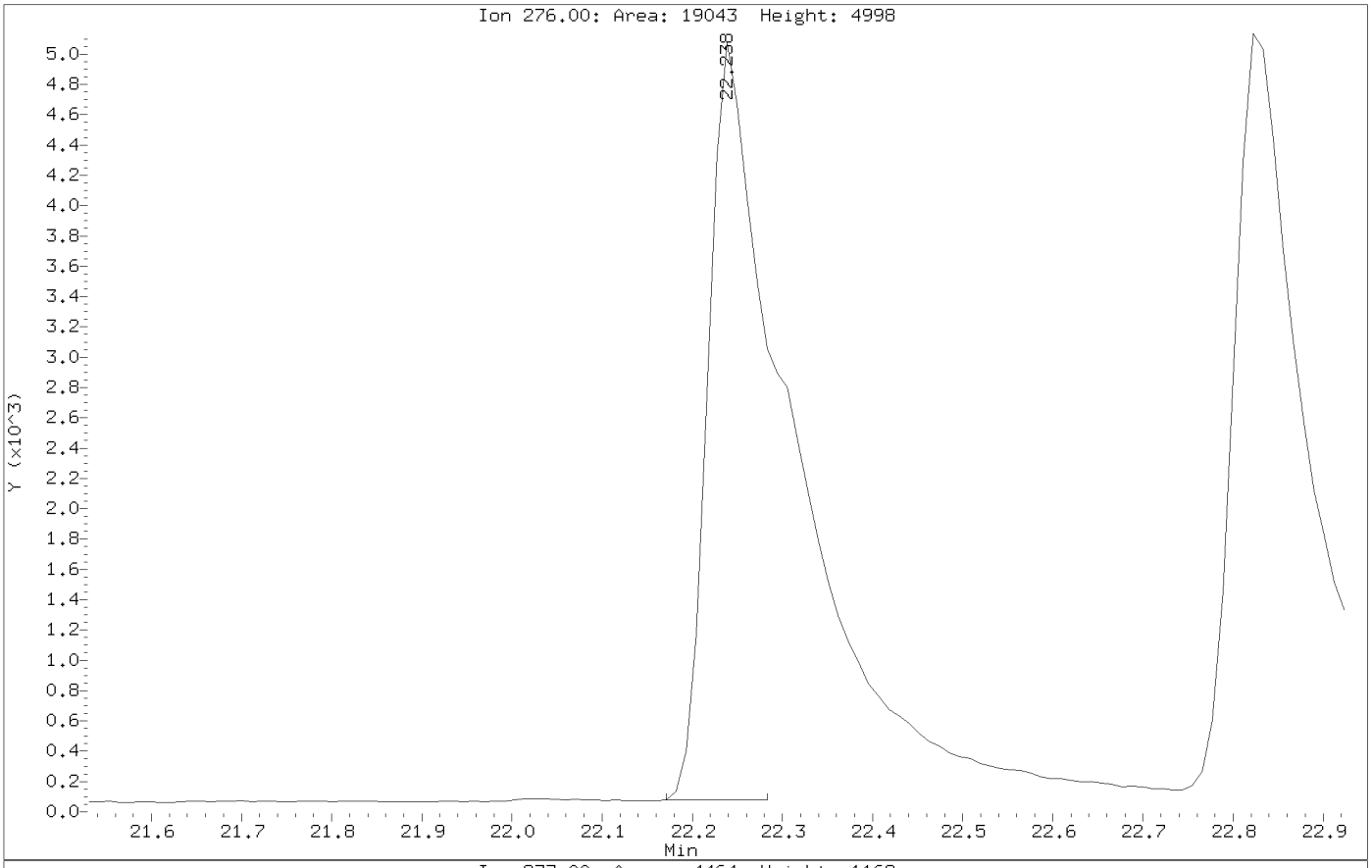


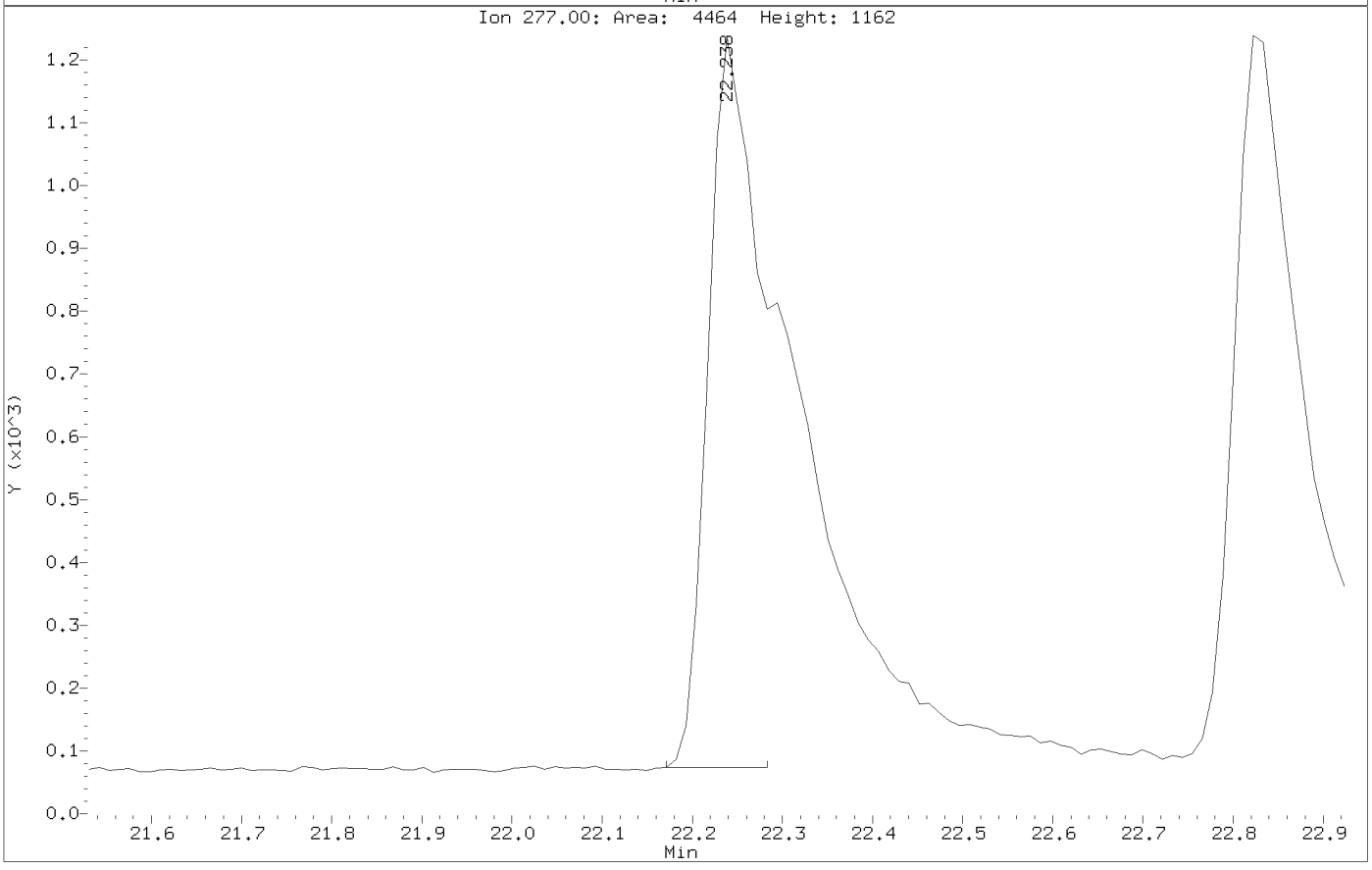


Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3629.D
Injection Date: 28-JUL-2021 21:55
Instrument: gcms-n.i
Client Sample ID: MW-01-SUMMER2021MSD

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

AFTER MANUAL INTEGRATION





Logbooks and Supporting Documents

* SM 72721

S/S SEP

KATAHDIN ANALYTICAL SERVICES, LLC.
ORGANIC EXTRACTIONS LOG - AQUEOUS SEMI-VOLATILES

Extraction Method: (check one)	SW846 3510 (SEP) ✓	SW846 3520 (CLLE)	
Analytical Method:(check one)	SW846 8270 ✓	SW846 8270 SIM ✓	Other:
Surrogate ID: SV3035	Surrogate ID:	Spike ID: SV3022	Spike ID: SV3027
Methylene Chloride Lot #: EB68246	pH Paper Lot # 6003003	KI Starch Paper ID:	If positive, note in comments and contact the PM, the client may need to resample.
pH (1st Extraction) ≤2	H_2SO_4 Lot # RE0730	pH (2nd Extraction) ≥11	NaOH Lot # ~~203~~ 2063442
$NaSO_4$ Lot # 27961001	Filter Paper Lot #: 17227520	Boiling Stones ID: 52421	Vial Lot #: 229921048A520
Nitrogen Bath Temperature: 36°C			Client ID vs KAS ID Verified:
Prep Start Time: 7:30	Prep End Time:	CLLE Start Time: —	CLLE End Date & Time: —

SS720

Date Extracted	Ext. Init.	Sample ID	Initial Vol. mL	Surr. Vol.	Spike Vol.	Fraction SV	Fraction SIM	Final Vol. mL	Date Conc.	Tray Location	Initials	Comments
7 27 21	SMGN	W6303 222-1 223-1	1000	1.00	NR	✓	✓	1mL	72821	D-4	SMGN	R572942 (-222) R572943 (-223)
		W6303222-2	↓		1.00		✓			-5		
		-3	960				✓			-6		S047234
		-4	900				✓			-7		-1
		-5	1070				✓			-8		S047242
		-6	1050				✓			-9		-2
		W6303223-2	1000			✓				-10		
		-3	~~200~~ 150		NR	✓				E-1		TCLP Blank RE PBT17024

EX-007 – Revision 7– 09/22/2020

QAEX451 - 000316

0000126

SV720/721

Date Extracted	Ext. Init.	Sample ID	Initial Vol. mL	Surr. Vol.	Spike Vol.	Fraction SV	Fraction SIM	Final Vol. mL	Date Conc.	Tray Location	Initials	Comments
7 27 21	SMGN	S04723-1	930	1.00	NR		✓	1mL	72821	E-2	SMGN	
		-2	950							-3		
		-3	930							-4		
		-4	1070							-5		
		-5	1070							-6		
		-6	1000							-7		
		-8	975							-8		
		S04724-1	1070							-9		
		-2	1070							-10		
		-3	1070							A-1		SV721
		-4	1040							-2		
		-5	1050							-3		
		-6	1050							-4		
		S04562-1	200			✓				-5		RE may double TCLP DI SURR
		-2	150			✓				-6		
		S04680 -4	1070							-7		Emulsion Diosepkreation
		-5								-8		
		-6								-9		
		S04698-1								10		
		S04699-1	1050							B-1		

Reviewed By_____ Date_____

Katahdin Analytical Services 2000160

KATAHDIN ANALYTICAL SERVICES
GC/MS SVOA INJ LOG INSTRUMENT: 5975B - N

DATE OF DFTPP INJECTION: 072821

JOB	SAMPLE	DATAFILE	DF	VIAL #	METHOD	UL INJ	CHEMIST	COMMENTS
WG302306-1	SQ ug DFTPP	ND 1978	1	1	DFTPPSLM	2.0	JLM	OK
-4	SSTD 2.0 NO 728	N 3618 JLM		2	NSPSLM94			✓
-3	0.5	19		3				✓
-2	0.2	20		4				✓
-5	7.0	21		5				✓
-6	10	22		6				✓
-7	15	23		7				✓
-8	IND	24		8				
	WG303222-2	25		9				OK
	↓ -1	26		10				OK
	504723-1	27		11				OK
	WG303222-3	28		12				OK
	↓ -4	29		13				OK
	504723-2	30		14				OK
	-3	31		15				OK
	-4	32		16				OK
	-5	33		17				OK
	-6	34		18				OK
	↓ -8	35		19				OK
	504724-1	36		20				OK
	↓ -3	37		21				OK
-9	SSTD 2.0 NO728	38		22				OK
-10	↓	39		↓				—
-11		40						—
	SPARGE TUBE	↓ 41	↓	23	↓	↓	↓	OK BKG TEST

STANDARD	CODE
DFTPP	53619
CAL. STD.-	53619 53614
ICV. STD.	53600
IS MIX	53615

REVIEWED AND APPROVED BY: _____
DATE: _____

Katahdin Analytical Services 2000161

VOLATILE PETROLEUM HYDROCARBON DATA

QC Summary Section

Katahdin
ANALYTICAL SERVICES

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** LO-58 Nike Missile Battery Launch Site **Matrix:** AQ
Lab Code: KAS **SDG:** SO4723

Client Sample ID	Lab Sample ID	Col. ID	DBT-FID #	DBT-PID #
MW-01-SUMMER2021	SO4723-1	B	92.5	81.4
MW-02-SUMMER2021	SO4723-2	B	95.6	85.3
MW-03-SUMMER2021	SO4723-3	B	96.5	86.4
MW-04-SUMMER2021	SO4723-4	B	89.6	80.4
MW-05-SUMMER2021	SO4723-5	B	94.2	88.8
MW-FD-SUMMER2021	SO4723-6	B	98.2	87.8
GW-TB-SUMMER2021	SO4723-7	B	76.5	70.4
GW-EB-SUMMER2021	SO4723-8	B	84.3	75.4
Method Blank	WG303232-1	B	90.5	81.3
Laboratory Control S	WG303232-2	B	107.	96.0
Laboratory Control S	WG303232-3	B	106.	96.0
Matrix Spike	WG303232-4	B	105.	93.9
Matrix Spike Duplica	WG303232-5	B	102.	92.5

		QC Limits
DBT-FID	2,5-DIBROMOTOLUENE (FID)	70-130
DBT-PID	2,5-DIBROMOTOLUENE (PID)	70-130

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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Form 4
Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site
Lab File ID : 2OG10063.D
Instrument ID : GC02

SDG : SO4723
Lab Sample ID : WG303232-1
Date Analyzed : 27-JUL-21
Time Analyzed : 09:26
Date Extracted : 27-JUL-21

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG303232-2	2OG10064.	07/27/21	10:07
Laboratory Control S	WG303232-3	2OG10065.	07/27/21	10:48
GW-TB-SUMMER2021	SO4723-7	2OG10067.	07/27/21	12:57
GW-EB-SUMMER2021	SO4723-8	2OG10068.	07/27/21	13:38
MW-01-SUMMER2021	SO4723-1	2OG10069.	07/27/21	14:19
MW-02-SUMMER2021	SO4723-2	2OG10070.	07/27/21	15:00
MW-03-SUMMER2021	SO4723-3	2OG10071.	07/27/21	15:40
MW-04-SUMMER2021	SO4723-4	2OG10072.	07/27/21	16:21
MW-05-SUMMER2021	SO4723-5	2OG10073.	07/27/21	17:02
MW-FD-SUMMER2021	SO4723-6	2OG10074.	07/27/21	17:43
Matrix Spike	WG303232-4	2OG10081.	07/27/21	22:37
Matrix Spike Duplica	WG303232-5	2OG10082.	07/27/21	23:19

Form 8
GC Analytical Sequence

Lab Name : Katahdin Analytical Services **SDG :** SO4723
Project : LO-58 Nike Missile Battery Launch Site
Instrument ID : GC02

Client Sample ID	Lab Sample ID	Date Analyzed	Time Analyzed	DBT (FID)	DBT (PID)
Initial Calibration	WG301241-4	06/22/21	14:24		31.078
Initial Calibration	WG301241-4	06/22/21	14:24	31.068	
Initial Calibration	WG301241-1	06/22/21	15:05		31.078
Initial Calibration	WG301241-1	06/22/21	15:05	31.066	
Initial Calibration	WG301241-2	06/22/21	15:45		31.072
Initial Calibration	WG301241-2	06/22/21	15:45	31.066	
Initial Calibration	WG301241-3	06/22/21	16:26		31.077
Initial Calibration	WG301241-3	06/22/21	16:26	31.067	
Initial Calibration	WG301241-5	06/22/21	17:07		31.083
Initial Calibration	WG301241-5	06/22/21	17:07	31.07	
Initial Calibration	WG301241-6	06/22/21	17:48		31.088
Initial Calibration	WG301241-6	06/22/21	17:48	31.076	
Independent Source	WG301241-7	06/22/21	18:30	31.074	31.084
Continuing Calibrati	WG303232-8	07/27/21	07:40	31.075	31.085
Method Blank	WG303232-1	07/27/21	09:26	31.076	31.086
Laboratory Control S	WG303232-2	07/27/21	10:07	31.074	31.084
Laboratory Control S	WG303232-3	07/27/21	10:48	31.073	31.084
GW-TB-SUMMER2021	SO4723-7	07/27/21	12:57	31.074	31.081
GW-EB-SUMMER2021	SO4723-8	07/27/21	13:38	31.075	31.086
MW-01-SUMMER2021	SO4723-1	07/27/21	14:19	31.077	31.087
MW-02-SUMMER2021	SO4723-2	07/27/21	15:00	31.076	31.086
MW-03-SUMMER2021	SO4723-3	07/27/21	15:40	31.077	31.087
MW-04-SUMMER2021	SO4723-4	07/27/21	16:21	31.076	31.086
MW-05-SUMMER2021	SO4723-5	07/27/21	17:02	31.073	31.083
MW-FD-SUMMER2021	SO4723-6	07/27/21	17:43	31.082	31.092
Matrix Spike	WG303232-4	07/27/21	22:37	31.078	31.088
Matrix Spike Duplica	WG303232-5	07/27/21	23:19	31.078	31.088
Continuing Calibrati	WG303232-9	07/28/21	01:25	31.079	31.089

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Sample Data Section

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

* Compound recovery or percent RPD (relative percent difference) was outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

C Indicates that the flagged compound did not meet DoD criteria in the corresponding daily calibration verification (CV).

L Indicates that the flagged compound did not meet DoD criteria in the corresponding Laboratory Control Sample (LCS) and/or Laboratory Control Sample Duplicate (LCSD) prepared and/or analyzed concurrently with the sample.

M Indicates that the flagged compound did not meet DoD criteria in the Matrix Spike and/or Matrix Spike Duplicate prepared and/or analyzed concurrently with the native sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-1
Client ID: MW-01-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: 2OG10069.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		92.5	%					
2,5-Dibromotoluene (PID)		81.4	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10069.D
Report Date: 30-Jul-2021 09:57

Katahdin Analytical Services

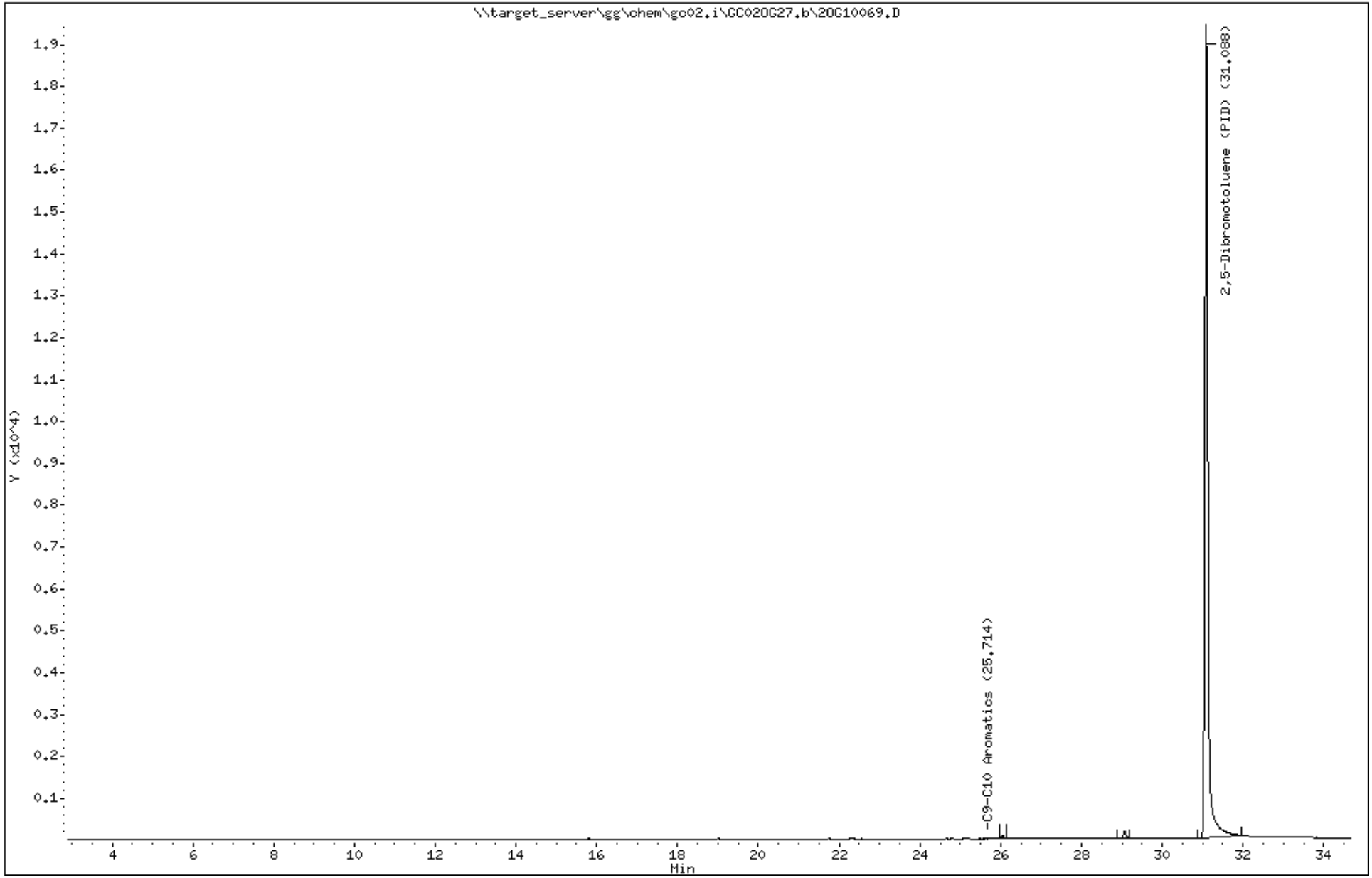
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10069.D
Lab Smp Id: SO4723-1 Client Smp ID: MW-01-SUMMER2021
Inj Date : 27-JUL-2021 14:19
Operator : DL Inst ID: gc02.i
Smp Info : SO4723-1
Misc Info : WG303232,WG301241-4
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07 Cal File: 2OF10009.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	31.087	31.083	0.004	203358	81.4349	81.4	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10069.D
Date : 27-JUL-2021 14:19
Client ID: MW-01-SUMMER2021
Instrument: gc02.i
Sample Info: S04723-1
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000011

Data File: 2OG10069.D
Report Date: 30-Jul-2021 09:59

Katahdin Analytical Services

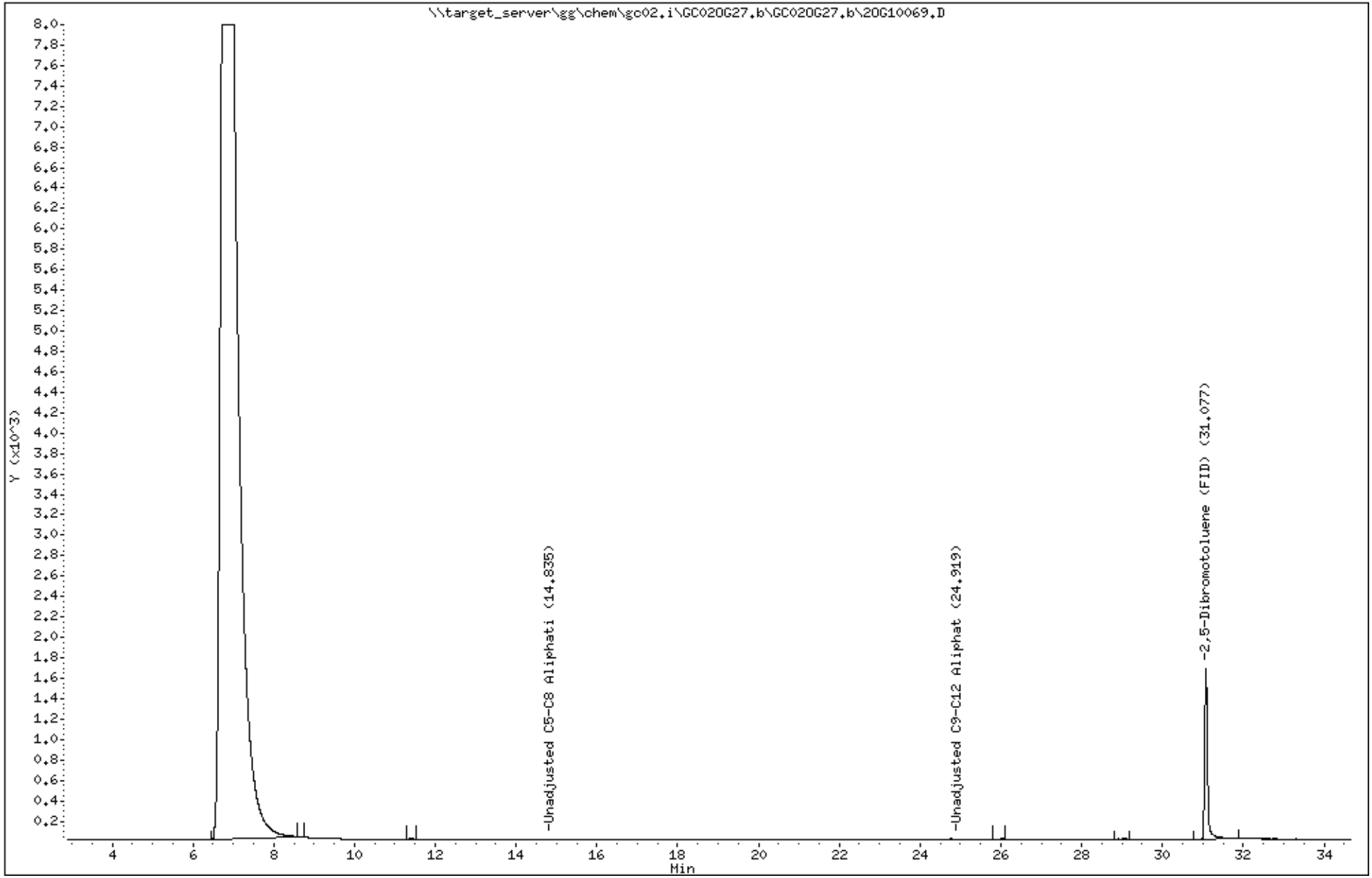
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10069.D
Lab Smp Id: SO4723-1 Client Smp ID: MW-01-SUMMER2021
Inj Date : 27-JUL-2021 14:19
Operator : DL Inst ID: gc02.i
Smp Info : SO4723-1
Misc Info : WG303232,WG301241-4
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	31.077	31.076	0.001	167089	92.5020	92.5	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20G10069.D
Date : 27-JUL-2021 14:19
Client ID: MW-01-SUMMER2021
Instrument: gc02.i
Sample Info: S04723-1
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000013

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-2
Client ID: MW-02-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: 2OG10070.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		95.6	%					
2,5-Dibromotoluene (PID)		85.3	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10070.D
Report Date: 30-Jul-2021 09:57

Katahdin Analytical Services

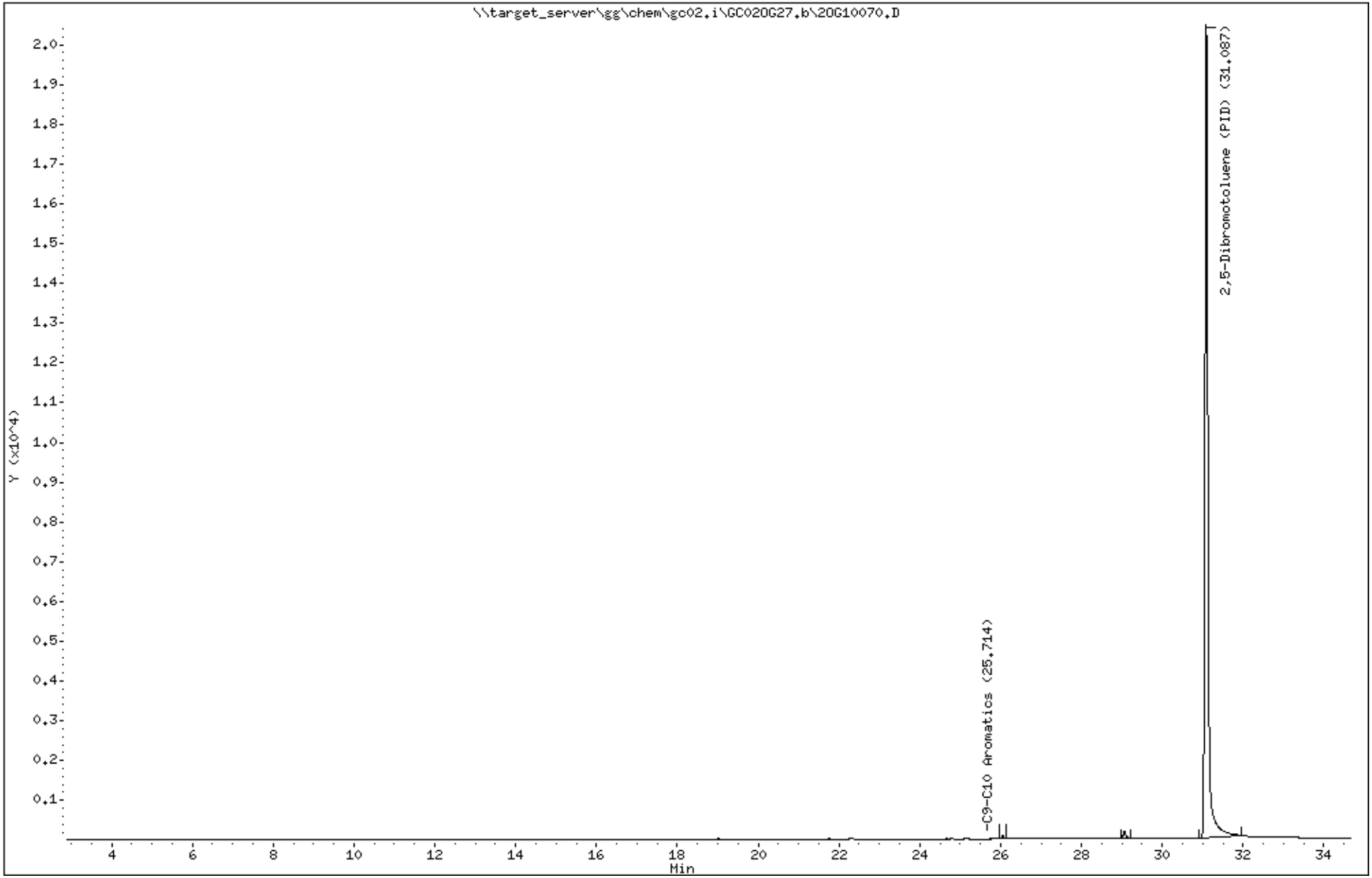
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10070.D
Lab Smp Id: SO4723-2 Client Smp ID: MW-02-SUMMER2021
Inj Date : 27-JUL-2021 15:00
Operator : DL Inst ID: gc02.i
Smp Info : SO4723-2
Misc Info : WG303232,WG301241-4
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07 Cal File: 2OF10009.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	31.086	31.083	0.003	212934	85.2696	85.3	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10070.D
Date : 27-JUL-2021 15:00
Client ID: MW-02-SUMMER2021
Instrument: gc02.i
Sample Info: S04723-2
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000016

Data File: 2OG10070.D
Report Date: 30-Jul-2021 09:59

Katahdin Analytical Services

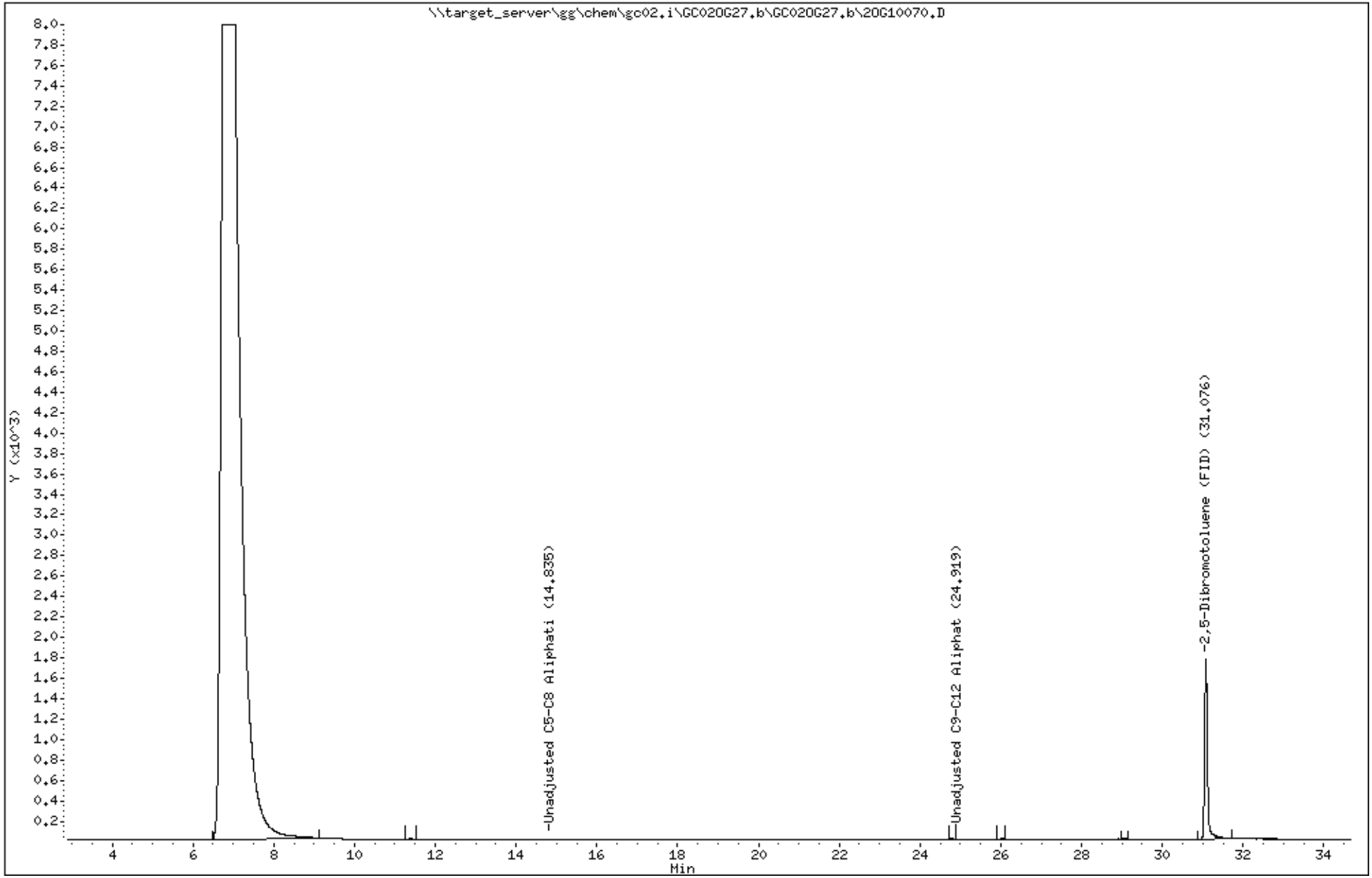
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10070.D
Lab Smp Id: SO4723-2 Client Smp ID: MW-02-SUMMER2021
Inj Date : 27-JUL-2021 15:00
Operator : DL Inst ID: gc02.i
Smp Info : SO4723-2
Misc Info : WG303232,WG301241-4
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	31.076	31.076	0.000	172631	95.5701	95.6	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20G10070.D
Date : 27-JUL-2021 15:00
Client ID: MW-02-SUMMER2021
Instrument: gc02.i
Sample Info: S04723-2
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000018

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-3
Client ID: MW-03-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: 2OG10071.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		96.5	%					
2,5-Dibromotoluene (PID)		86.4	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10071.D
Report Date: 30-Jul-2021 09:57

Katahdin Analytical Services

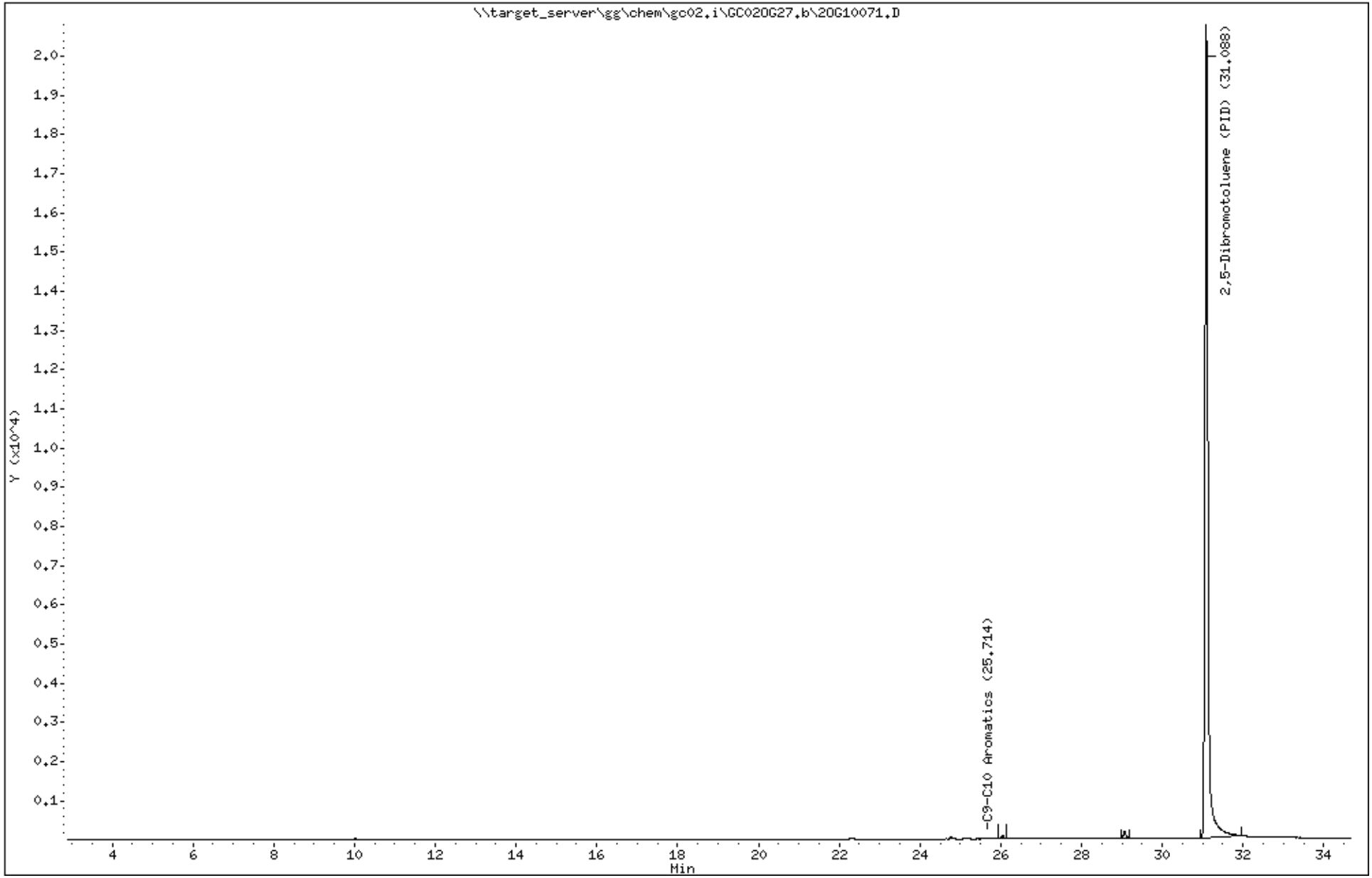
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10071.D
Lab Smp Id: SO4723-3 Client Smp ID: MW-03-SUMMER2021
Inj Date : 27-JUL-2021 15:40
Operator : DL Inst ID: gc02.i
Smp Info : SO4723-3
Misc Info : WG303232,WG301241-4
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07 Cal File: 2OF10009.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	31.087	31.083	0.004	215675	86.3672	86.4	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10071.D
Date : 27-JUL-2021 15:40
Client ID: MW-03-SUMMER2021
Instrument: gc02.i
Sample Info: S04723-3
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000021

Data File: 2OG10071.D
Report Date: 30-Jul-2021 09:59

Katahdin Analytical Services

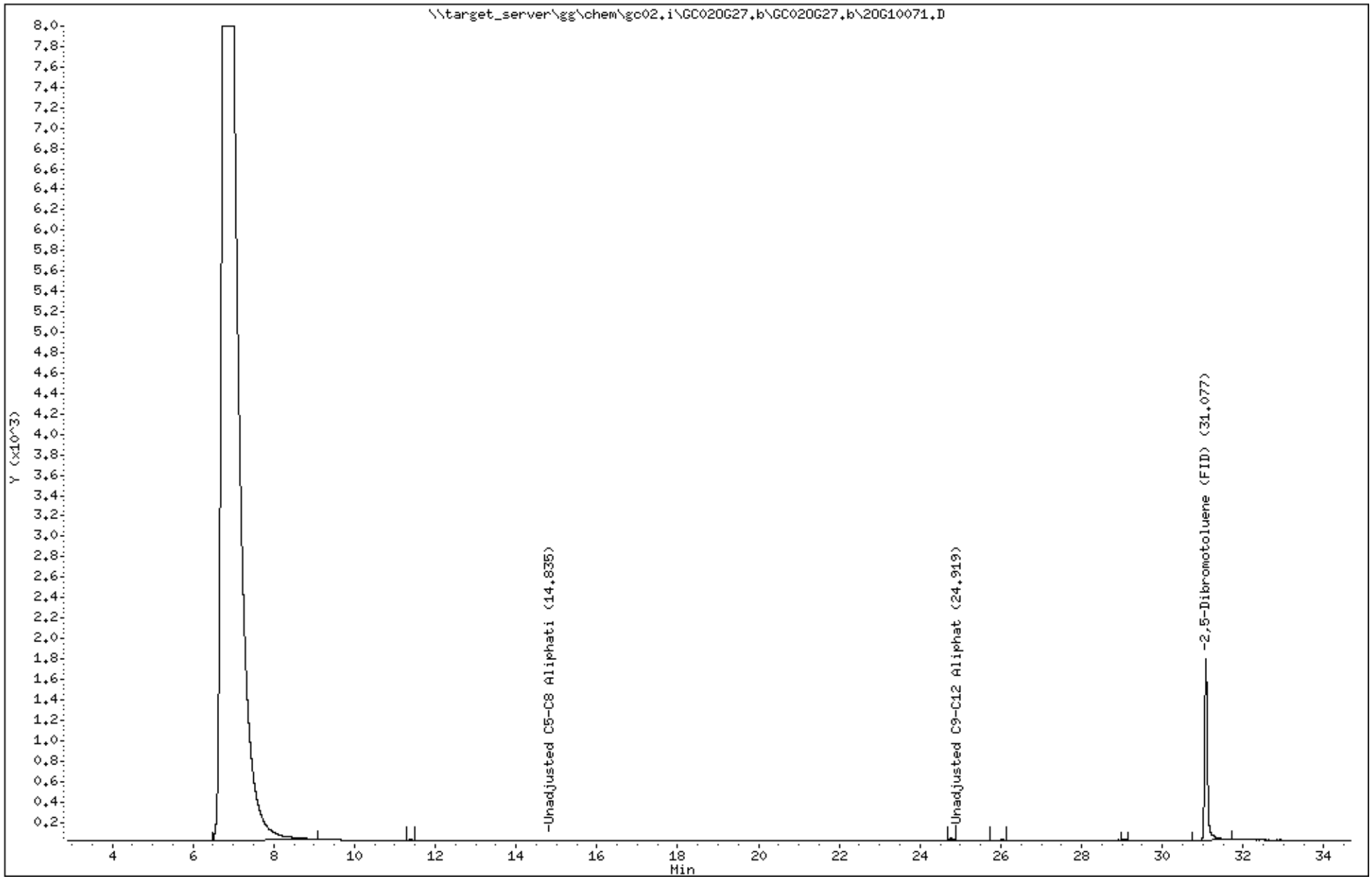
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10071.D
Lab Smp Id: SO4723-3 Client Smp ID: MW-03-SUMMER2021
Inj Date : 27-JUL-2021 15:40
Operator : DL Inst ID: gc02.i
Smp Info : SO4723-3
Misc Info : WG303232,WG301241-4
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	31.077	31.076	0.001	174337	96.5145	96.5	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20G10071.D
Date : 27-JUL-2021 15:40
Client ID: MW-03-SUMMER2021
Instrument: gc02.i
Sample Info: S04723-3
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000023

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-4
Client ID: MW-04-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: 2OG10072.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		89.6	%					
2,5-Dibromotoluene (PID)		80.4	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10072.D
Report Date: 30-Jul-2021 09:57

Katahdin Analytical Services

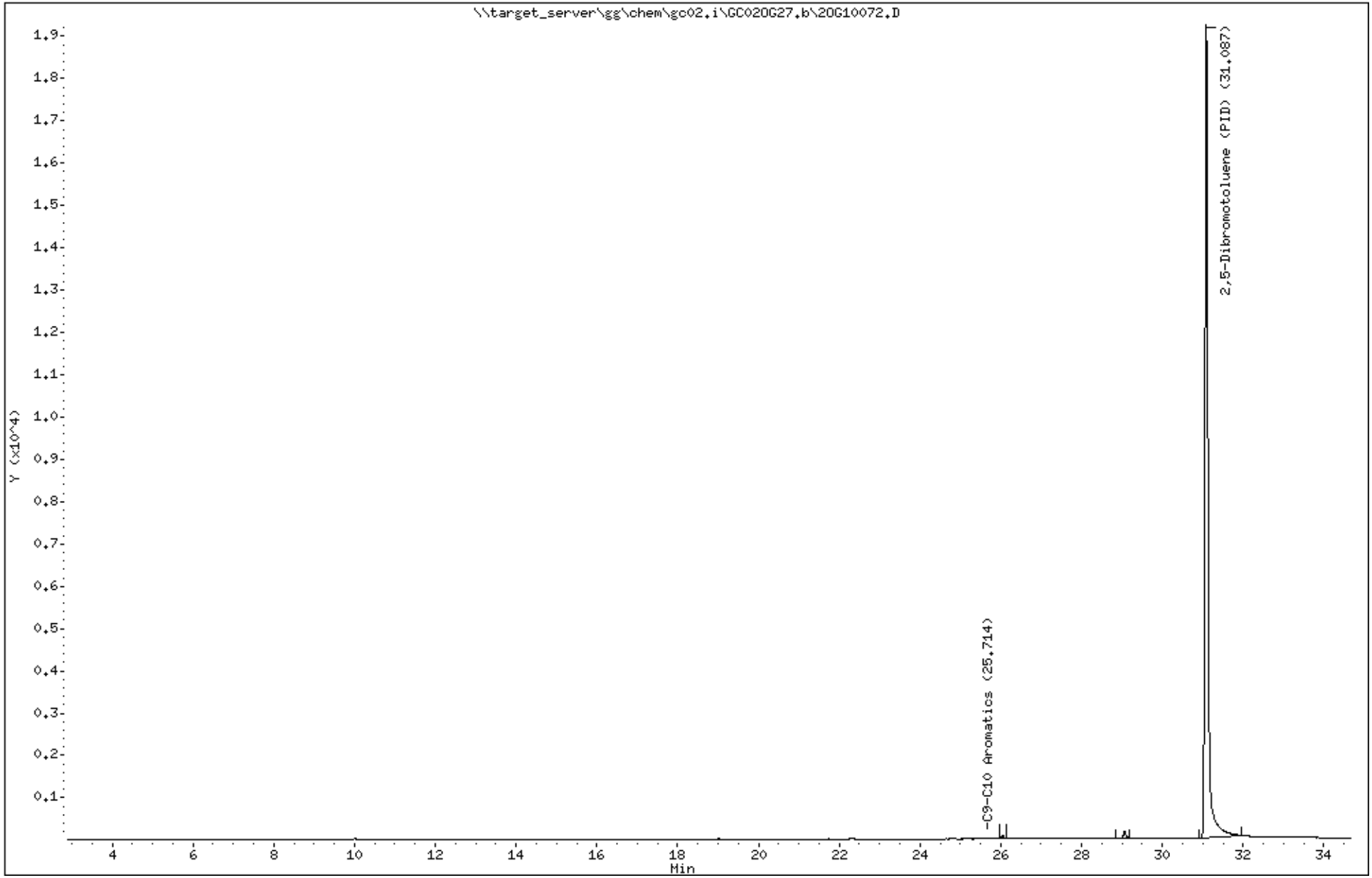
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10072.D
Lab Smp Id: SO4723-4 Client Smp ID: MW-04-SUMMER2021
Inj Date : 27-JUL-2021 16:21
Operator : DL Inst ID: gc02.i
Smp Info : SO4723-4
Misc Info : WG303232,WG301241-4
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07 Cal File: 2OF10009.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	31.086	31.083	0.003	200745	80.3885	80.4	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10072.D
Date : 27-JUL-2021 16:21
Client ID: MW-04-SUMMER2021
Instrument: gc02.i
Sample Info: S04723-4
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000026

Data File: 2OG10072.D
Report Date: 30-Jul-2021 09:59

Katahdin Analytical Services

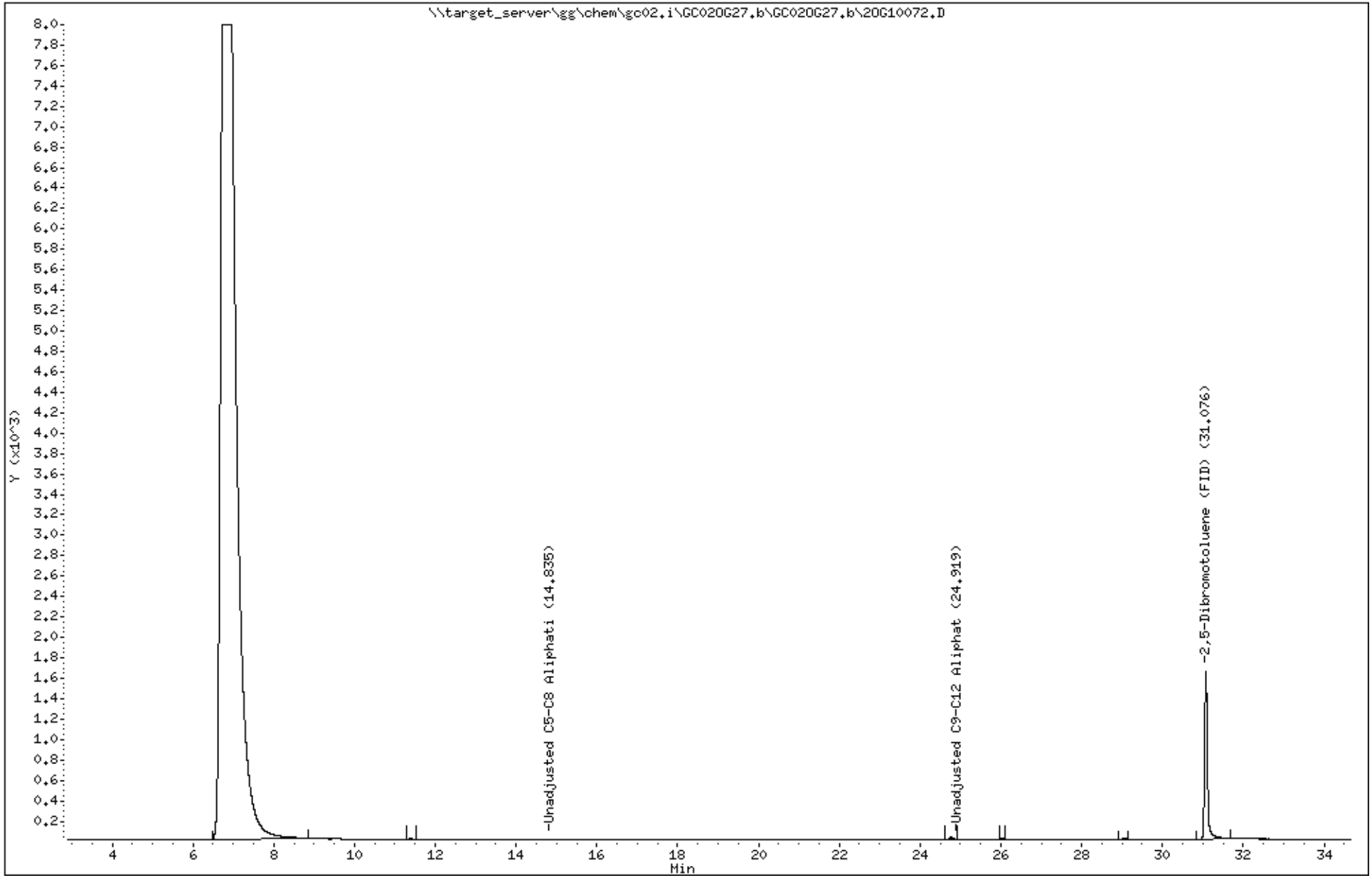
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10072.D
Lab Smp Id: SO4723-4 Client Smp ID: MW-04-SUMMER2021
Inj Date : 27-JUL-2021 16:21
Operator : DL Inst ID: gc02.i
Smp Info : SO4723-4
Misc Info : WG303232,WG301241-4
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	31.076	31.076	0.000	161943	89.6531	89.6	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20G10072.D
Date : 27-JUL-2021 16:21
Client ID: MW-04-SUMMER2021
Instrument: gc02.i
Sample Info: S04723-4
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000028

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-5
Client ID: MW-05-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: 2OG10073.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	J	82	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	J	76	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		94.2	%					
2,5-Dibromotoluene (PID)		88.8	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10073.D
Report Date: 30-Jul-2021 09:57

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10073.D
Lab Smp Id: SO4723-5 Client Smp ID: MW-05-SUMMER2021
Inj Date : 27-JUL-2021 17:02
Operator : DL Inst ID: gc02.i
Smp Info : SO4723-5
Misc Info : WG303232,WG301241-4
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07 Cal File: 2OF10009.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

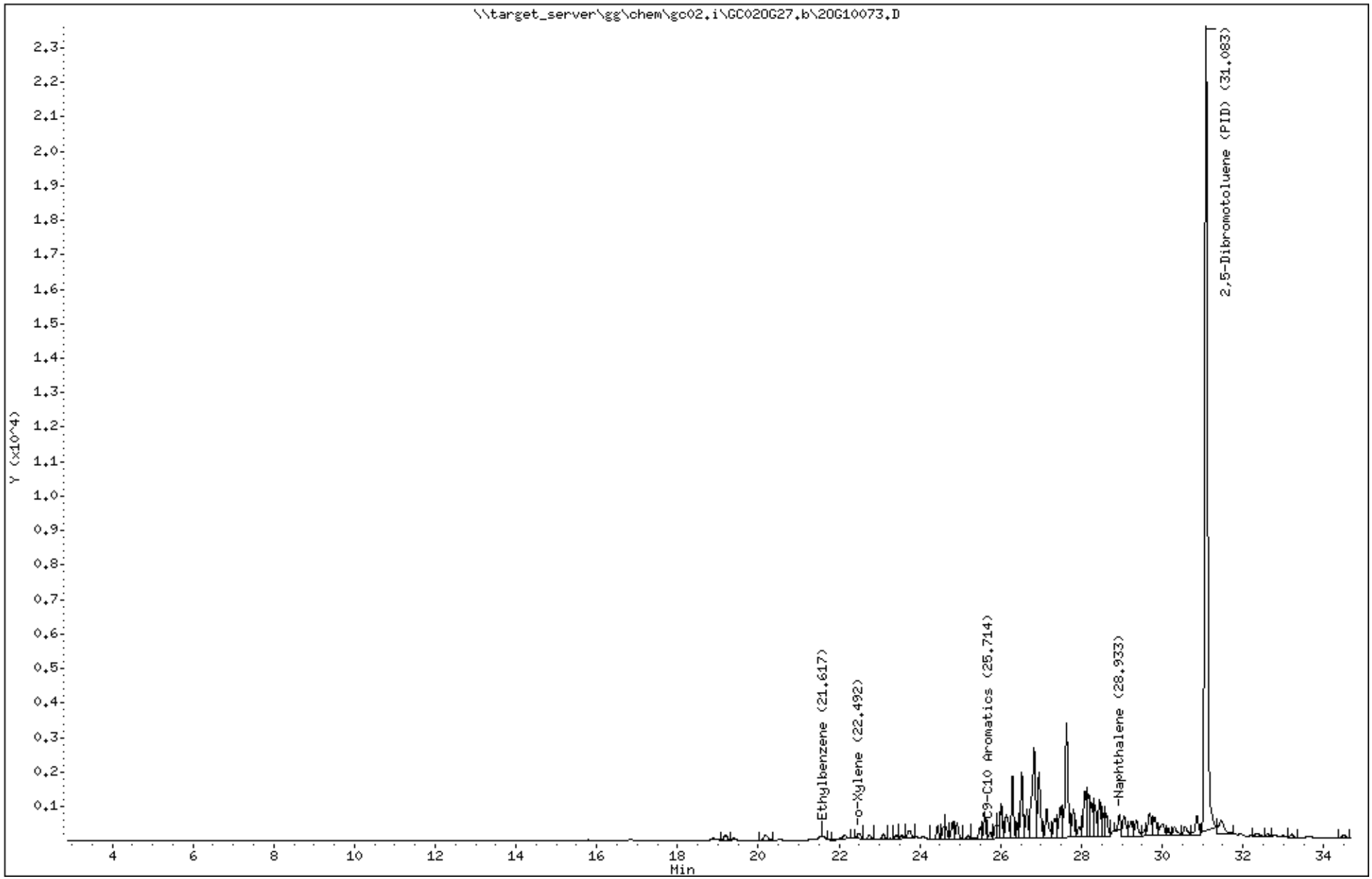
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
S 9 C9-C10 Aromatics	22.611-28.816			276378	75.7710	75.8(a)	
$ 11 2,5-Dibromotoluene (PID)	31.083	31.083	0.000	221662	88.7647	88.8(M)	M2

DL
10:13 am, Jul 30, 2021

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10073.D
Date : 27-JUL-2021 17:02
Client ID: MW-05-SUMMER2021
Instrument: gc02.i
Sample Info: S04723-5
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000031

Data File: 2OG10073.D
Report Date: 30-Jul-2021 10:00

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10073.D
Lab Smp Id: SO4723-5 Client Smp ID: MW-05-SUMMER2021
Inj Date : 27-JUL-2021 17:02
Operator : DL Inst ID: gc02.i
Smp Info : SO4723-5
Misc Info : WG303232,WG301241-4
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

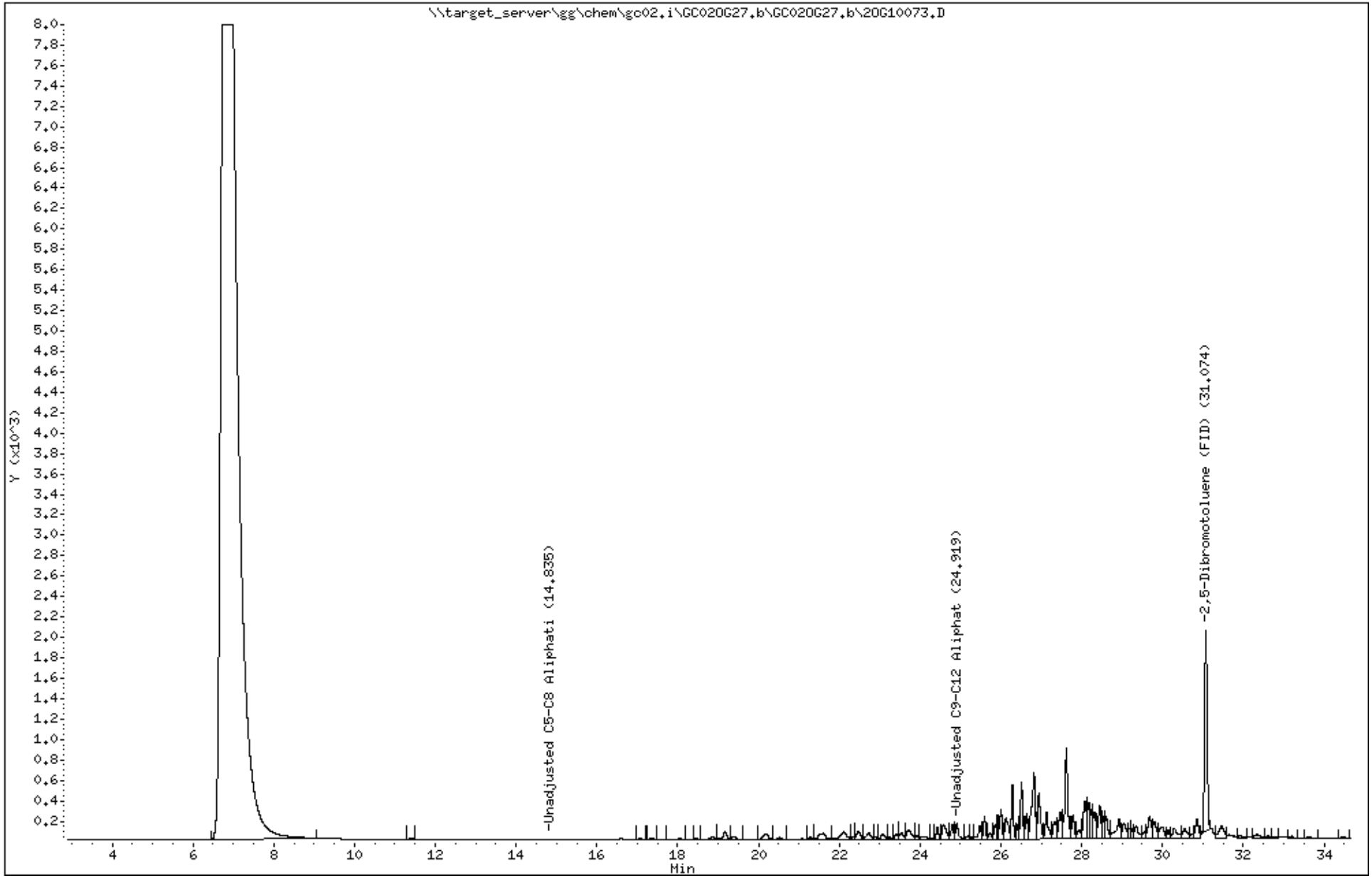
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
S 17 Unadjusted C9-C12 Aliphatics	21.028-28.810			867681	158.143	158	
$ 21 2,5-Dibromotoluene (FID)	31.073	31.076	-0.003	170088	94.1623	94.2(M)	M2

DL
10:13 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20G10073.D
Date : 27-JUL-2021 17:02
Client ID: MW-05-SUMMER2021
Instrument: gc02.i
Sample Info: S04723-5
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000033

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-6
Client ID: MW-FD-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: 2OG10074.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		98.2	%					
2,5-Dibromotoluene (PID)		87.8	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10074.D
Report Date: 30-Jul-2021 09:57

Katahdin Analytical Services

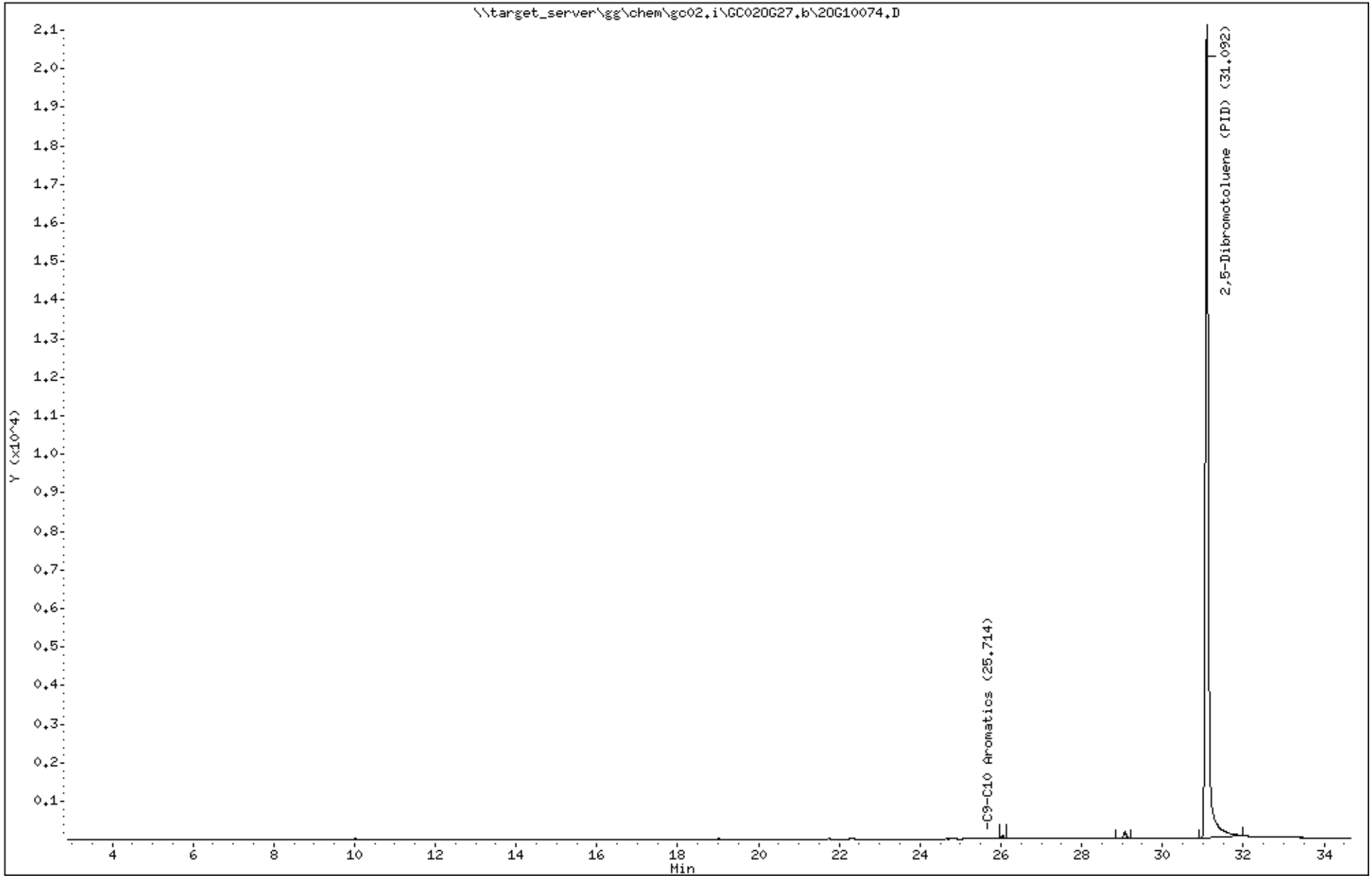
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10074.D
Lab Smp Id: SO4723-6 Client Smp ID: MW-FD-SUMMER2021
Inj Date : 27-JUL-2021 17:43
Operator : DL Inst ID: gc02.i
Smp Info : SO4723-6
Misc Info : WG303232,WG301241-4
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07 Cal File: 2OF10009.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	31.092	31.083	0.009	219341	87.8353	87.8	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10074.D
Date : 27-JUL-2021 17:43
Client ID: MW-FD-SUMMER2021
Instrument: gc02.i
Sample Info: S04723-6
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000036

Data File: 2OG10074.D
Report Date: 30-Jul-2021 10:00

Katahdin Analytical Services

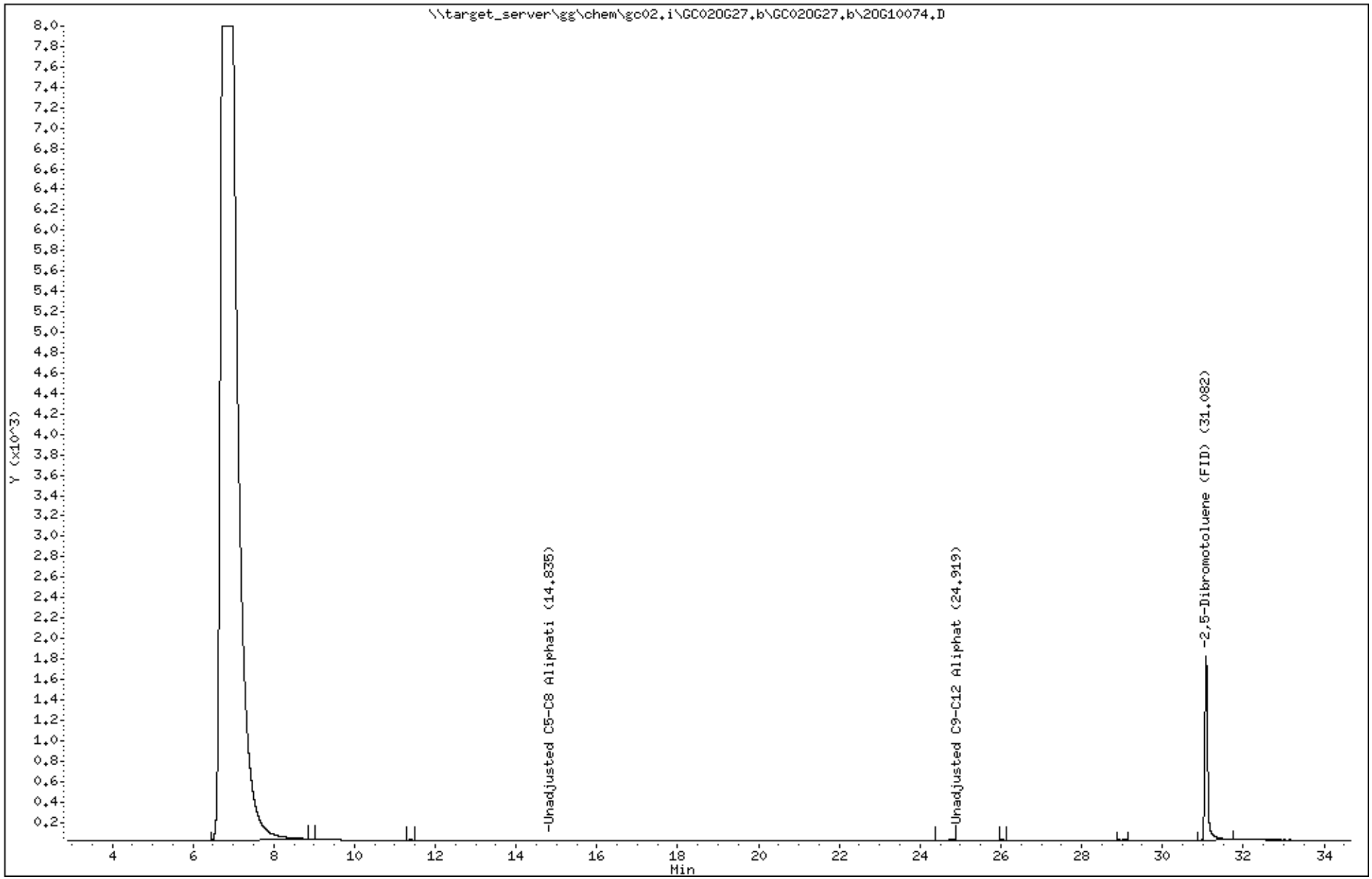
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10074.D
Lab Smp Id: SO4723-6 Client Smp ID: MW-FD-SUMMER2021
Inj Date : 27-JUL-2021 17:43
Operator : DL Inst ID: gc02.i
Smp Info : SO4723-6
Misc Info : WG303232,WG301241-4
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	31.082	31.076	0.006	177417	98.2197	98.2	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20G10074.D
Date : 27-JUL-2021 17:43
Client ID: MW-FD-SUMMER2021
Instrument: gc02.i
Sample Info: S04723-6
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000038

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-7
Client ID: GW-TB-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: 2OG10067.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		76.5	%					
2,5-Dibromotoluene (PID)		70.4	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10067.D
Report Date: 30-Jul-2021 09:57

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10067.D
Lab Smp Id: SO4723-7 Client Smp ID: GW-TB-SUMMER2021
Inj Date : 27-JUL-2021 12:57
Operator : DL Inst ID: gc02.i
Smp Info : SO4723-7
Misc Info : WG303232,WG301241-4
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07 Cal File: 2OF10009.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	31.081	31.083	-0.002	175815	70.4052	70.4(M)	M9

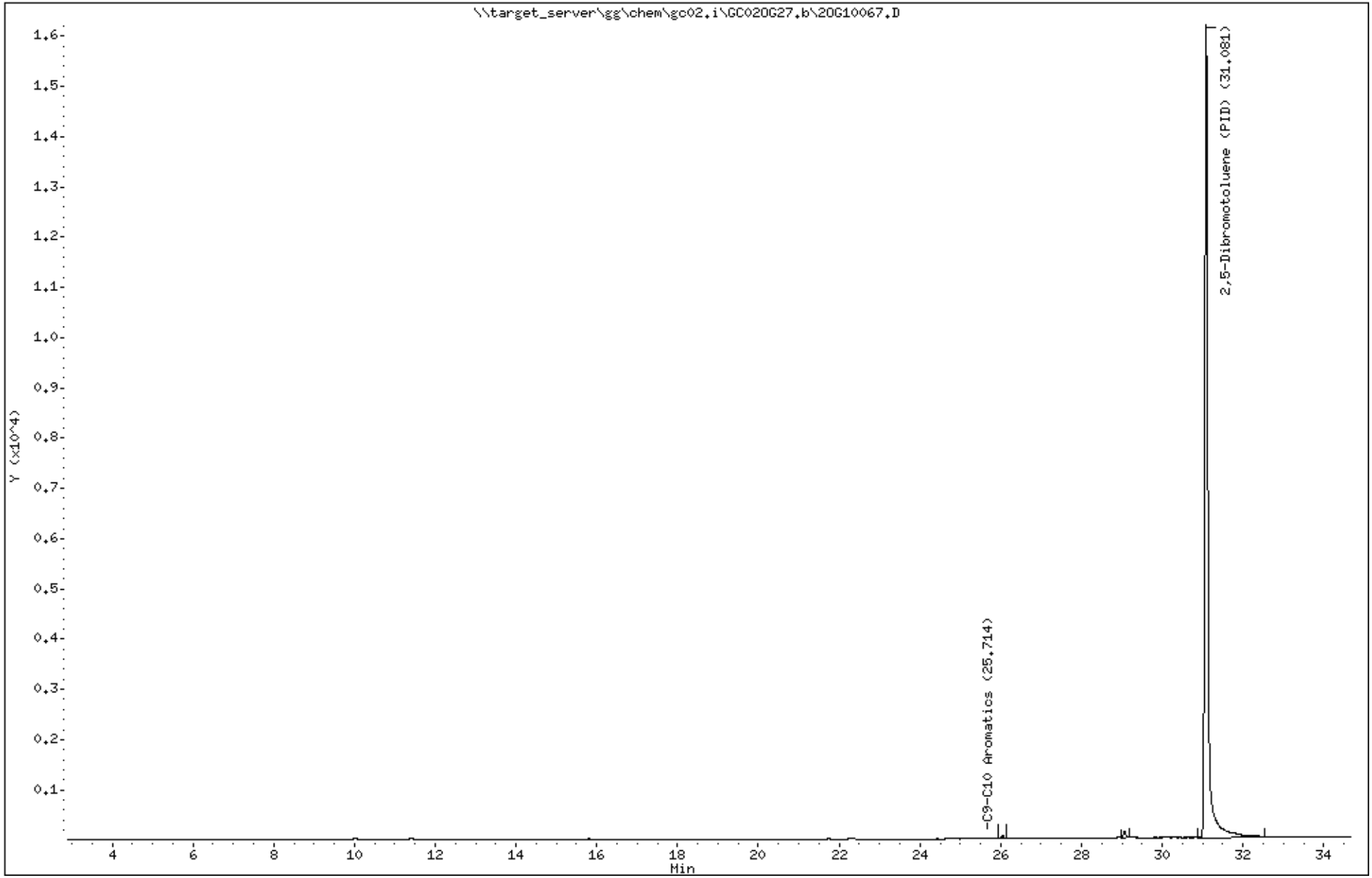
QC Flag Legend

M - Compound response manually integrated.

DL

10:13 am, Jul 30, 2021

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10067.D
Date : 27-JUL-2021 12:57
Client ID: GW-TB-SUMMER2021
Instrument: gc02.i
Sample Info: S04723-7
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000041

Data File: 2OG10067.D
Report Date: 30-Jul-2021 09:59

Katahdin Analytical Services

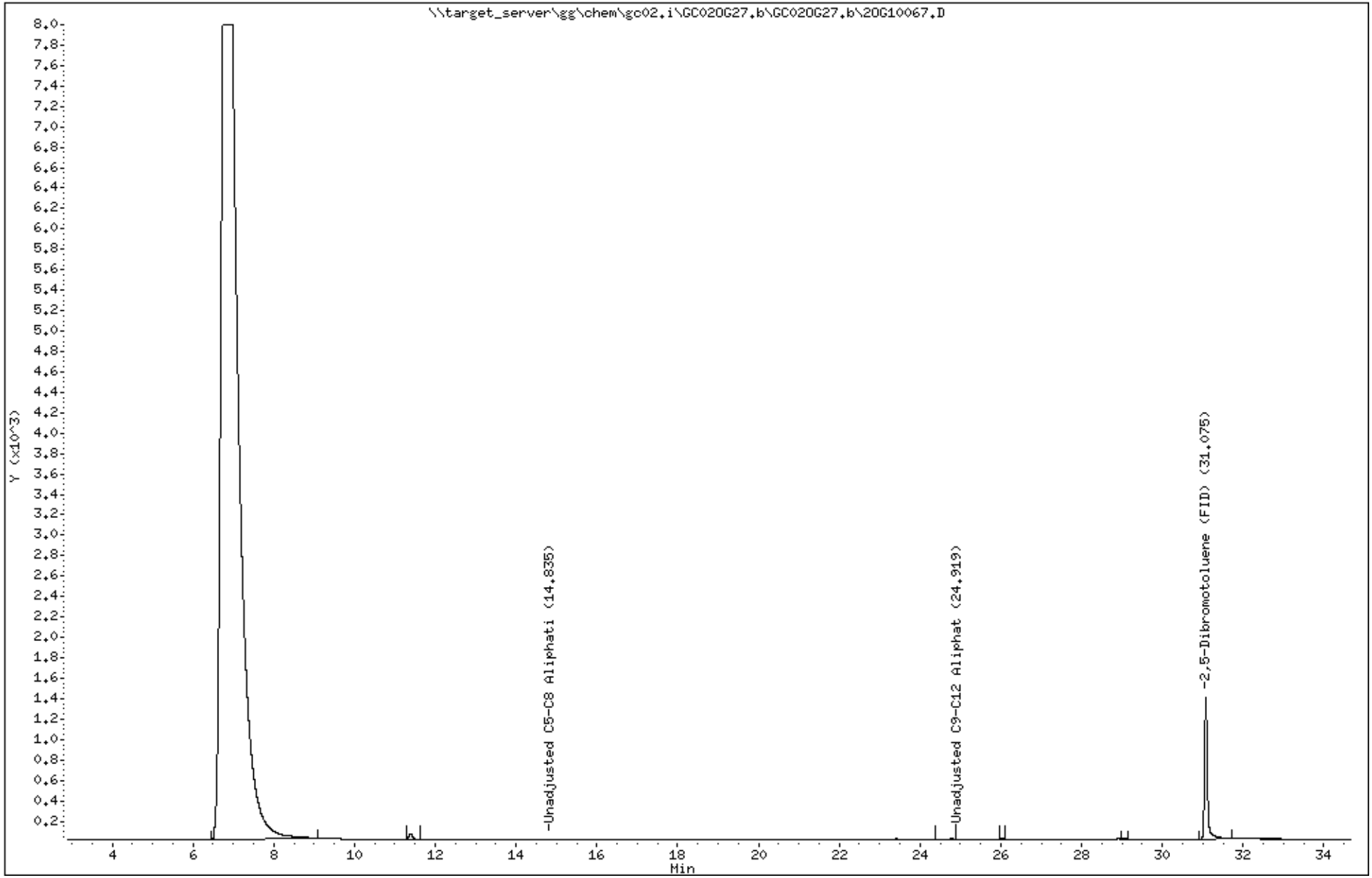
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10067.D
Lab Smp Id: SO4723-7 Client Smp ID: GW-TB-SUMMER2021
Inj Date : 27-JUL-2021 12:57
Operator : DL Inst ID: gc02.i
Smp Info : SO4723-7
Misc Info : WG303232,WG301241-4
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	31.074	31.076	-0.002	138182	76.4988	76.5	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20G10067.D
Date : 27-JUL-2021 12:57
Client ID: GW-TB-SUMMER2021
Instrument: gc02.i
Sample Info: S04723-7
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000043

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4723-8
Client ID: GW-EB-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4723
Lab File ID: 2OG10068.D

Sample Date: 22-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		84.3	%					
2,5-Dibromotoluene (PID)		75.4	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10068.D
Report Date: 30-Jul-2021 09:57

Katahdin Analytical Services

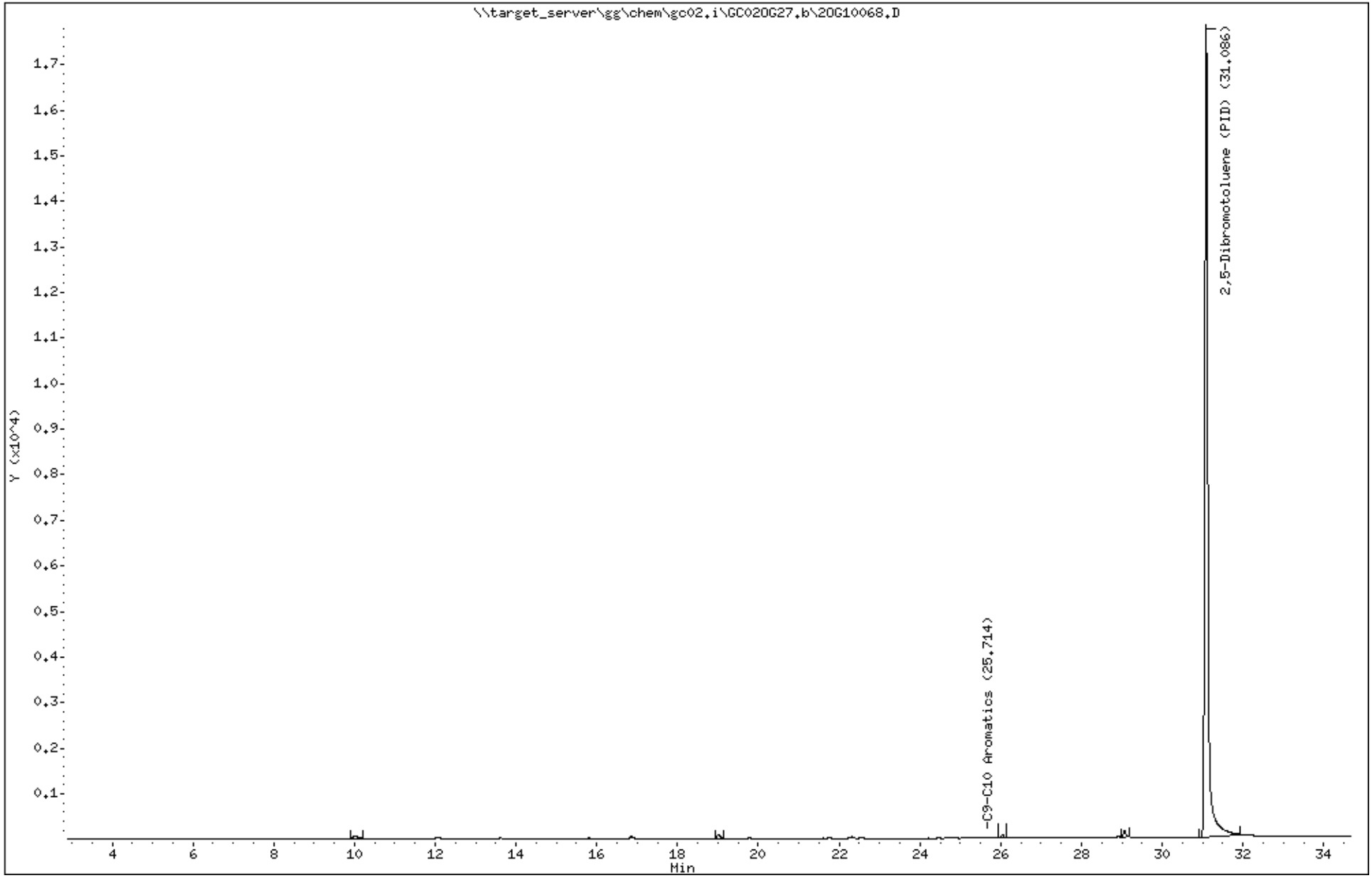
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10068.D
Lab Smp Id: SO4723-8 Client Smp ID: GW-EB-SUMMER2021
Inj Date : 27-JUL-2021 13:38
Operator : DL Inst ID: gc02.i
Smp Info : SO4723-8
Misc Info : WG303232,WG301241-4
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07 Cal File: 2OF10009.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	31.086	31.083	0.003	188260	75.3889	75.4	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10068.D
Date : 27-JUL-2021 13:38
Client ID: GW-EB-SUMMER2021
Instrument: gc02.i
Sample Info: S04723-8
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000046

Data File: 2OG10068.D
Report Date: 30-Jul-2021 09:59

Katahdin Analytical Services

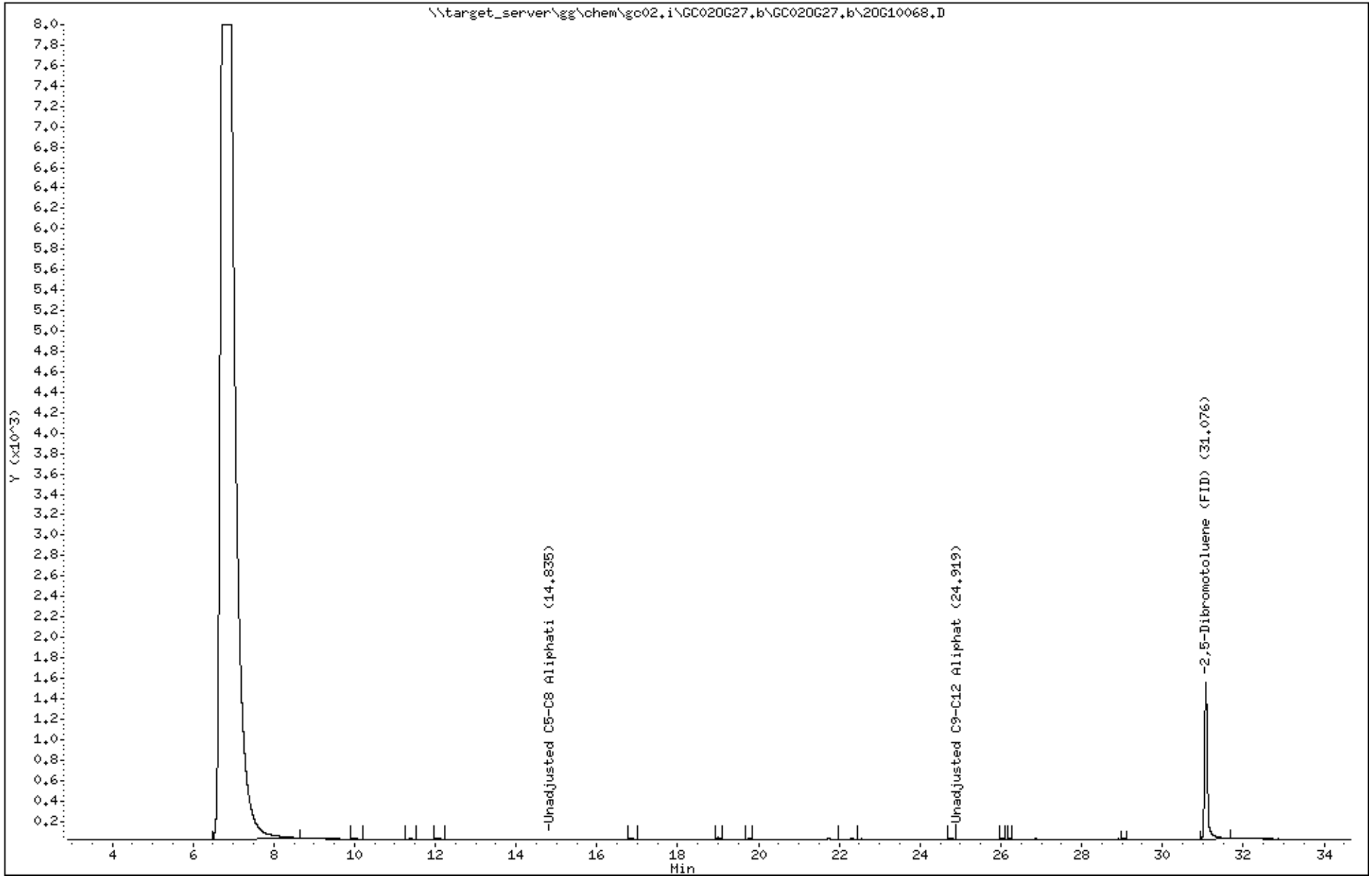
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10068.D
Lab Smp Id: SO4723-8 Client Smp ID: GW-EB-SUMMER2021
Inj Date : 27-JUL-2021 13:38
Operator : DL Inst ID: gc02.i
Smp Info : SO4723-8
Misc Info : WG303232,WG301241-4
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	31.075	31.076	-0.001	152323	84.3274	84.3	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20G10068.D
Date : 27-JUL-2021 13:38
Client ID: GW-EB-SUMMER2021
Instrument: gc02.i
Sample Info: S04723-8
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000048

Standards Data Section

Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services **SDG:** SO4723
Project : LO-58 Nike Missile Battery Launch Site **Instrument ID:** GC02
Lab File IDs : 2OF10006.D 2OF10007.D 2OF10008.D 2OF10005.D 2OF10009.D 2OF10010.D **Calibration Date(s):** 22-JUN-21 14:24 22-JUN-21 17:48

	Level 1 1.0000	Level 2 5.0000	Level 3 10.0000	Level 4 50.0000	Level 5 100.0000	Level 6 300.0000	Crv New	b	m1	m2	%RSD	Max %RSD	
C9-C10 Aromatic	3415	3617	3747	3839	3810	3456	AVG		3648		4.97750	25.00000	M C
Methyl tert-butylether	2108	2227	2246	2164	2197	2062	AVG		2167		3.28805	25.00000	O
Benzene	4697	4504	4514	4362	4371	4110	AVG		4426		4.45210	25.00000	O
Toluene	4123	4071	4117	3966	3989	3710	AVG		3996		3.86285	25.00000	O
Ethylbenzene	3367	3460	3560	3496	3527	3254	AVG		3444		3.31480	25.00000	O
m+p-Xylene	4292	4218	4264	4110	4038	3233	AVG		4026		9.93798	25.00000	O
o-Xylene	3533	3612	3659	3578	3549	3217	AVG		3525		4.46638	25.00000	O
1,2,4-trimethylbenzene	3415	3617	3747	3839	3810	3456	AVG		3648		4.97750	25.00000	O
Naphthalene	2820	3183	3320	3717	3642	3383	AVG		3344		9.74221	25.00000	O
2,5-Dibromotoluene (PID)	2258	2206	2418	3031	2911	2160	AVG		2497		15.1712(	25.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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Data File: \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10011.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: SDGa01556
Sample Matrix: LIQUID Fraction: VPH
Lab Smp Id: WG301241-7
Level: LOW Operator: DL
Data Type: GC DATA SampleType: INDSOURCE
SpikeList File: ind.spk Quant Type: ESTD
Sublist File: IND.sub
Method File: \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m
Misc Info: WG301241,WG301241-4

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
2 Methyl tert-butyle	100	95.1	95.08	80-120
3 Benzene	100	98.3	98.30	80-120
4 Toluene	100	99.3	99.31	80-120
5 Ethylbenzene	100	102	102.48	80-120
6 m+p-Xylene	200	200	100.03	80-120
7 o-Xylene	100	100	100.49	80-120
8 1,2,4-trimethylben	100	102	101.59	80-120
10 Naphthalene	100	115	114.95	80-120

SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 11 2,5-Dibromotoluene	100	112	112.21	70-130

Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services **SDG:** SO4723
Project : LO-58 Nike Missile Battery Launch Site **Instrument ID:** GC02
Lab File IDs : 2OF10006.D 2OF10007.D 2OF10008.D 2OF10005.D 2OF10009.D 2OF10010.D **Calibration Date(s):** 22-JUN-21 14:24 22-JUN-21 17:48

	1.0000 Level 1	5.0000 Level 2	10.0000 Level 3	50.0000 Level 4	100.0000 Level 5	300.0000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
C5-C8 Aliphatic	6390	5650	5743	5945	5553	5503	AVG		5797		5.68657	25.00000	M C
C9-C12 Aliphatic	5976	4876	5034	5280	5583	6172	AVG		5487		9.43003	25.00000	M C
n-Pentane	5797	4931	5245	5534	5151	5110	AVG		5295		5.96612	25.00000	O
2-Methylpentane	6596	5897	5864	6010	5630	5544	AVG		5924		6.28767	25.00000	O
Methyl tert-butylether	4757	4593	4645	4438	4489	4254	AVG		4529		3.88958	25.00000	O
2,2,4-Trimethylpentane	6776	6122	6120	6291	5877	5856	AVG		6174		5.47183	25.00000	O
Benzene	8348	7766	7854	7562	7655	7422	AVG		7768		4.14755	25.00000	O
Toluene	7992	7645	7785	7430	7597	7360	AVG		7635		3.03927	25.00000	O
n-Nonane	5958	4981	5047	5352	5323	5976	AVG		5440		7.98006	25.00000	O
n-Decane	5184	3954	4388	4921	5631	6171	AVG		5041		16.0387	25.00000	O
Ethylbenzene	6885	7132	7315	7238	7408	7185	AVG		7194		2.50112	25.00000	O
m+p-Xylene	7545	7537	7644	7458	7558	7299	AVG		7507		1.56655	25.00000	O
o-Xylene	7629	7702	7761	7620	7702	7405	AVG		7637		1.63397	25.00000	O
1,2,4-trimethylbenzene	6725	7129	7421	7619	7676	7335	AVG		7317		4.79909	25.00000	O
n-Butylcyclohexane	6768	5798	5681	5638	5535	6172	AVG		5932		7.83932	25.00000	O
Naphthalene	4246	4598	4980	5389	5526	5319	AVG		5010		10.0169	25.00000	O
2,5-Dibromotoluene (FID)	1598	1470	1725	2110	2040	1895	AVG		1806		13.9687	25.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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Data File: 2OF10011.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: SDGa01556
Sample Matrix: LIQUID Fraction: VPH
Lab Smp Id: WG301241-7
Level: LOW Operator: DL
Data Type: GC DATA SampleType: INDSOURCE
SpikeList File: ind.spk Quant Type: ESTD
Sublist File: IND.sub
Method File: \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m\VPHFIDA5.m
Misc Info: WG301241,WG301241-4

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 n-Pentane	100	83.1	83.11	80-120
6 2-Methylpentane	100	88.4	88.43	80-120
7 Methyl tert-butyle	100	95.1	95.08	80-120
8 2,2,4-Trimethylpen	100	94.3	94.29	80-120
9 Benzene	100	97.9	97.94	80-120
11 Toluene	100	98.6	98.66	80-120
12 n-Nonane	100	96.2	96.24	80-120
13 n-Decane	100	109	109.12	80-120
14 Ethylbenzene	100	103	102.78	80-120
15 m+p-Xylene	200	199	99.75	80-120
16 o-Xylene	100	100	100.05	80-120
18 1,2,4-trimethylben	100	102	101.55	80-120
19 n-Butylcyclohexane	100	92.2	92.24	80-120
20 Naphthalene	100	113	112.89	80-120

SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 21 2,5-Dibromotoluene	100	110	110.38	70-130

Data File: \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10006.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10006.D
Lab Smp Id: WG301241-1
Inj Date : 22-JUN-2021 15:05
Operator : DL   Inst ID: gc02.i
Smp Info : WG301241-1
Misc Info :
Comment   : AROMATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m
Meth Date : 23-Jun-2021 07:30 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 15:05   Cal File: 2OF10006.D
Als bottle: 1   Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

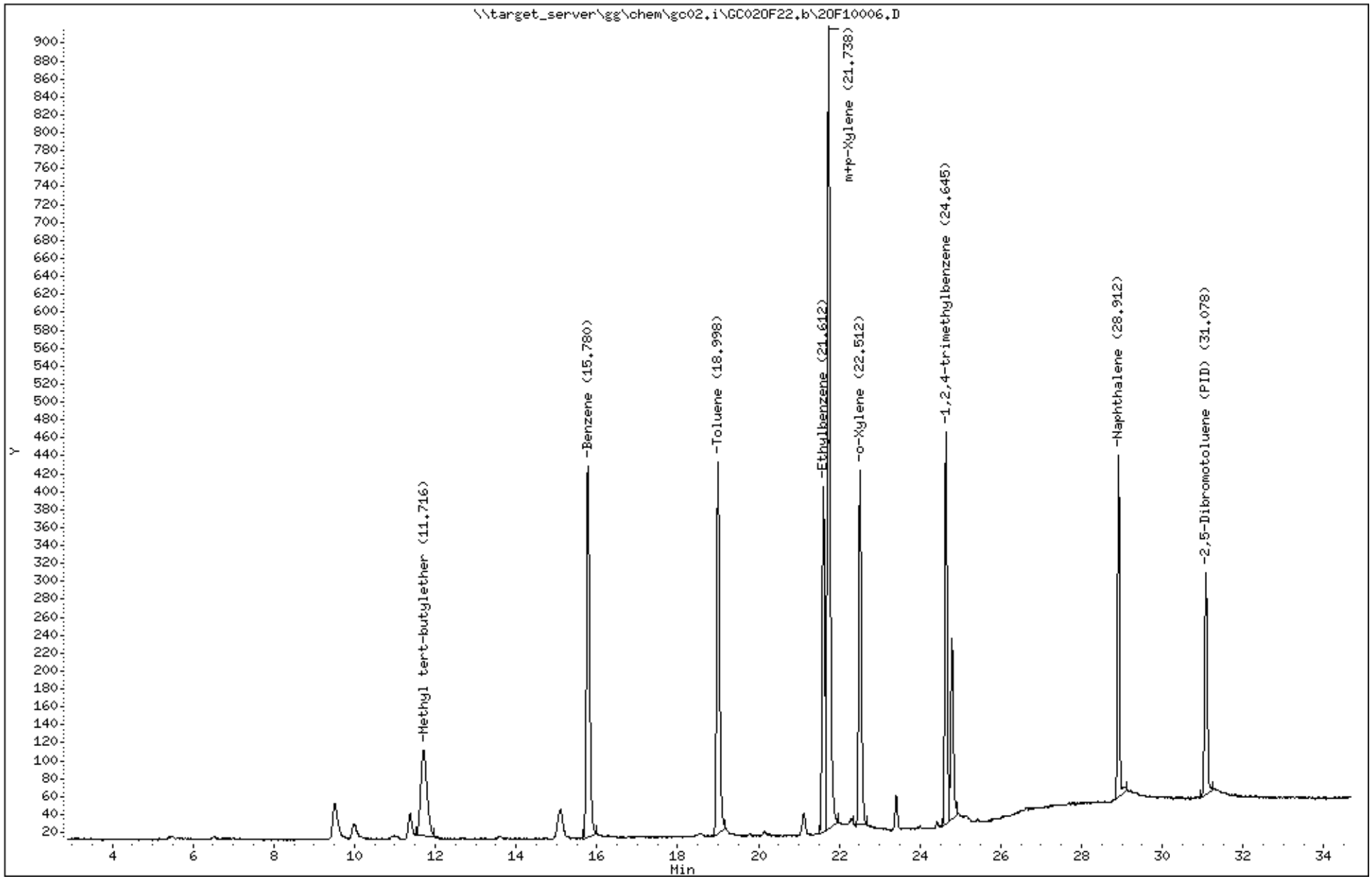
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
2	Methyl tert-butylether	11.715	11.696	0.019	2108	1.00000	0.987	
3	Benzene	15.780	15.780	0.000	4697	1.00000	1.04	
4	Toluene	18.998	18.998	0.000	4123	1.00000	1.02	
5	Ethylbenzene	21.611	21.612	-0.001	3367	1.00000	0.981	
6	m+p-Xylene	21.737	21.739	-0.002	8583	2.00000	2.04	
7	o-Xylene	22.511	22.511	0.000	3533	1.00000	0.994	
8	1,2,4-trimethylbenzene	24.645	24.643	0.002	3415	1.00000	0.941(M)	M9
10	Naphthalene	28.911	28.916	-0.005	2820	1.00000	0.863(M)	M9
M 1	C9-C10 Aromatic				3415	1.00000	0.941	
$ 11	2,5-Dibromotoluene (PID)	31.078	31.083	-0.005	2258	1.00000	0.854(M)	M9

DL
9:11 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\20F10006.D
Date : 22-JUN-2021 15:05
Client ID:
Instrument: gc02.i
Sample Info: WG301241-1
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000055

Data File: 2OF10006.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\GC02OF22.b\2OF10006.D
Lab Smp Id: WG301241-1
Inj Date : 22-JUN-2021 15:05
Operator : DL   Inst ID: gc02.i
Smp Info : WG301241-1
Misc Info :
Comment   : ALIPHATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 23-Jun-2021 07:36 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 15:05   Cal File: 2OF10006.D
Als bottle: 1   Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

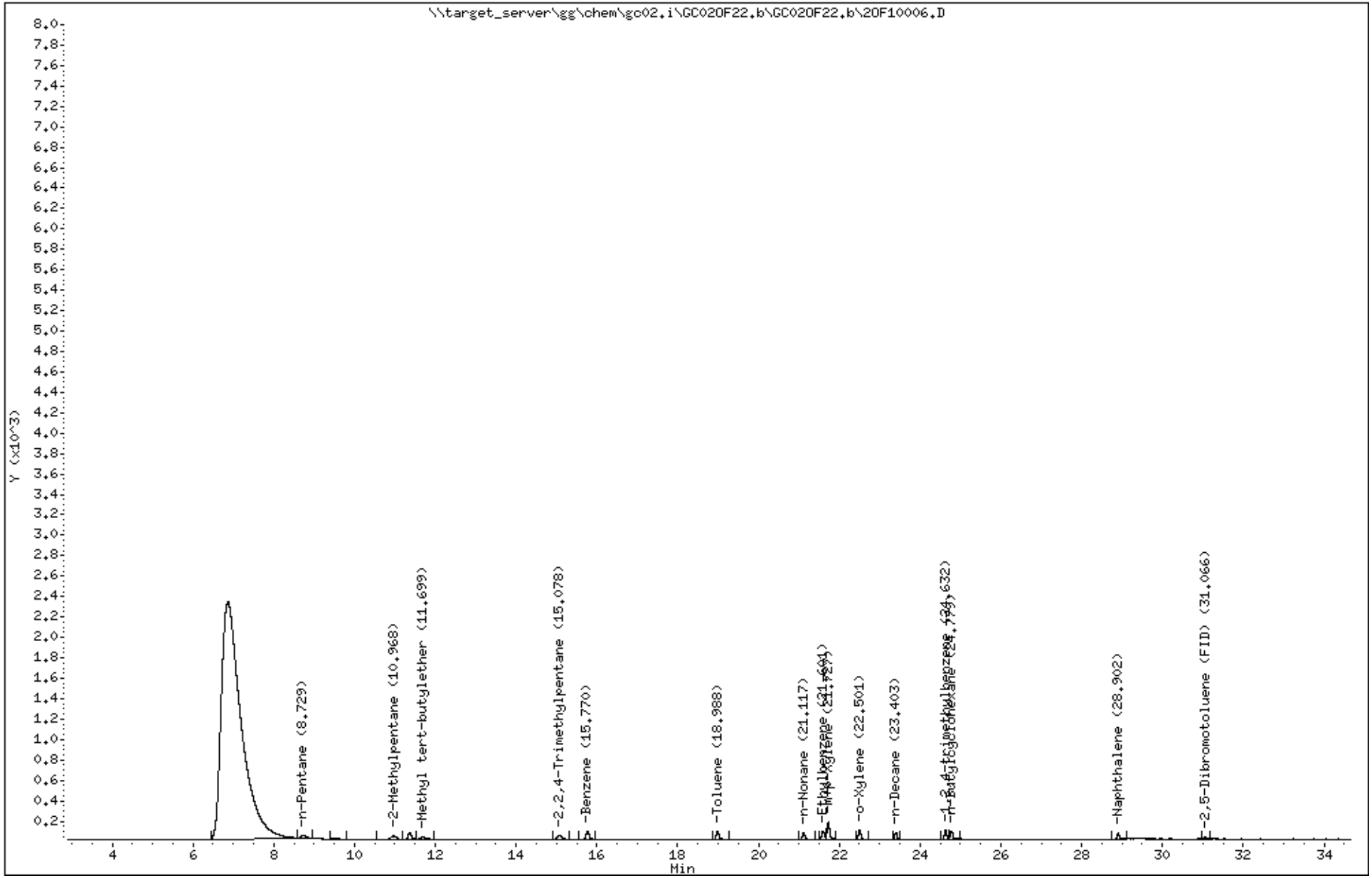
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
5	n-Pentane	8.729	8.743	-0.014	5797	1.00000	1.02(M)	M2
6	2-Methylpentane	10.967	10.966	0.001	6596	1.00000	1.05	
7	Methyl tert-butylether	11.699	11.687	0.012	4757	1.00000	1.03	
8	2,2,4-Trimethylpentane	15.078	15.093	-0.015	6776	1.00000	1.04	
9	Benzene	15.769	15.769	0.000	8348	1.00000	1.05	
11	Toluene	18.987	18.989	-0.002	7992	1.00000	1.04	
12	n-Nonane	21.116	21.127	-0.011	5958	1.00000	1.05	
14	Ethylbenzene	21.601	21.606	-0.005	6885	1.00000	0.975	
15	m+p-Xylene	21.727	21.736	-0.009	15090	2.00000	2.01	
16	o-Xylene	22.501	22.505	-0.004	7629	1.00000	1.00	
13	n-Decane	23.402	23.409	-0.007	5184	1.00000	1.03	
18	1,2,4-trimethylbenzene	24.631	24.638	-0.007	6725	1.00000	0.938	
19	n-Butylcyclohexane	24.779	24.785	-0.006	6768	1.00000	1.09	
20	Naphthalene	28.902	28.910	-0.008	4246	1.00000	0.881	
M 1	C5-C8 Aliphatic				19169	3.00000	3.11	
M 2	C9-C12 Aliphatic				11952	2.00000	2.12	
$ 21	2,5-Dibromotoluene (FID)	31.066	31.076	-0.010	1598	1.00000	0.862	

DL
9:11 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\GC020F22.b\20F10006.D
Date : 22-JUN-2021 15:05
Client ID:
Instrument: gc02.i
Sample Info: WG301241-1
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000057

Data File: \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10007.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10007.D
Lab Smp Id: WG301241-2
Inj Date : 22-JUN-2021 15:45
Operator : DL   Inst ID: gc02.i
Smp Info : WG301241-2
Misc Info :
Comment   : AROMATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m
Meth Date : 23-Jun-2021 07:30 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 15:45   Cal File: 2OF10007.D
Als bottle: 1   Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
2	Methyl tert-butylether	11.707	11.696	0.011	11137	5.00000	5.14	
3	Benzene	15.780	15.780	0.000	22521	5.00000	5.09	
4	Toluene	18.998	18.998	0.000	20356	5.00000	5.09	
5	Ethylbenzene	21.610	21.612	-0.002	17298	5.00000	5.02	
6	m+p-Xylene	21.736	21.739	-0.003	42180	10.0000	10.5	
7	o-Xylene	22.510	22.511	-0.001	18059	5.00000	5.12	
8	1,2,4-trimethylbenzene	24.641	24.643	-0.002	18084	5.00000	4.96	
10	Naphthalene	28.914	28.916	-0.002	15916	5.00000	4.73(M)	M9
M 1	C9-C10 Aromatic				18084	5.00000	4.96	
$ 11	2,5-Dibromotoluene (PID)	31.072	31.083	-0.011	11028	5.00000	4.40(M)	M9

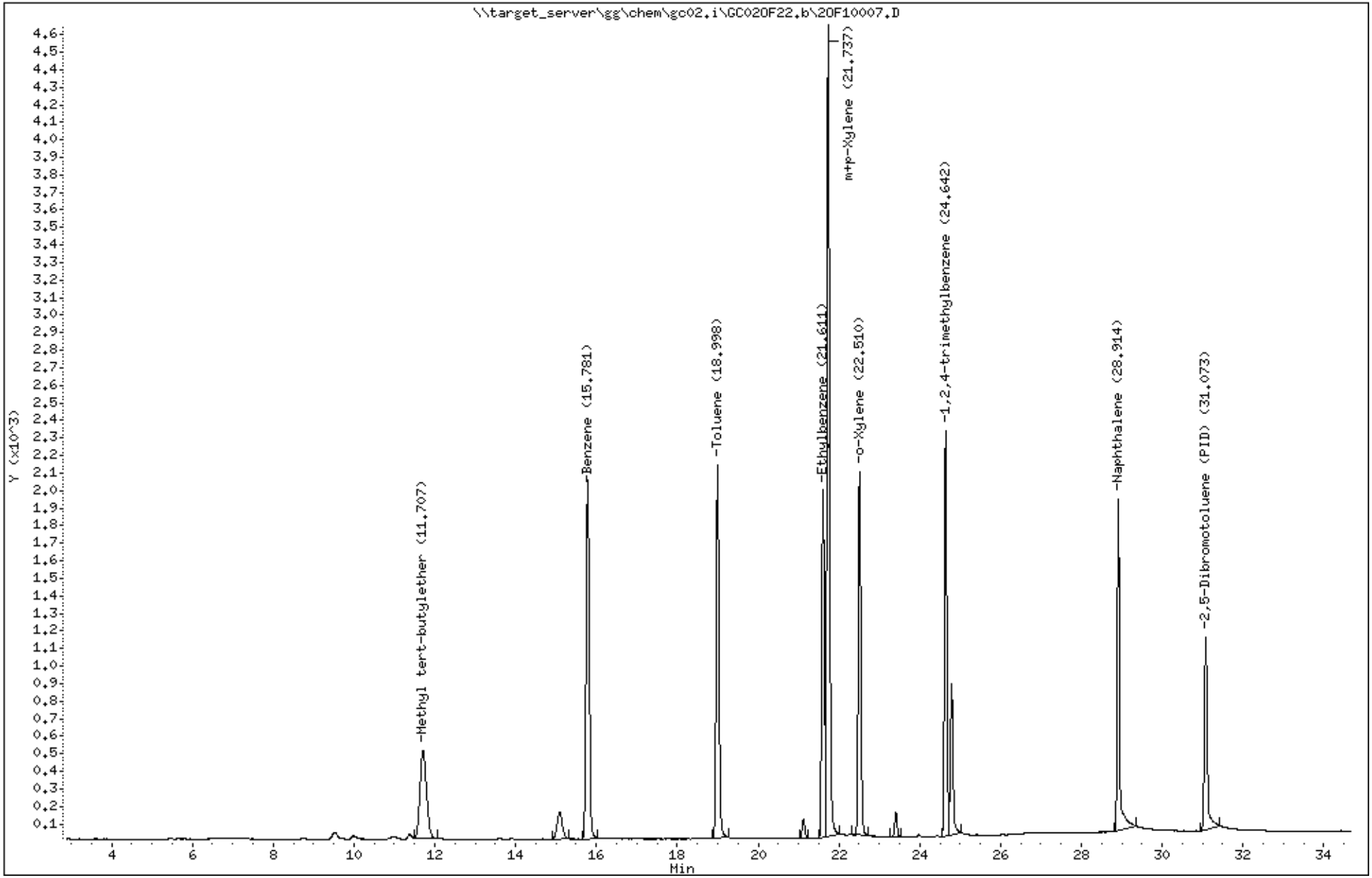
DL

9:11 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\20F10007.D
Date : 22-JUN-2021 15:45
Client ID:
Instrument: gc02.i
Sample Info: WG301241-2
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000059

Data File: 2OF10007.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\GC02OF22.b\2OF10007.D
Lab Smp Id: WG301241-2
Inj Date : 22-JUN-2021 15:45
Operator : DL   Inst ID: gc02.i
Smp Info : WG301241-2
Misc Info :
Comment   : ALIPHATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 23-Jun-2021 07:36 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 15:45   Cal File: 2OF10007.D
Als bottle: 1   Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

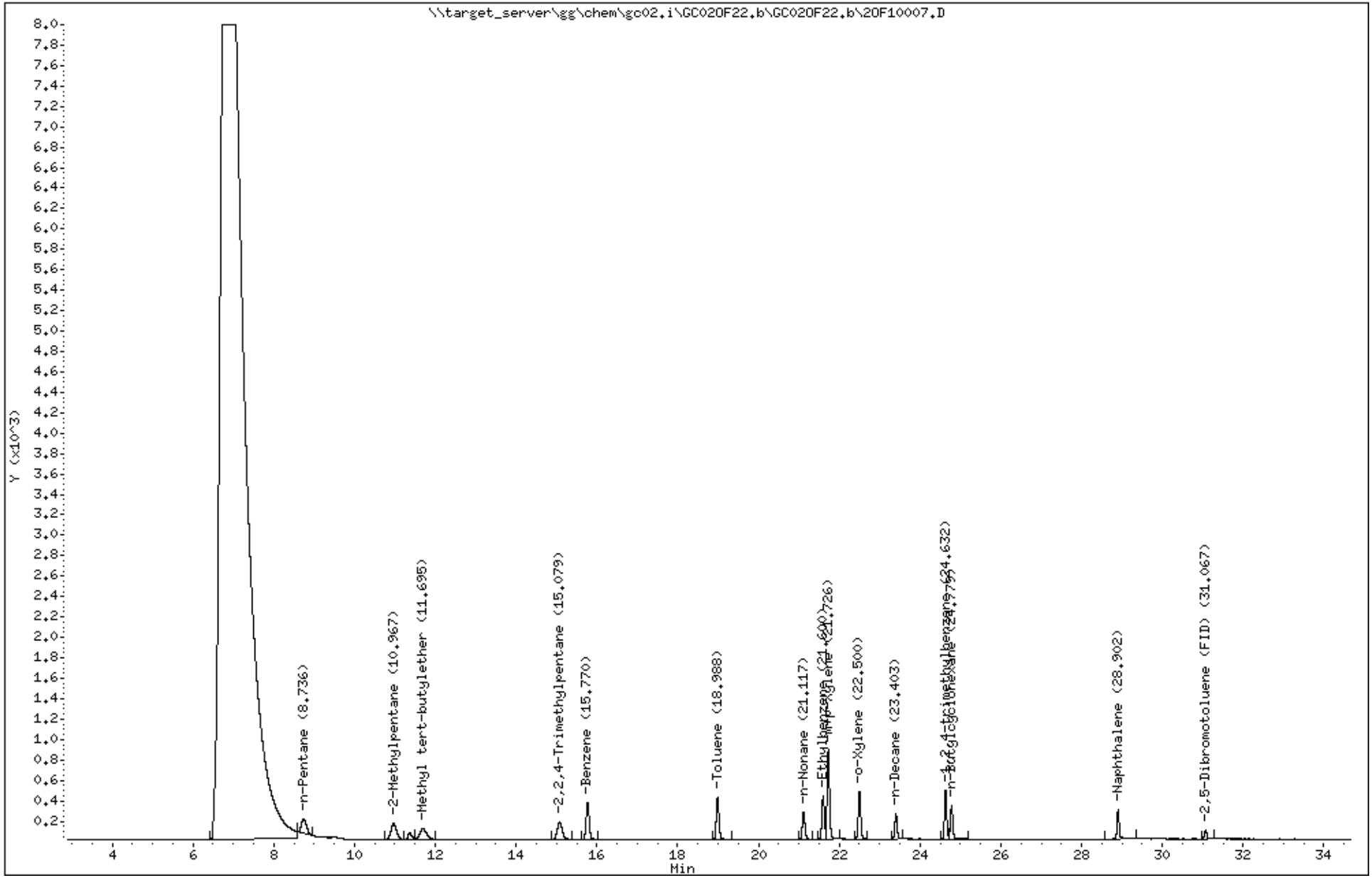
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
5	n-Pentane	8.736	8.743	-0.007	24657	5.00000	4.05(M)	M2
6	2-Methylpentane	10.967	10.966	0.001	29486	5.00000	4.98	
7	Methyl tert-butylether	11.694	11.687	0.007	22963	5.00000	5.07	
8	2,2,4-Trimethylpentane	15.079	15.093	-0.014	30609	5.00000	4.96	
9	Benzene	15.770	15.769	0.001	38832	5.00000	5.00	
11	Toluene	18.987	18.989	-0.002	38227	5.00000	5.01	
12	n-Nonane	21.116	21.127	-0.011	24903	5.00000	4.58	
14	Ethylbenzene	21.599	21.606	-0.007	35658	5.00000	4.96	
15	m+p-Xylene	21.726	21.736	-0.010	75367	10.0000	10.0	
16	o-Xylene	22.499	22.505	-0.006	38512	5.00000	5.04	
13	n-Decane	23.402	23.409	-0.007	19769	5.00000	3.92	
18	1,2,4-trimethylbenzene	24.631	24.638	-0.007	35645	5.00000	4.87	
19	n-Butylcyclohexane	24.778	24.785	-0.007	28989	5.00000	4.89	
20	Naphthalene	28.901	28.910	-0.009	22992	5.00000	4.59	
M 1	C5-C8 Aliphatic				84752	15.0000	14.0	
M 2	C9-C12 Aliphatic				48758	10.0000	8.80	
$ 21	2,5-Dibromotoluene (FID)	31.066	31.076	-0.010	7348	5.00000	4.00	

DL
9:11 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\GC020F22.b\20F10007.D
Date : 22-JUN-2021 15:45
Client ID:
Instrument: gc02.i
Sample Info: WG301241-2
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000061

Data File: \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10008.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

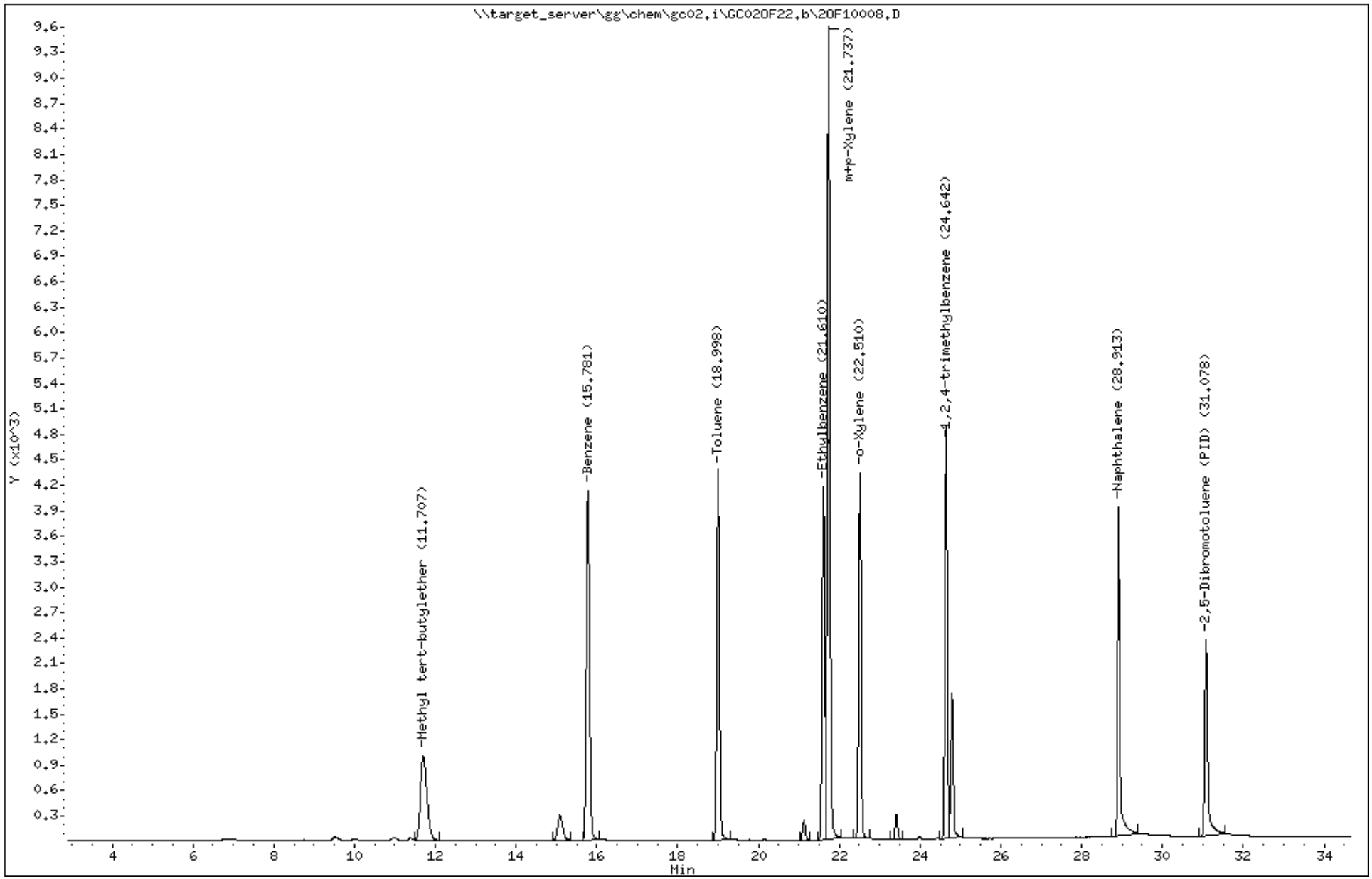
Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10008.D
Lab Smp Id: WG301241-3
Inj Date : 22-JUN-2021 16:26
Operator : DL   Inst ID: gc02.i
Smp Info : WG301241-3
Misc Info :
Comment   : AROMATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m
Meth Date : 23-Jun-2021 07:30 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 16:26   Cal File: 2OF10008.D
Als bottle: 1   Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
2	Methyl tert-butylether	11.707	11.696	0.011	22460	10.0000	10.3	
3	Benzene	15.780	15.780	0.000	45136	10.0000	9.99	
4	Toluene	18.997	18.998	-0.001	41165	10.0000	10.1	
5	Ethylbenzene	21.610	21.612	-0.002	35604	10.0000	10.2	
6	m+p-Xylene	21.736	21.739	-0.003	85274	20.0000	20.2	
7	o-Xylene	22.509	22.511	-0.002	36594	10.0000	10.2	
8	1,2,4-trimethylbenzene	24.642	24.643	-0.001	37474	10.0000	10.2	
10	Naphthalene	28.913	28.916	-0.003	33202	10.0000	10.3	
M 1	C9-C10 Aromatic				37474	10.0000	10.2	
$ 11	2,5-Dibromotoluene (PID)	31.077	31.083	-0.006	24177	10.0000	9.79	

Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\20F10008.D
Date : 22-JUN-2021 16:26
Client ID:
Instrument: gc02.i
Sample Info: WG301241-3
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000063

Data File: 2OF10008.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\GC02OF22.b\2OF10008.D
Lab Smp Id: WG301241-3
Inj Date : 22-JUN-2021 16:26
Operator : DL   Inst ID: gc02.i
Smp Info : WG301241-3
Misc Info :
Comment   : ALIPHATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 23-Jun-2021 07:36 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 16:26   Cal File: 2OF10008.D
Als bottle: 1   Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

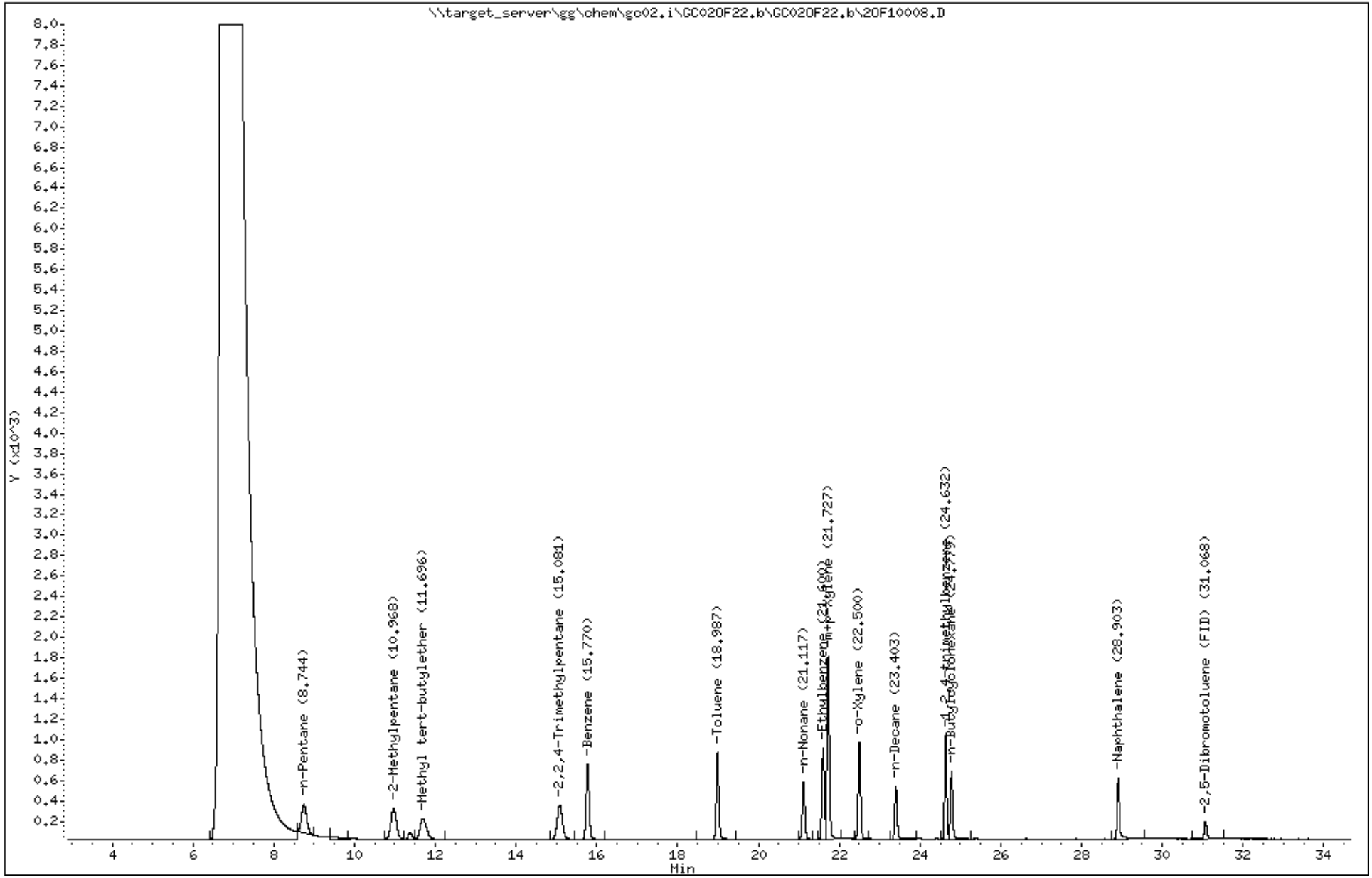
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
5	n-Pentane	8.743	8.743	0.000	52449	10.0000	9.69(M)	M2
6	2-Methylpentane	10.967	10.966	0.001	58641	10.0000	9.90	
7	Methyl tert-butylether	11.695	11.687	0.008	46452	10.0000	10.2	
8	2,2,4-Trimethylpentane	15.081	15.093	-0.012	61195	10.0000	9.91	
9	Benzene	15.770	15.769	0.001	78537	10.0000	10.1	
11	Toluene	18.987	18.989	-0.002	77852	10.0000	10.2	
12	n-Nonane	21.117	21.127	-0.010	50474	10.0000	9.28	
14	Ethylbenzene	21.600	21.606	-0.006	73145	10.0000	10.2	
15	m+p-Xylene	21.726	21.736	-0.010	152875	20.0000	20.4	
16	o-Xylene	22.499	22.505	-0.006	77610	10.0000	10.2	
13	n-Decane	23.402	23.409	-0.007	43875	10.0000	8.69	
18	1,2,4-trimethylbenzene	24.631	24.638	-0.007	74214	10.0000	10.1	
19	n-Butylcyclohexane	24.778	24.785	-0.007	56810	10.0000	9.58	
20	Naphthalene	28.903	28.910	-0.007	49801	10.0000	9.94	
M 1	C5-C8 Aliphatic				172285	30.0000	29.5	
M 2	C9-C12 Aliphatic				100685	20.0000	18.3	
$ 21	2,5-Dibromotoluene (FID)	31.067	31.076	-0.009	17248	10.0000	9.38	

DL
9:11 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\GC020F22.b\20F10008.D
Date : 22-JUN-2021 16:26
Client ID:
Instrument: gc02.i
Sample Info: WG301241-3
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000065

Data File: \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10005.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

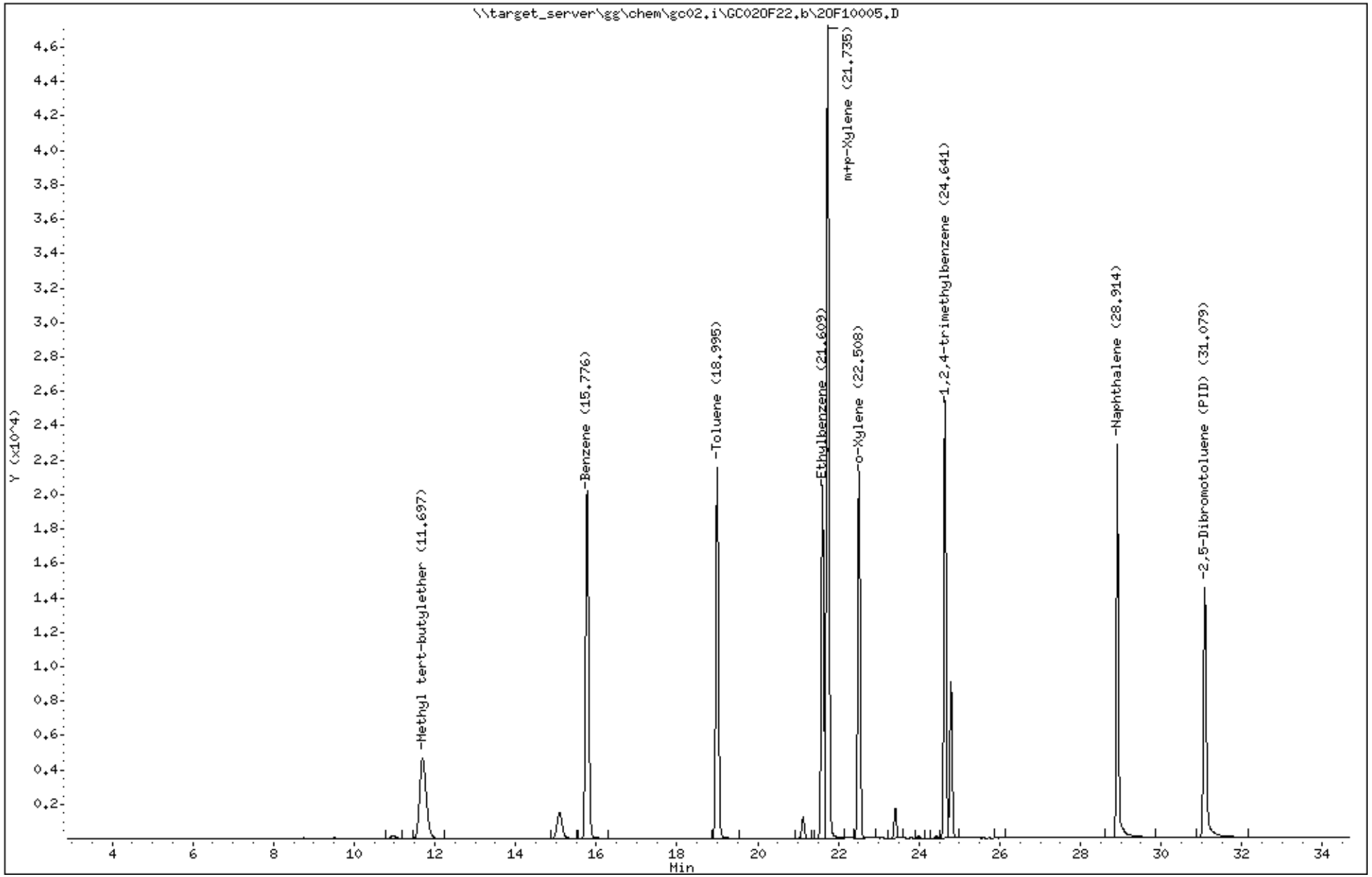
Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10005.D
Lab Smp Id: WG301241-4
Inj Date : 22-JUN-2021 14:24
Operator : DL   Inst ID: gc02.i
Smp Info : WG301241-4
Misc Info :
Comment   : AROMATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m
Meth Date : 23-Jun-2021 07:30 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 14:24   Cal File: 2OF10005.D
Als bottle: 1   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
2	Methyl tert-butylether	11.697	11.696	0.001	108180	50.0000	50.0	
3	Benzene	15.775	15.780	-0.005	218078	50.0000	50.0	
4	Toluene	18.994	18.998	-0.004	198279	50.0000	50.0	
5	Ethylbenzene	21.608	21.612	-0.004	174779	50.0000	50.0	
6	m+p-Xylene	21.735	21.739	-0.004	410964	100.000	100	
7	o-Xylene	22.508	22.511	-0.003	178921	50.0000	50.0	
8	1,2,4-trimethylbenzene	24.641	24.643	-0.002	191974	50.0000	50.0	
10	Naphthalene	28.913	28.916	-0.003	185869	50.0000	50.0	
M 1	C9-C10 Aromatic				191974	50.0000	50.0	
$ 11	2,5-Dibromotoluene (PID)	31.078	31.083	-0.005	151538	50.0000	50.0	

Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\20F10005.D
Date : 22-JUN-2021 14:24
Client ID:
Instrument: gc02.i
Sample Info: WG301241-4
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000067

Data File: 2OF10005.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\GC02OF22.b\2OF10005.D
Lab Smp Id: WG301241-4
Inj Date : 22-JUN-2021 14:24
Operator : DL   Inst ID: gc02.i
Smp Info : WG301241-4
Misc Info :
Comment   : ALIPHATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 23-Jun-2021 07:36 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 14:24   Cal File: 2OF10005.D
Als bottle: 1   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

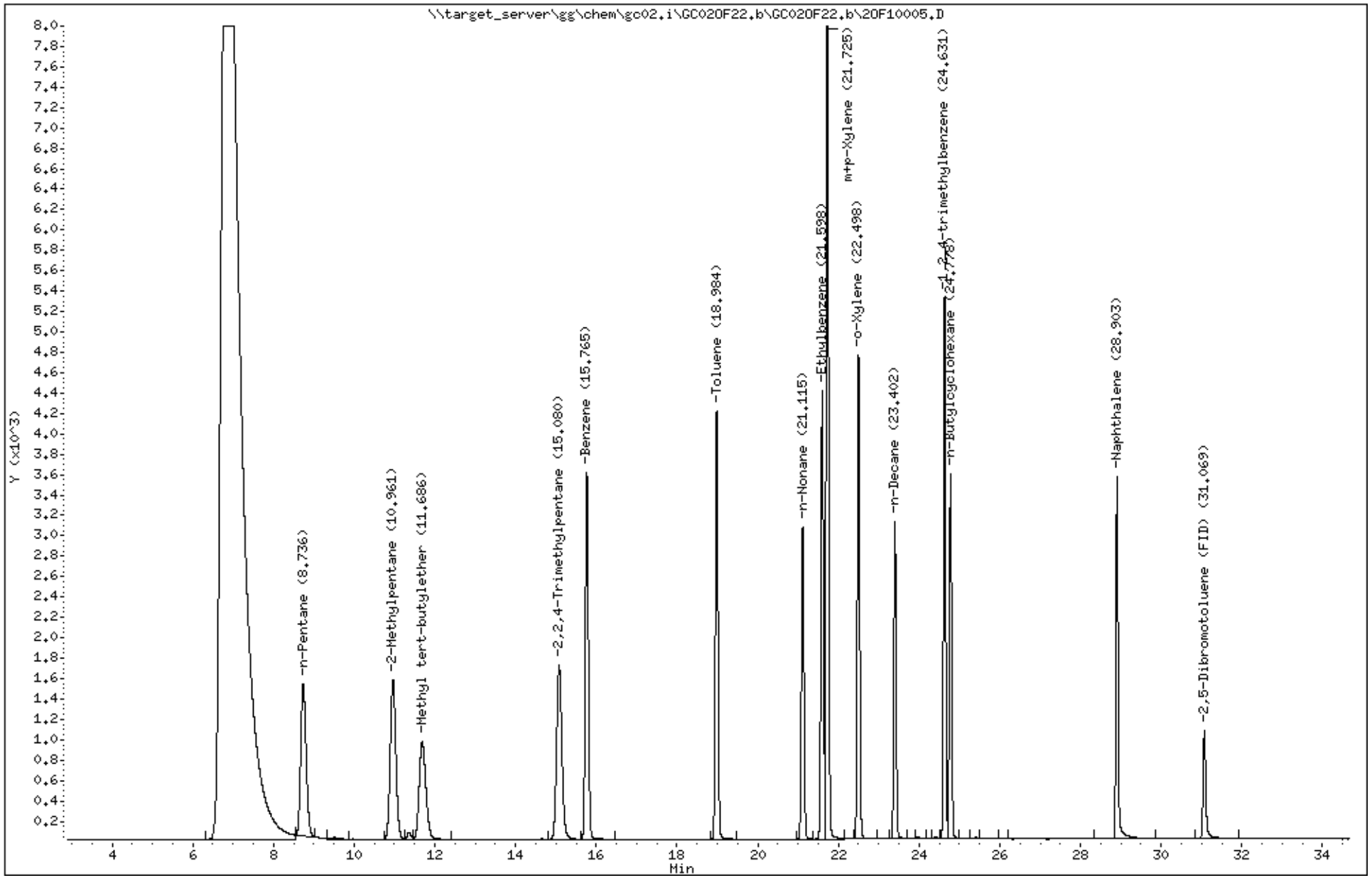
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)	REVIEW CODE
5	n-Pentane	8.736	8.743	-0.007	276684	50.0000	50.0(M)	M2
6	2-Methylpentane	10.961	10.966	-0.005	300487	50.0000	50.0	
7	Methyl tert-butylether	11.686	11.687	-0.001	221920	50.0000	50.0	
8	2,2,4-Trimethylpentane	15.079	15.093	-0.014	314538	50.0000	50.0	
9	Benzene	15.765	15.769	-0.004	378100	50.0000	50.0	
11	Toluene	18.984	18.989	-0.005	371513	50.0000	50.0	
12	n-Nonane	21.115	21.127	-0.012	267590	50.0000	50.0	
14	Ethylbenzene	21.598	21.606	-0.008	361883	50.0000	50.0	
15	m+p-Xylene	21.725	21.736	-0.011	745806	100.000	100	
16	o-Xylene	22.497	22.505	-0.008	381012	50.0000	50.0	
13	n-Decane	23.401	23.409	-0.008	246036	50.0000	50.0	
18	1,2,4-trimethylbenzene	24.631	24.638	-0.007	380927	50.0000	50.0	
19	n-Butylcyclohexane	24.778	24.785	-0.007	281918	50.0000	50.0	
20	Naphthalene	28.903	28.910	-0.007	269429	50.0000	50.0	
M 1	C5-C8 Aliphatic				891709	150.000	150	
M 2	C9-C12 Aliphatic				527954	100.000	100	
$ 21	2,5-Dibromotoluene (FID)	31.068	31.076	-0.008	105514	50.0000	50.0	

DL
9:11 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\GC020F22.b\20F10005.D
Date : 22-JUN-2021 14:24
Client ID:
Instrument: gc02.i
Sample Info: WG301241-4
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000069

Data File: \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10009.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10009.D
Lab Smp Id: WG301241-5
Inj Date : 22-JUN-2021 17:07
Operator : DL   Inst ID: gc02.i
Smp Info : WG301241-5
Misc Info :
Comment   : AROMATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m
Meth Date : 23-Jun-2021 07:30 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07   Cal File: 2OF10009.D
Als bottle: 1   Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

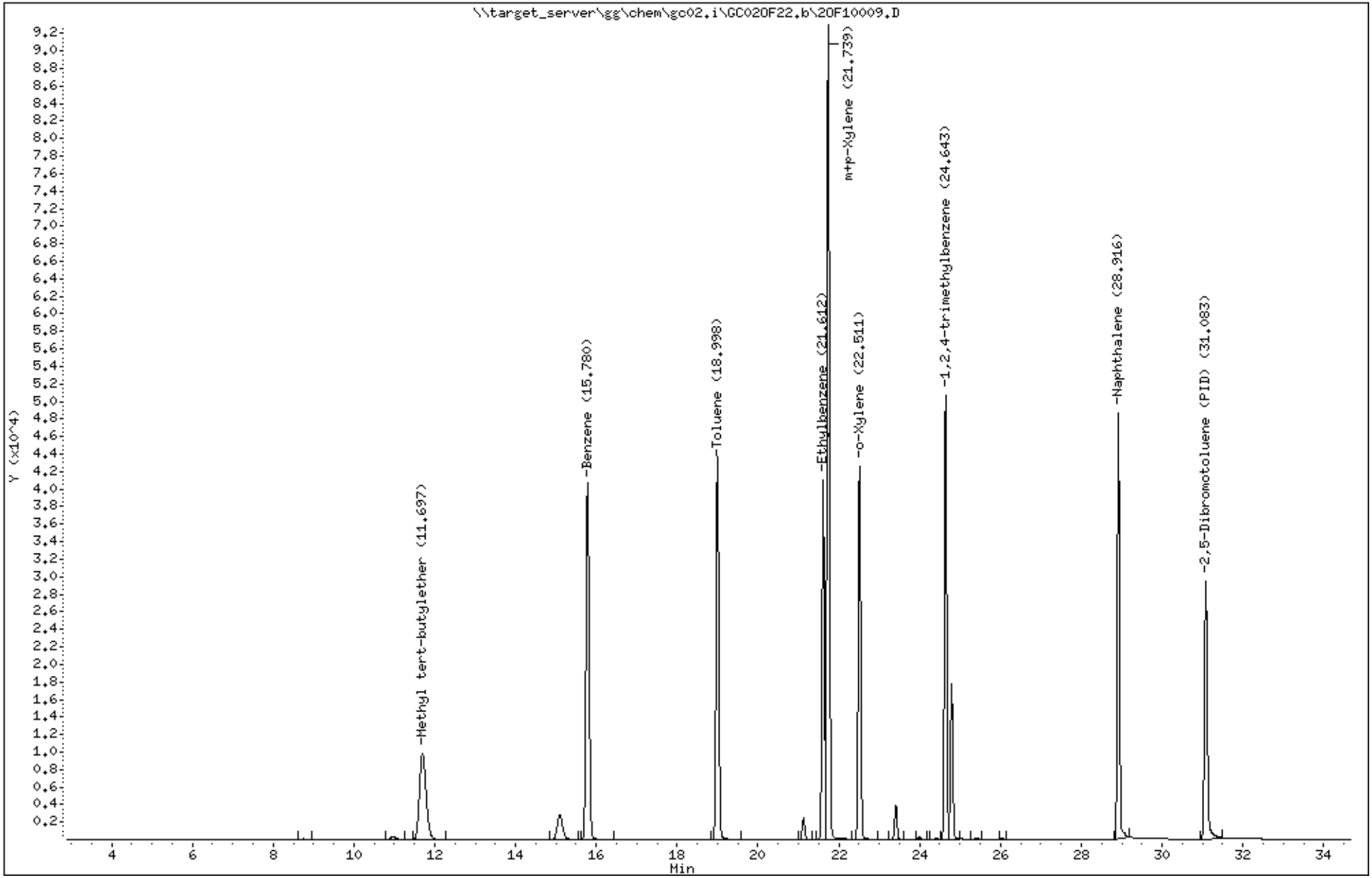
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE	
2	Methyl tert-butylether	11.696	11.696	0.000	219695	100.000	101		
3	Benzene	15.779	15.780	-0.001	437073	100.000	98.7		
4	Toluene	18.998	18.998	0.000	398941	100.000	99.8		
5	Ethylbenzene	21.611	21.612	-0.001	352681	100.000	102		
6	m+p-Xylene	21.739	21.739	0.000	807683	200.000	201		
7	o-Xylene	22.511	22.511	0.000	354903	100.000	101		
8	1,2,4-trimethylbenzene	24.643	24.643	0.000	381018	100.000	104		
10	Naphthalene	28.916	28.916	0.000	364203	100.000	109(M)	M9	
M 1	C9-C10 Aromatic				381018	100.000	104		
$ 11	2,5-Dibromotoluene (PID)	31.083	31.083	0.000	291067	100.000	116(M)	M9	

DL
9:11 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\20F10009.D
Date : 22-JUN-2021 17:07
Client ID:
Instrument: gc02.i
Sample Info: WG301241-5
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000071

Data File: 2OF10009.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\GC02OF22.b\2OF10009.D
Lab Smp Id: WG301241-5
Inj Date : 22-JUN-2021 17:07
Operator : DL Inst ID: gc02.i
Smp Info : WG301241-5
Misc Info :
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 23-Jun-2021 07:36 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07 Cal File: 2OF10009.D
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

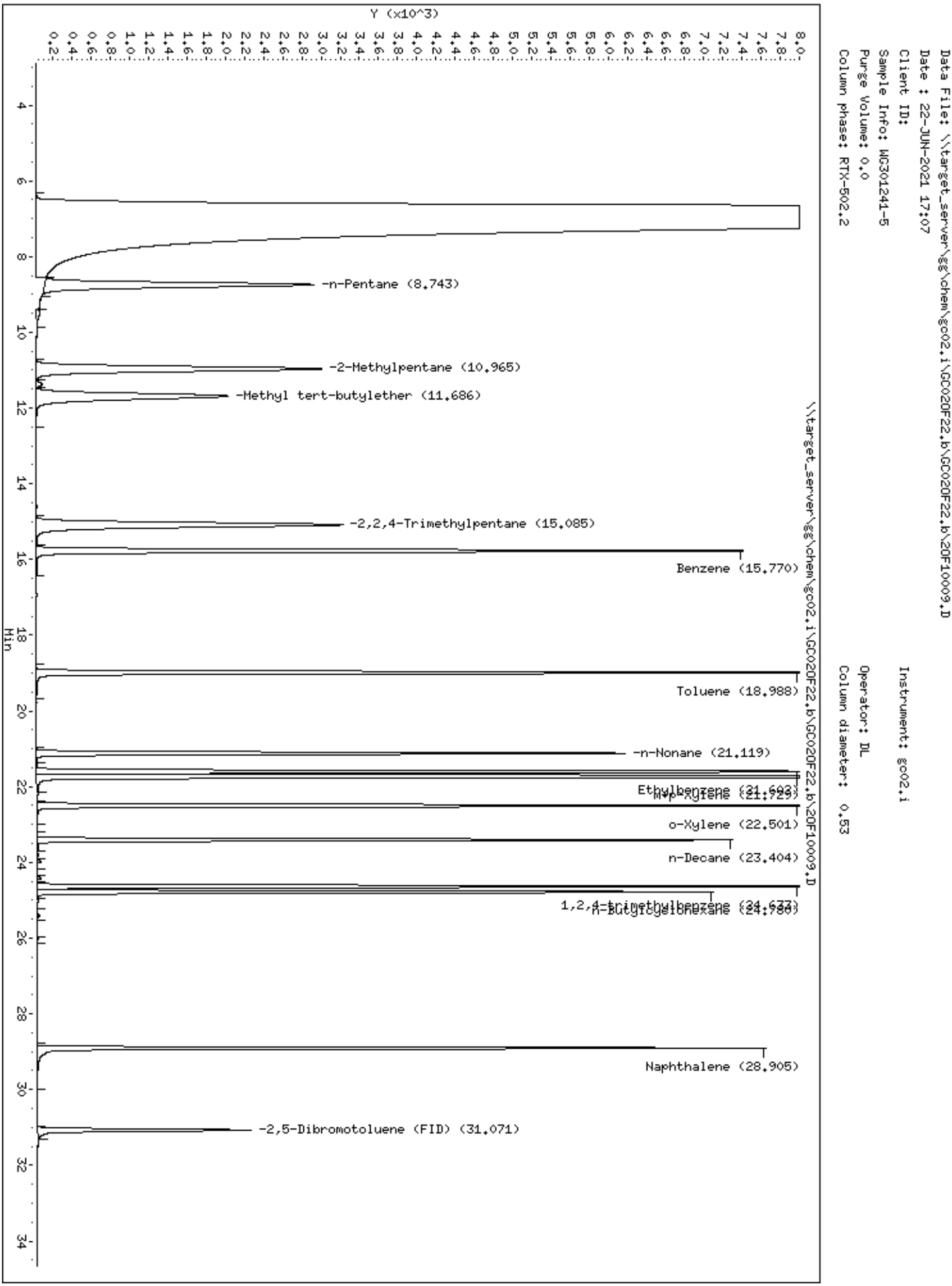
Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
5	n-Pentane	8.743	8.743	0.000	515058	100.000	97.0(M)	M2
6	2-Methylpentane	10.965	10.966	-0.001	563017	100.000	95.0	
7	Methyl tert-butylether	11.686	11.687	-0.001	448906	100.000	99.1	
8	2,2,4-Trimethylpentane	15.084	15.093	-0.009	587749	100.000	95.2	
9	Benzene	15.769	15.769	0.000	765465	100.000	98.5	
11	Toluene	18.987	18.989	-0.002	759728	100.000	99.5	
12	n-Nonane	21.119	21.127	-0.008	532341	100.000	97.9	
14	Ethylbenzene	21.601	21.606	-0.005	740844	100.000	103	
15	m+p-Xylene	21.729	21.736	-0.007	1511674	200.000	201	
16	o-Xylene	22.500	22.505	-0.005	770157	100.000	101	
13	n-Decane	23.404	23.409	-0.005	563082	100.000	112	
18	1,2,4-trimethylbenzene	24.632	24.638	-0.006	767567	100.000	105	
19	n-Butylcyclohexane	24.780	24.785	-0.005	553509	100.000	93.3	
20	Naphthalene	28.904	28.910	-0.006	552625	100.000	110	
M 1	C5-C8 Aliphatic				1665824	300.000	287	
M 2	C9-C12 Aliphatic				1116591	200.000	205	
$ 21	2,5-Dibromotoluene (FID)	31.070	31.076	-0.006	203998	100.000	112(M)	M9

DL
9:11 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.


Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\GC020F22.b\20F10009.D
Date : 22-JUN-2021 17:07
Client ID:
Sample Info: WG301241-5
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: DL
Column diameter: 0.53
\\target_server\gg\chem\gc02.i\GC020F22.b\GC020F22.b\20F10009.D
Y (x10^3)
Min
-n-Pentane (8.743)
-2-Methylpentane (10.965)
-Methyl tert-butylether (11.686)
-2,2,4-Trimethylpentane (15.085)
Benzene (15.770)
Toluene (18.988)
-n-Nonane (21.119)
Ethylbenzene (21.693)
m,p-Xylene (21.729)
o-Xylene (22.501)
n-Decane (23.404)
1,2,4-Trimethylbenzene (24.677)
n-Butylcyclohexane (24.980)
Naphthalene (28.905)
-2,5-Dibromotoluene (FID) (31.071)

Data File: \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10010.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

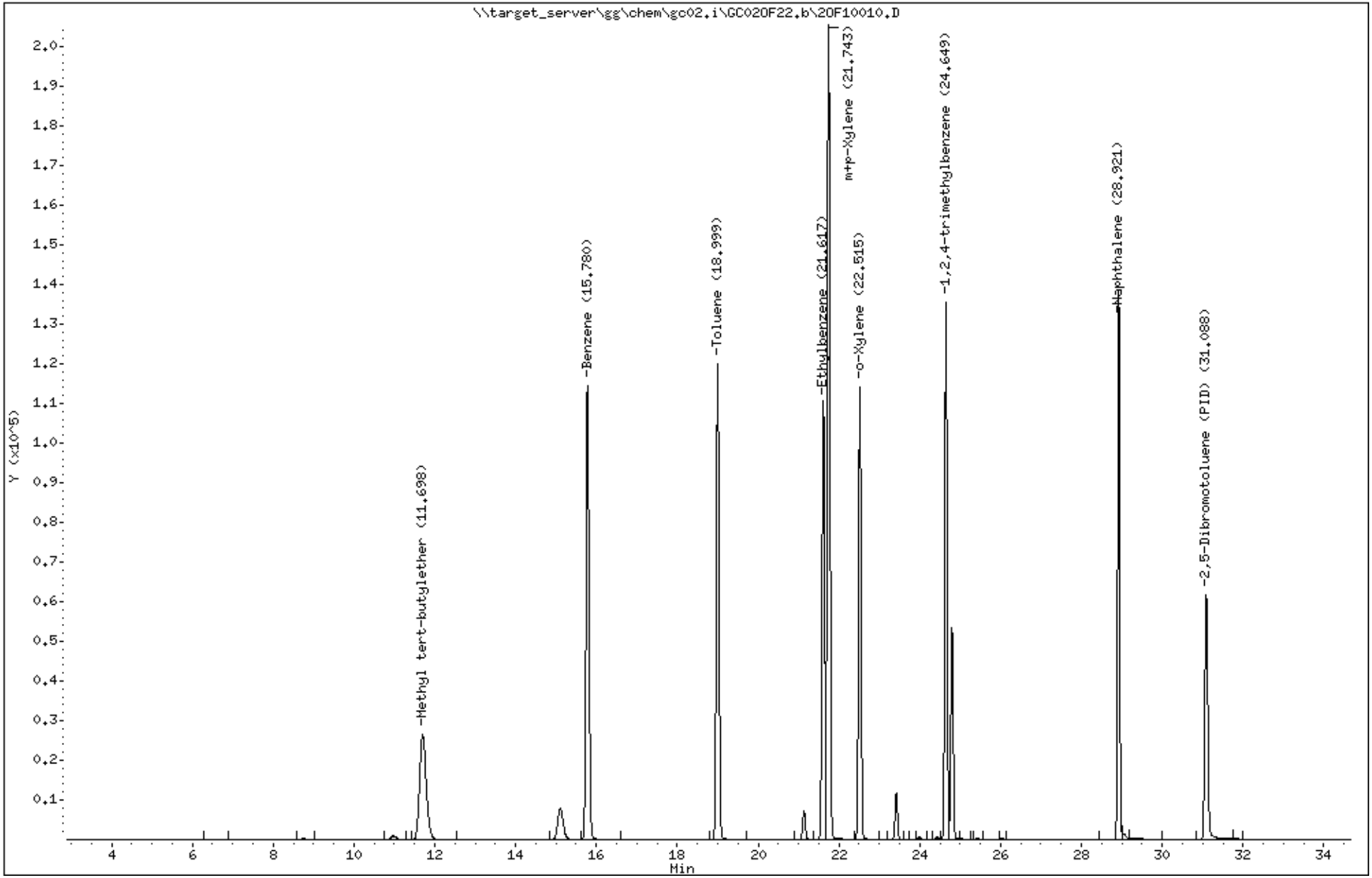
Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10010.D
Lab Smp Id: WG301241-6
Inj Date : 22-JUN-2021 17:48
Operator : DL   Inst ID: gc02.i
Smp Info : WG301241-6
Misc Info :
Comment   : AROMATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m
Meth Date : 23-Jun-2021 07:30 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48   Cal File: 2OF10010.D
Als bottle: 1   Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
2	Methyl tert-butylether	11.698	11.696	0.002	618476	300.000	285	
3	Benzene	15.779	15.780	-0.001	1233062	300.000	278	
4	Toluene	18.999	18.998	0.001	1112968	300.000	278	
5	Ethylbenzene	21.617	21.612	0.005	976339	300.000	283	
6	m+p-Xylene	21.742	21.739	0.003	1939639	600.000	482	
7	o-Xylene	22.515	22.511	0.004	965117	300.000	274	
8	1,2,4-trimethylbenzene	24.648	24.643	0.005	1036924	300.000	284	
10	Naphthalene	28.920	28.916	0.004	1014933	300.000	304	
M 1	C9-C10 Aromatic				1036924	300.000	284	
$ 11	2,5-Dibromotoluene (PID)	31.088	31.083	0.005	648116	300.000	259	

Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\20F10010.D
Date : 22-JUN-2021 17:48
Client ID:
Instrument: gc02.i
Sample Info: WG301241-6
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000075

Data File: 2OF10010.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\GC02OF22.b\2OF10010.D
Lab Smp Id: WG301241-6
Inj Date : 22-JUN-2021 17:48
Operator : DL   Inst ID: gc02.i
Smp Info : WG301241-6
Misc Info :
Comment   : ALIPHATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 23-Jun-2021 07:36 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48   Cal File: 2OF10010.D
Als bottle: 1   Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

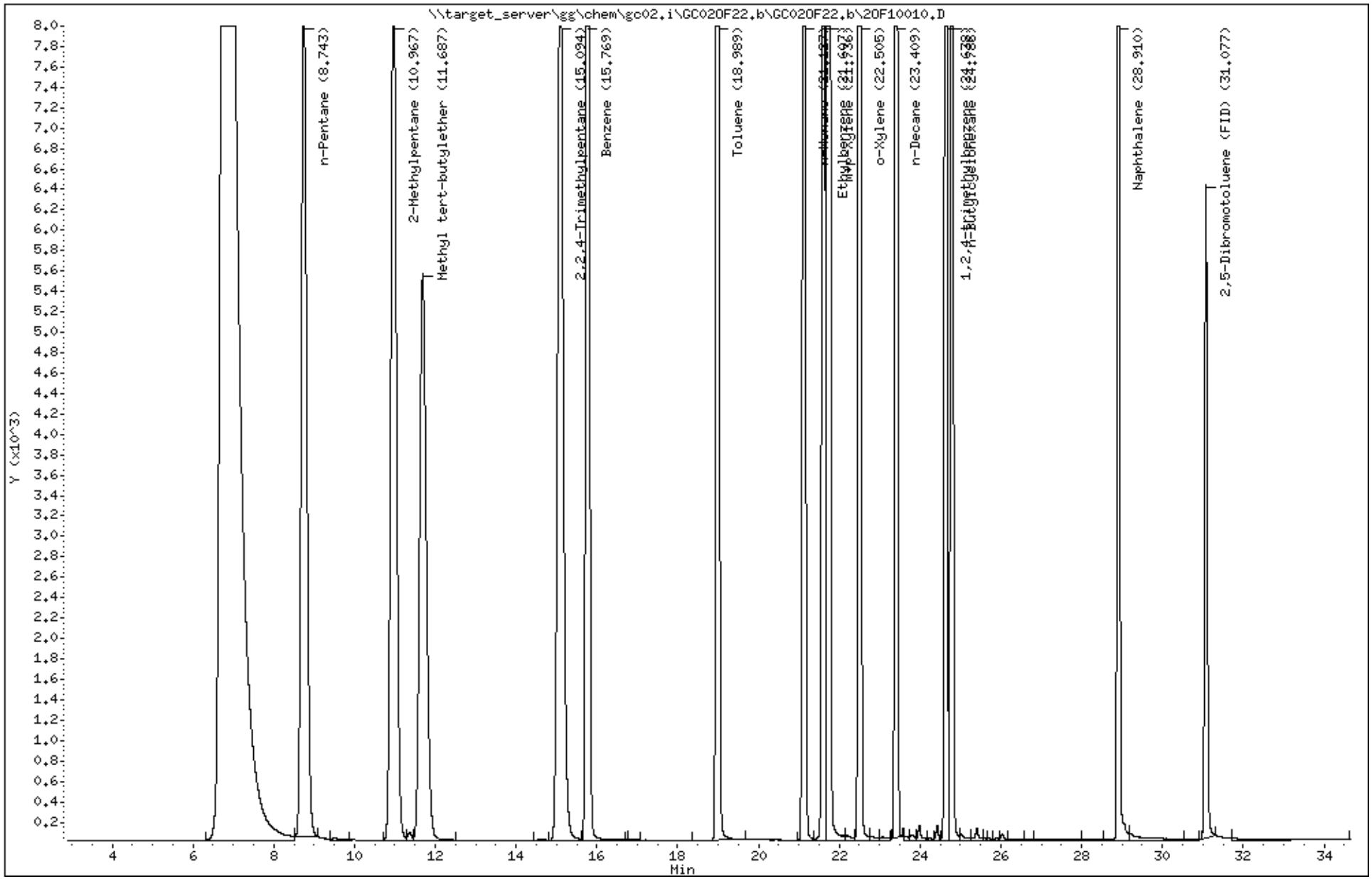
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
5	n-Pentane	8.743	8.743	0.000	1532897	300.000	290(M)	M2
6	2-Methylpentane	10.966	10.966	0.000	1663340	300.000	281	
7	Methyl tert-butylether	11.687	11.687	0.000	1276079	300.000	282	
8	2,2,4-Trimethylpentane	15.093	15.093	0.000	1756890	300.000	284	
9	Benzene	15.769	15.769	0.000	2226503	300.000	287	
11	Toluene	18.989	18.989	0.000	2207920	300.000	289	
12	n-Nonane	21.126	21.127	-0.001	1792784	300.000	330	
14	Ethylbenzene	21.606	21.606	0.000	2155555	300.000	300	
15	m+p-Xylene	21.736	21.736	0.000	4379655	600.000	583	
16	o-Xylene	22.505	22.505	0.000	2221591	300.000	291	
13	n-Decane	23.409	23.409	0.000	1851313	300.000	367(M)	M9
18	1,2,4-trimethylbenzene	24.638	24.638	0.000	2200538	300.000	301	
19	n-Butylcyclohexane	24.785	24.785	0.000	1851602	300.000	312	
20	Naphthalene	28.910	28.910	0.000	1595583	300.000	318	
M 1	C5-C8 Aliphatic				4953127	900.000	855	
M 2	C9-C12 Aliphatic				3702915	600.000	679	
$ 21	2,5-Dibromotoluene (FID)	31.076	31.076	0.000	568594	300.000	315(M)	M9

DL
9:12 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\GC020F22.b\20F10010.D
Date : 22-JUN-2021 17:48
Client ID:
Instrument: gc02.i
Sample Info: WG301241-6
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000077

Data File: \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10011.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

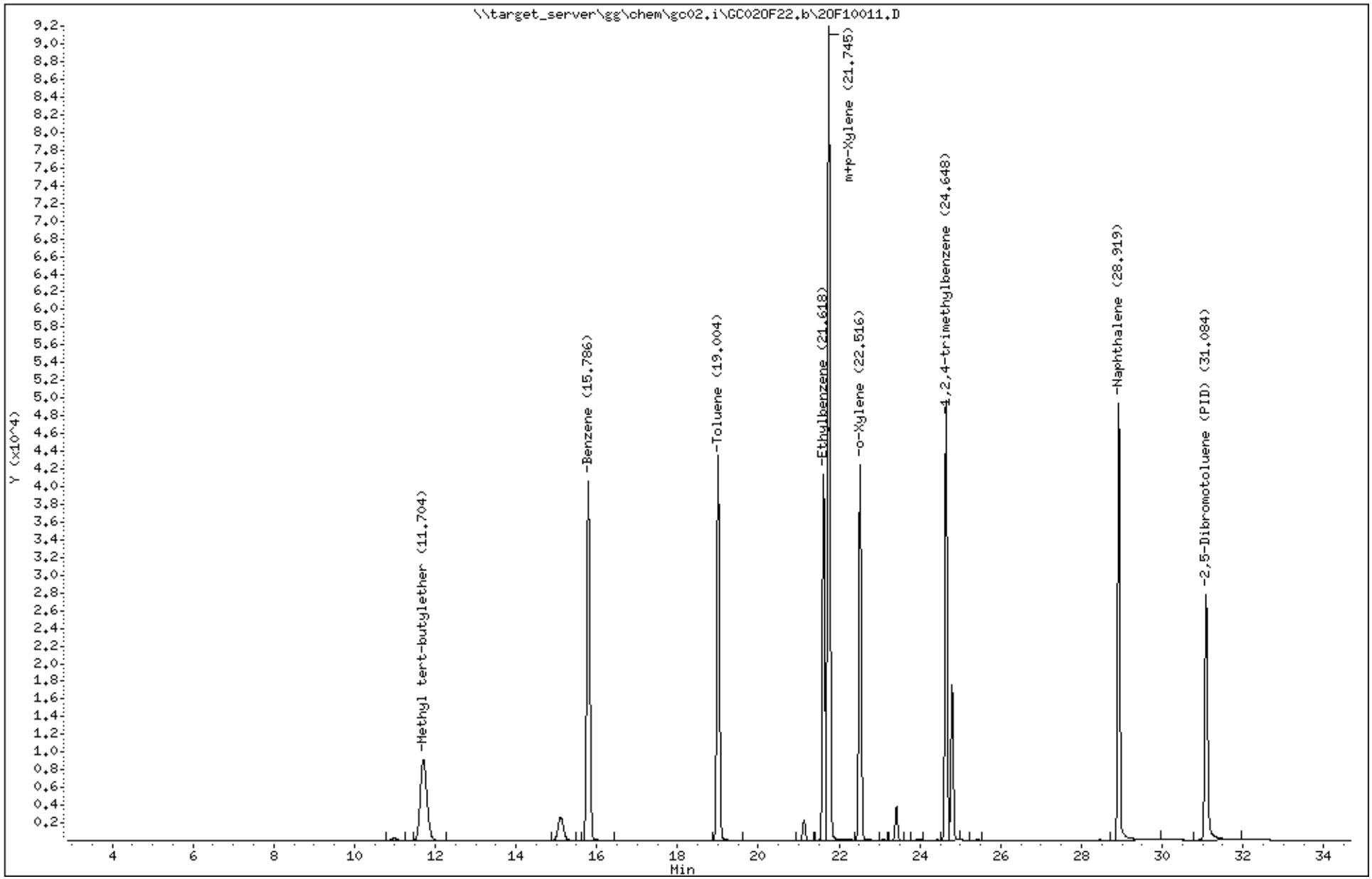
Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10011.D
Lab Smp Id: WG301241-7
Inj Date : 22-JUN-2021 18:30
Operator : DL   Inst ID: gc02.i
Smp Info : WG301241-7
Misc Info : WG301241,WG301241-4
Comment   : AROMATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m
Meth Date : 23-Jun-2021 07:30 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07   Cal File: 2OF10009.D
Als bottle: 1   QC Sample: INDSOURCE
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: IND.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
2	Methyl tert-butylether	11.703	11.696	0.007	206058	95.0778	95.1	
3	Benzene	15.786	15.780	0.006	435076	98.2952	98.3	
4	Toluene	19.003	18.998	0.005	396846	99.3125	99.3	
5	Ethylbenzene	21.617	21.612	0.005	352938	102.480	102	
6	m+p-Xylene	21.744	21.739	0.005	805359	200.056	200	
7	o-Xylene	22.516	22.511	0.005	354194	100.487	100	
8	1,2,4-trimethylbenzene	24.647	24.643	0.004	370567	101.594	102	
10	Naphthalene	28.919	28.916	0.003	384421	114.947	115	
$ 11	2,5-Dibromotoluene (PID)	31.084	31.083	0.001	280197	112.205	112	

Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\20F10011.D
Date : 22-JUN-2021 18:30
Client ID:
Instrument: gc02.i
Sample Info: WG301241-7
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000079

Data File: 2OF10011.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\GC02OF22.b\2OF10011.D
Lab Smp Id: WG301241-7
Inj Date : 22-JUN-2021 18:30
Operator : DL Inst ID: gc02.i
Smp Info : WG301241-7
Misc Info : WG301241,WG301241-4
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 23-Jun-2021 07:36 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1 QC Sample: INDSOURCE
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: IND.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

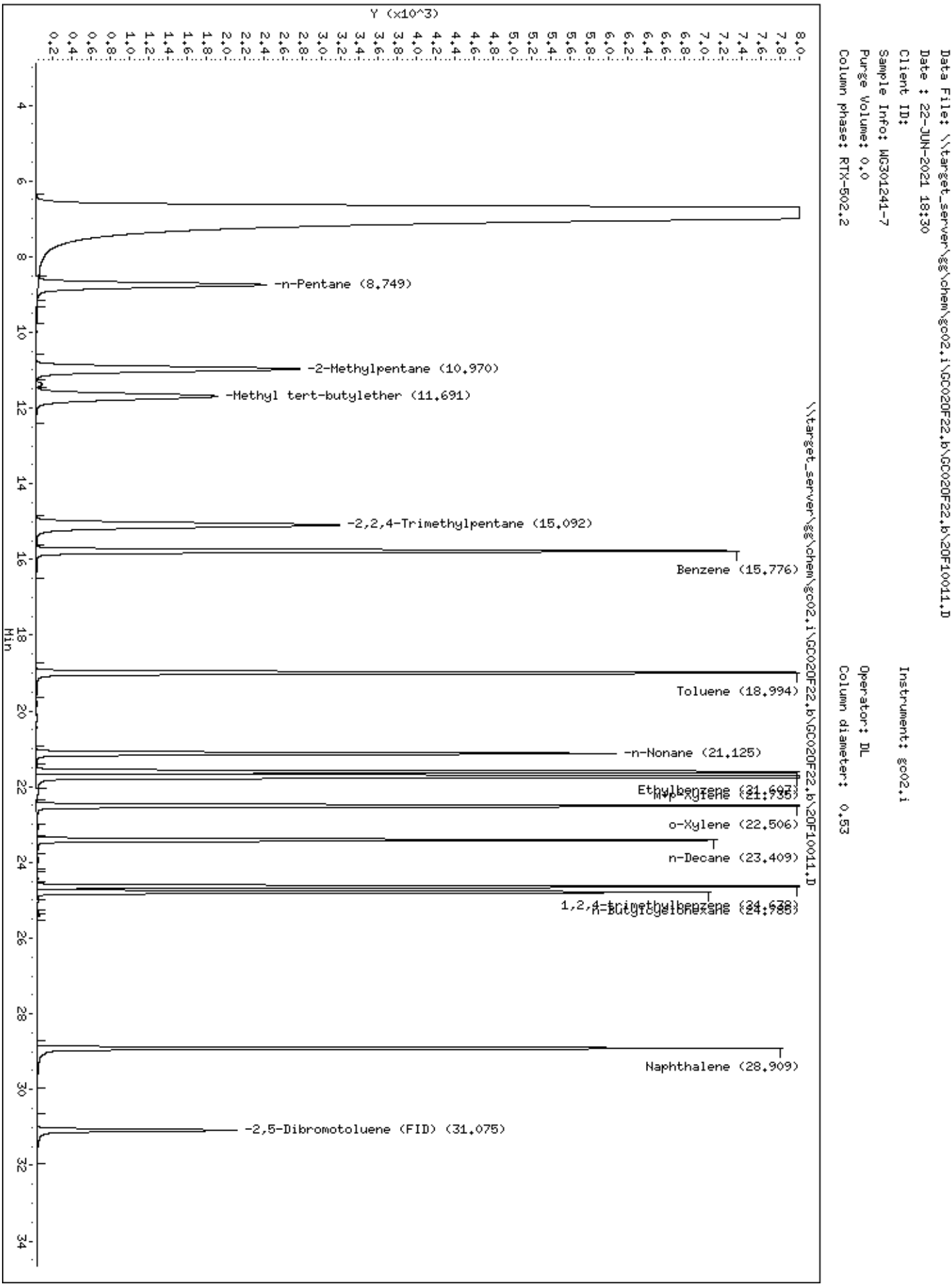
Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
5	n-Pentane	8.749	8.743	0.006	440034	83.1110	83.1(M)	M2
6	2-Methylpentane	10.970	10.966	0.004	523840	88.4325	88.4	
7	Methyl tert-butylether	11.691	11.687	0.004	430655	95.0818	95.1	
8	2,2,4-Trimethylpentane	15.092	15.093	-0.001	582113	94.2901	94.3	
9	Benzene	15.775	15.769	0.006	760753	97.9375	97.9	
11	Toluene	18.993	18.989	0.004	753240	98.6565	98.6	
12	n-Nonane	21.124	21.127	-0.003	523523	96.2442	96.2	
14	Ethylbenzene	21.607	21.606	0.001	739360	102.778	103	
15	m+p-Xylene	21.734	21.736	-0.002	1497579	199.494	199	
16	o-Xylene	22.506	22.505	0.001	764007	100.046	100	
13	n-Decane	23.409	23.409	0.000	550115	109.121	109	
18	1,2,4-trimethylbenzene	24.637	24.638	-0.001	743113	101.553	102	
19	n-Butylcyclohexane	24.784	24.785	-0.001	547158	92.2377	92.2	
20	Naphthalene	28.908	28.910	-0.002	565540	112.890	113	
$ 21	2,5-Dibromotoluene (FID)	31.074	31.076	-0.002	199386	110.382	110	

DL
9:12 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.


Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\GC020F22.b\20F10011.D
Date : 22-JUN-2021 18:30
Client ID:
Sample Info: WG301241-7
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: DL
Column diameter: 0.53
Y (x10^3)
Min
\\target_server\gg\chem\gc02.i\GC020F22.b\GC020F22.b\20F10011.D
-n-Pentane (8.749)
-2-Methylpentane (10.970)
-Methyl tert-butylether (11.691)
-2,2,4-Trimethylpentane (15.092)
Benzene (15.776)
Toluene (18.994)
-n-Nonane (21.125)
Ethylbenzene (21.697)
m+p-Xylene (21.736)
o-Xylene (22.506)
n-Decane (23.409)
1,2,4-Trimethylbenzene (24.638)
n-Butylcyclohexane (24.788)
Naphthalene (28.909)
-2,5-Dibromotoluene (FID) (31.075)

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Lau
SDG: SO4723
Lab ID : WG303232-8
Analytical Date: 07/27/21 07:40
Lab File ID : 2OG10061.D
Instrument ID: GC02
Initial Calibration Date(s): 06/22/21 14:24 06/22/21 17:48
Column ID: A

	Compound	$\overline{RRF}$/Amount	RF50	Min RRF	%D/ %Drift	Max %D/ %Drift	Curve Type
1	C9-C10 Aromatic	3648	3336	0.100	-8.53114	25.00000	Averaged
2	Methyl tert-butylether	2167	1890	0.100	-12.81510	25.00000	Averaged
3	Benzene	4426	3834	0.100	-13.37386	25.00000	Averaged
4	Toluene	3996	3517	0.100	-11.98295	25.00000	Averaged
5	Ethylbenzene	3444	3096	0.100	-10.11841	25.00000	Averaged
6	m+p-Xylene	4026	3620	0.100	-10.06652	25.00000	Averaged
7	o-Xylene	3525	3116	0.100	-11.59005	25.00000	Averaged
8	1,2,4-trimethylbenzene	3648	3336	0.100	-8.53137	25.00000	Averaged
10	Naphthalene	3344	3210	0.100	-4.02294	25.00000	Averaged
11	2,5-Dibromotoluene (PID)	2497	2478	0.100	-0.78353	25.00000	Averaged

*** = Compound out of QC criteria**

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P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029
http://katahdinlab.com
sales@katahdinlab.com

Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10061.D
Report Date: 30-Jul-2021 09:57

Katahdin Analytical Services

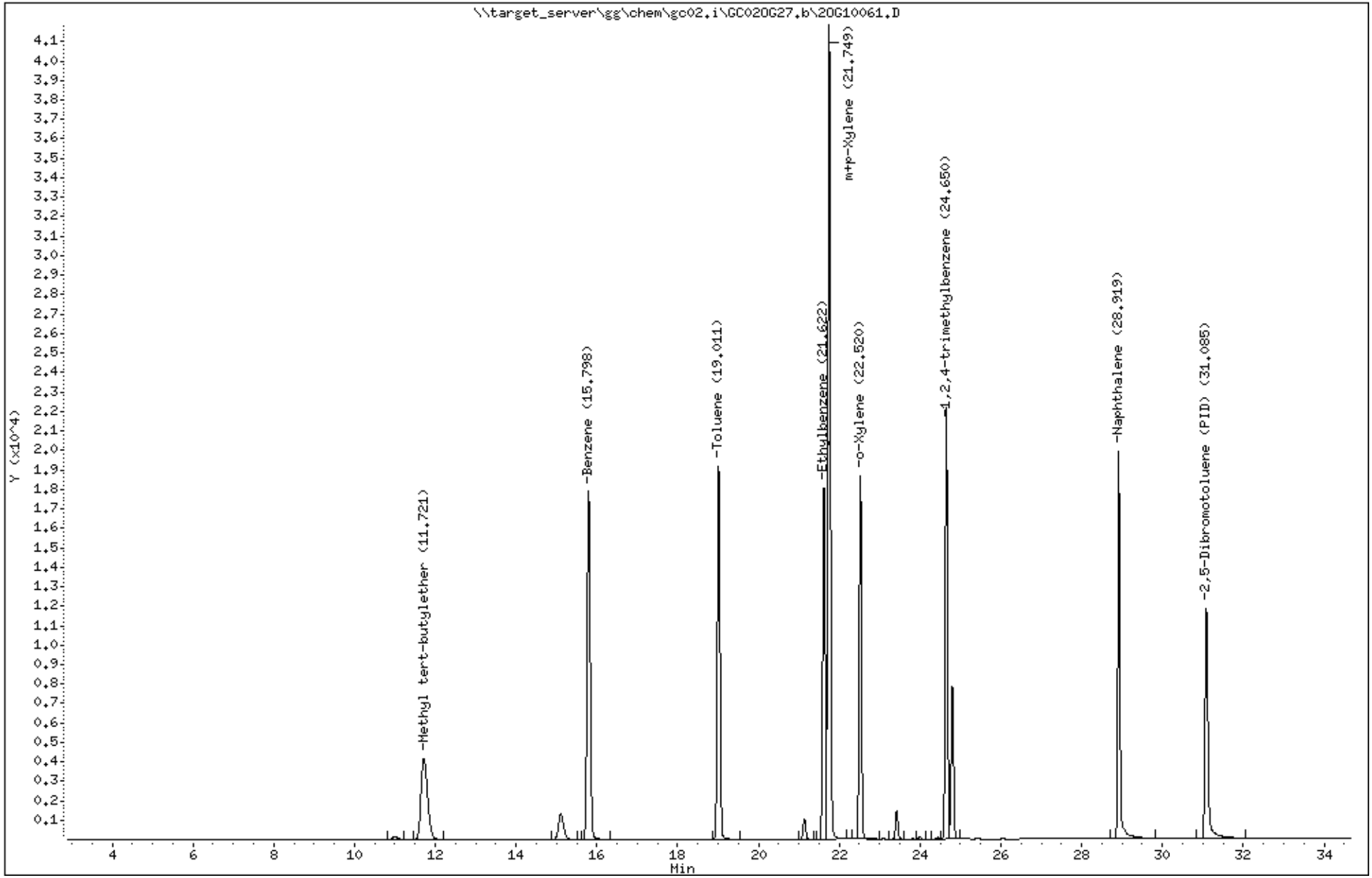
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10061.D
Lab Smp Id: WG303232-8
Inj Date : 27-JUL-2021 07:40
Operator : DL   Inst ID: gc02.i
Smp Info : WG303232-8,SO4723
Misc Info : WG303232,WG301241-4,SO4723-2
Comment   : AROMATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07   Cal File: 2OF10009.D
Als bottle: 1   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
						CAL-AMT	ON-COL	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)	REVIEW CODE
	2 Methyl tert-butylether	11.721	11.696	0.025	94476	50.0000	43.6	
	3 Benzene	15.797	15.780	0.017	191713	50.0000	43.3	
	4 Toluene	19.011	18.998	0.013	175855	50.0000	44.0	
	5 Ethylbenzene	21.622	21.612	0.010	154775	50.0000	44.9	
	6 m+p-Xylene	21.748	21.739	0.009	362042	100.000	89.9	
	7 o-Xylene	22.520	22.511	0.009	155813	50.0000	44.2	
	8 1,2,4-trimethylbenzene	24.650	24.643	0.007	166818	50.0000	45.7	
	10 Naphthalene	28.919	28.916	0.003	160489	50.0000	48.0	
M	1 C9-C10 Aromatic				166818	50.0000	45.7	
$	11 2,5-Dibromotoluene (PID)	31.085	31.083	0.002	123881	50.0000	49.6	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10061.D
Date : 27-JUL-2021 07:40
Client ID:
Instrument: gc02.i
Sample Info: WG303232-8,S04723
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000084

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Lau
SDG: SO4723
Lab ID : WG303232-8
Analytical Date: 07/27/21 07:40
Lab File ID : 2OG10061.D
Instrument ID: GC02
Initial Calibration Date(s): 06/22/21 14:24 06/22/21 17:48
Column ID: B

	Compound	$\overline{RRF}$/Amount	RF50	Min RRF	%D/ %Drift	Max %D/ %Drift	Curve Type
1	C5-C8 Aliphatic	5797	5951	0.100	2.65131	25.00000	Averaged
2	C9-C12 Aliphatic	5487	5177	0.100	-5.65075	25.00000	Averaged
5	n-Pentane	5295	5532	0.100	4.47903	25.00000	Averaged
6	2-Methylpentane	5924	6039	0.100	1.94758	25.00000	Averaged
7	Methyl tert-butylether	4529	4390	0.100	-3.08368	25.00000	Averaged
8	2,2,4-Trimethylpentane	6174	6282	0.100	1.75906	25.00000	Averaged
9	Benzene	7768	7655	0.100	-1.45496	25.00000	Averaged
11	Toluene	7635	7613	0.100	-0.29206	25.00000	Averaged
12	n-Nonane	5440	5380	0.100	-1.09763	30.00000	Averaged
13	n-Decane	5041	4771	0.100	-5.37110	25.00000	Averaged
14	Ethylbenzene	7194	7400	0.100	2.87291	25.00000	Averaged
15	m+p-Xylene	7507	7628	0.100	1.61340	25.00000	Averaged
16	o-Xylene	7637	7705	0.100	0.89771	25.00000	Averaged
18	1,2,4-trimethylbenzene	7317	7624	0.100	4.19222	25.00000	Averaged
19	n-Butylcyclohexane	5932	5583	0.100	-5.88841	25.00000	Averaged
20	Naphthalene	5010	5386	0.100	7.50437	25.00000	Averaged
21	2,5-Dibromotoluene (FID)	1806	1993	0.100	10.33207	25.00000	Averaged

*** = Compound out of QC criteria**

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Data File: 2OG10061.D
Report Date: 30-Jul-2021 09:59

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10061.D
Lab Smp Id: WG303232-8
Inj Date : 27-JUL-2021 07:40
Operator : DL   Inst ID: gc02.i
Smp Info : WG303232-8,SO4723
Misc Info : WG303232,WG301241-4,SO4723-2
Comment   : ALIPHATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48   Cal File: 2OF10010.D
Als bottle: 1   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

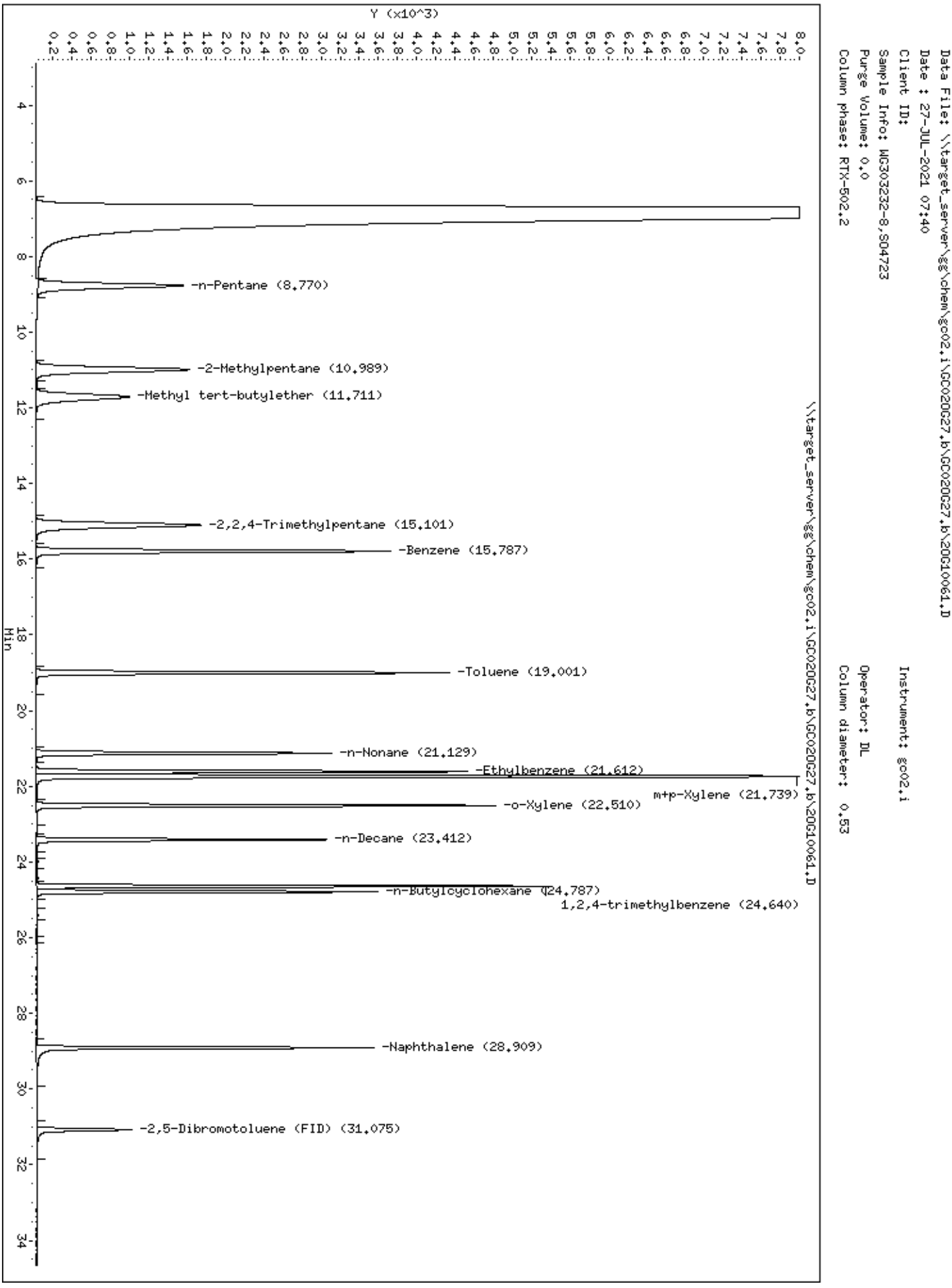
Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
5	n-Pentane	8.769	8.743	0.026	276584	50.0000	52.2(M)	M2
6	2-Methylpentane	10.989	10.966	0.023	301949	50.0000	51.0	
7	Methyl tert-butylether	11.710	11.687	0.023	219482	50.0000	48.4	
8	2,2,4-Trimethylpentane	15.100	15.093	0.007	314112	50.0000	50.9	
9	Benzene	15.787	15.769	0.018	382736	50.0000	49.3	
11	Toluene	19.000	18.989	0.011	380634	50.0000	49.8	
12	n-Nonane	21.128	21.127	0.001	268991	50.0000	49.4	
14	Ethylbenzene	21.611	21.606	0.005	370020	50.0000	51.4	
15	m+p-Xylene	21.738	21.736	0.002	762800	100.000	102	
16	o-Xylene	22.509	22.505	0.004	385257	50.0000	50.4	
13	n-Decane	23.411	23.409	0.002	238527	50.0000	47.3	
18	1,2,4-trimethylbenzene	24.639	24.638	0.001	381211	50.0000	52.1	
19	n-Butylcyclohexane	24.786	24.785	0.001	279137	50.0000	47.0	
20	Naphthalene	28.909	28.910	-0.001	269280	50.0000	53.8	
M 1	C5-C8 Aliphatic				892645	150.000	154	
M 2	C9-C12 Aliphatic				517664	100.000	94.4	
$ 21	2,5-Dibromotoluene (FID)	31.075	31.076	-0.001	99648	50.0000	55.2	

DL
10:12 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.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Date : 27-JUL-2021 07:40
Client ID:
Sample Info: WG303232-8,S04723
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: DL
Column diameter: 0.53
Y (x10^3)
Min
-n-Pentane (8.770)
-2-Methylpentane (10.989)
-Methyl tert-butylether (11.711)
-2,2,4-Trimethylpentane (15.101)
-Benzene (15.787)
-Toluene (19.001)
-n-Nonane (21.129)
-Ethylbenzene (21.612)
m+p-Xylene (21.739)
-o-Xylene (22.510)
-n-Decane (23.412)
-n-Butylcyclohexane (24.787)
1,2,4-trimethylbenzene (24.640)
-Naphthalene (28.909)
-2,5-Dibromotoluene (FID) (31.075)
\\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20610061.D

Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Lau
SDG: SO4723
Lab ID : WG303232-9
Analytical Date: 07/28/21 01:25
Lab File ID : 2OG10085.D
Instrument ID: GC02
Initial Calibration Date(s): 06/22/21 14:24 06/22/21 17:48
Column ID: A

	Compound	$\overline{RRF}$/Amount	RF50	Min RRF	%D/ %Drift	Max %D/ %Drift	Curve Type
1	C9-C10 Aromatic	3648	3365	0.100	-7.75224	25.00000	Averaged
2	Methyl tert-butylether	2167	1923	0.100	-11.24815	25.00000	Averaged
3	Benzene	4426	3845	0.100	-13.14206	25.00000	Averaged
4	Toluene	3996	3516	0.100	-12.01249	25.00000	Averaged
5	Ethylbenzene	3444	3097	0.100	-10.08763	25.00000	Averaged
6	m+p-Xylene	4026	3610	0.100	-10.31493	25.00000	Averaged
7	o-Xylene	3525	3150	0.100	-10.62319	25.00000	Averaged
8	1,2,4-trimethylbenzene	3648	3365	0.100	-7.75276	25.00000	Averaged
10	Naphthalene	3344	3343	0.100	-0.04844	25.00000	Averaged
11	2,5-Dibromotoluene (PID)	2497	2515	0.100	0.70375	25.00000	Averaged

*** = Compound out of QC criteria**

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Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10085.D
Report Date: 30-Jul-2021 09:57

Katahdin Analytical Services

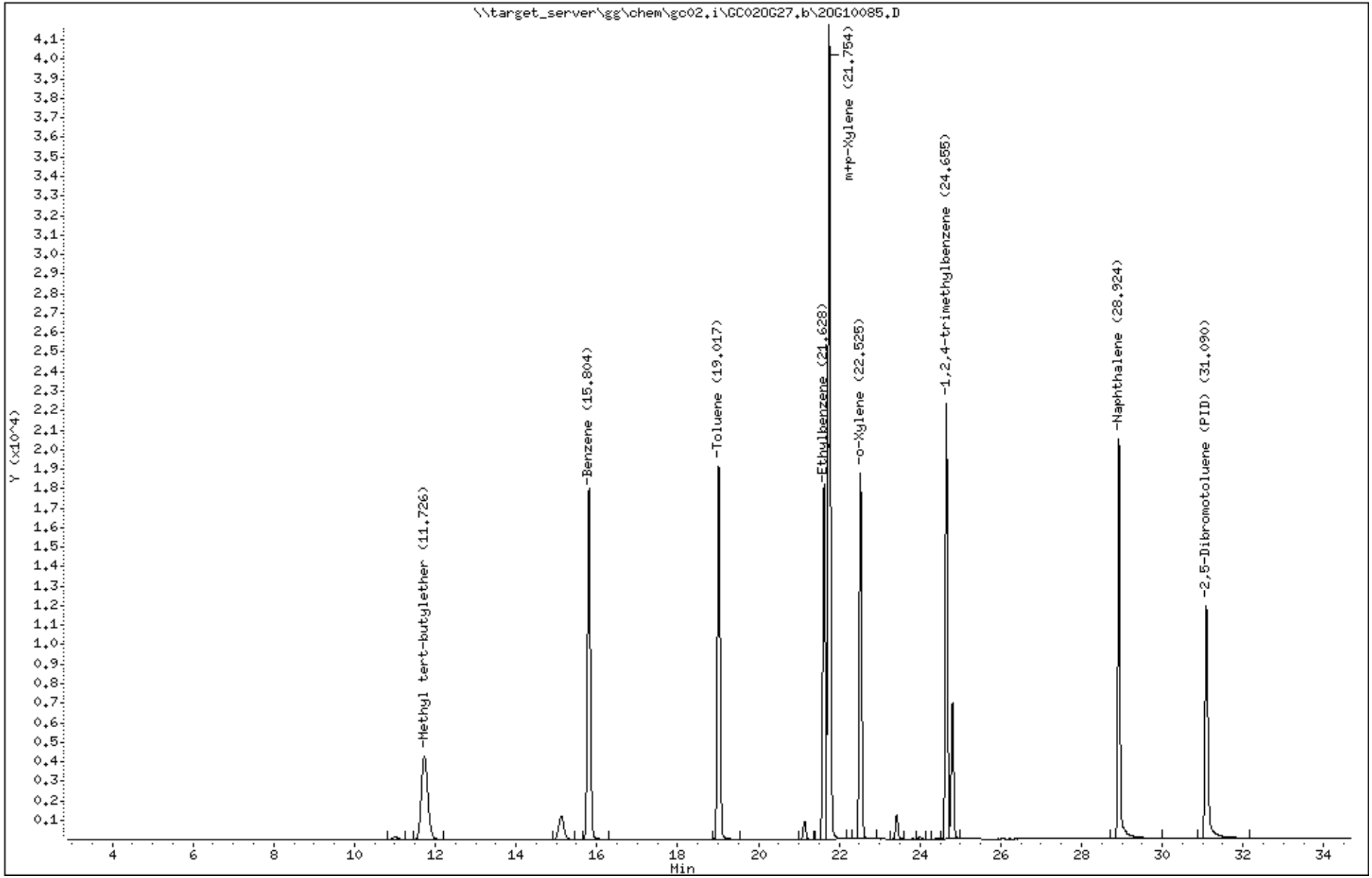
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10085.D
Lab Smp Id: WG303232-9
Inj Date : 28-JUL-2021 01:25
Operator : DL   Inst ID: gc02.i
Smp Info : WG303232-9,SO4723
Misc Info : WG303232,WG301241-4,SO4723-2
Comment   : AROMATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07   Cal File: 2OF10009.D
Als bottle: 1   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
						CAL-AMT	ON-COL	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)	REVIEW CODE
	2 Methyl tert-butylether	11.726	11.696	0.030	96174	50.0000	44.4	
	3 Benzene	15.803	15.780	0.023	192226	50.0000	43.4	
	4 Toluene	19.017	18.998	0.019	175796	50.0000	44.0	
	5 Ethylbenzene	21.627	21.612	0.015	154828	50.0000	45.0	
	6 m+p-Xylene	21.754	21.739	0.015	361042	100.000	89.7	
	7 o-Xylene	22.525	22.511	0.014	157517	50.0000	44.7	
	8 1,2,4-trimethylbenzene	24.655	24.643	0.012	168238	50.0000	46.1	
	10 Naphthalene	28.923	28.916	0.007	167135	50.0000	50.0	
M	1 C9-C10 Aromatic				168238	50.0000	46.1	
$	11 2,5-Dibromotoluene (PID)	31.089	31.083	0.006	125738	50.0000	50.4	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10085.D
Date : 28-JUL-2021 01:25
Client ID:
Instrument: gc02.i
Sample Info: WG303232-9,S04723
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000090

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ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Lau
SDG: SO4723
Lab ID : WG303232-9
Analytical Date: 07/28/21 01:25
Lab File ID : 2OG10085.D
Instrument ID: GC02
Initial Calibration Date(s): 06/22/21 14:24 06/22/21 17:48
Column ID: B

	Compound	$\overline{RRF}$/Amount	RF50	Min RRF	%D/ %Drift	Max %D/ %Drift	Curve Type
1	C5-C8 Aliphatic	5797	5477	0.100	-5.52278	25.00000	Averaged
2	C9-C12 Aliphatic	5487	4472	0.100	-18.49859	25.00000	Averaged
5	n-Pentane	5295	5144	0.100	-2.83492	25.00000	Averaged
6	2-Methylpentane	5924	5582	0.100	-5.77406	25.00000	Averaged
7	Methyl tert-butylether	4529	4469	0.100	-1.32182	25.00000	Averaged
8	2,2,4-Trimethylpentane	6174	5705	0.100	-7.58680	25.00000	Averaged
9	Benzene	7768	7599	0.100	-2.17538	25.00000	Averaged
11	Toluene	7635	7519	0.100	-1.52062	25.00000	Averaged
12	n-Nonane	5440	4606	0.100	-15.32314	30.00000	Averaged
13	n-Decane	5041	4063	0.100	-19.40791	25.00000	Averaged
14	Ethylbenzene	7194	7315	0.100	1.68048	25.00000	Averaged
15	m+p-Xylene	7507	7481	0.100	-0.34254	25.00000	Averaged
16	o-Xylene	7637	7614	0.100	-0.29602	25.00000	Averaged
18	1,2,4-trimethylbenzene	7317	7563	0.100	3.35149	25.00000	Averaged
19	n-Butylcyclohexane	5932	4881	0.100	-17.72581	25.00000	Averaged
20	Naphthalene	5010	5482	0.100	9.42387	25.00000	Averaged
21	2,5-Dibromotoluene (FID)	1806	1947	0.100	7.76554	25.00000	Averaged

*** = Compound out of QC criteria**

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Data File: 2OG10085.D
Report Date: 30-Jul-2021 10:00

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Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10085.D
Lab Smp Id: WG303232-9
Inj Date : 28-JUL-2021 01:25
Operator : DL Inst ID: gc02.i
Smp Info : WG303232-9,SO4723
Misc Info : WG303232,WG301241-4,SO4723-2
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

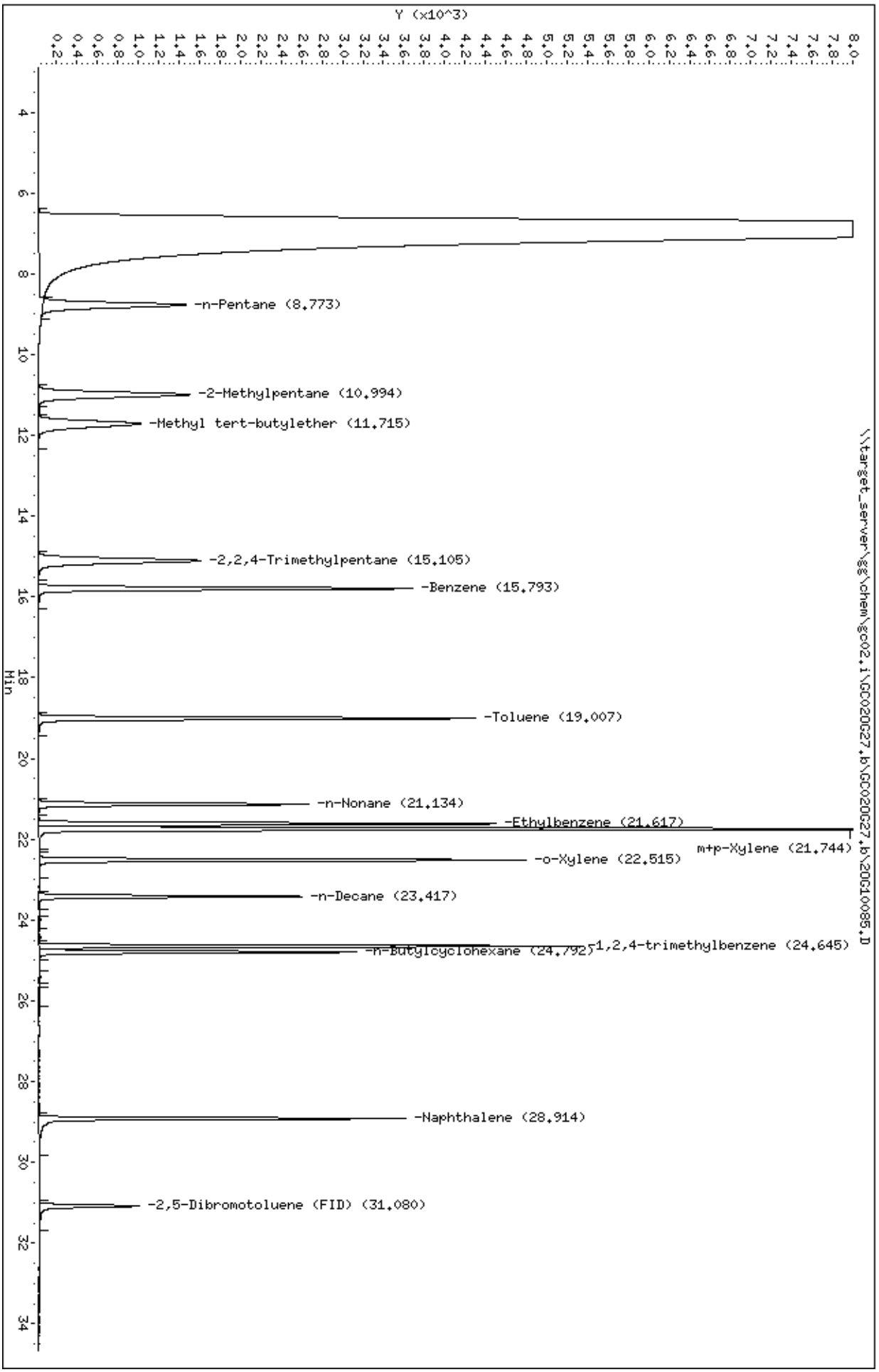
Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
5	n-Pentane	8.772	8.743	0.029	257222	50.0000	48.6(M)	M2
6	2-Methylpentane	10.993	10.966	0.027	279079	50.0000	47.1	
7	Methyl tert-butylether	11.714	11.687	0.027	223472	50.0000	49.3	
8	2,2,4-Trimethylpentane	15.105	15.093	0.012	285263	50.0000	46.2	
9	Benzene	15.792	15.769	0.023	379938	50.0000	48.9	
11	Toluene	19.006	18.989	0.017	375944	50.0000	49.2	
12	n-Nonane	21.134	21.127	0.007	230301	50.0000	42.3	
14	Ethylbenzene	21.617	21.606	0.011	365731	50.0000	50.8	
15	m+p-Xylene	21.743	21.736	0.007	748117	100.000	99.6	
16	o-Xylene	22.515	22.505	0.010	380699	50.0000	49.8	
13	n-Decane	23.416	23.409	0.007	203145	50.0000	40.3	
18	1,2,4-trimethylbenzene	24.644	24.638	0.006	378135	50.0000	51.7	
19	n-Butylcyclohexane	24.791	24.785	0.006	244027	50.0000	41.1	
20	Naphthalene	28.913	28.910	0.003	274088	50.0000	54.7	
M 1	C5-C8 Aliphatic				821564	150.000	142	
M 2	C9-C12 Aliphatic				447172	100.000	81.4	
$ 21	2,5-Dibromotoluene (FID)	31.079	31.076	0.003	97330	50.0000	53.9	

DL
10:12 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.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Date : 28-JUL-2021 01:25
Client ID:
Sample Info: WG303232-9,S04723
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: DL
Column diameter: 0.53
\\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20010085.D
Y (x10^3)
Min
-n-Pentane (8.773)
-2-Methylpentane (10.994)
-Methyl tert-butylether (11.715)
-2,2,4-Trimethylpentane (15.105)
-Benzene (15.793)
-Toluene (19.007)
-n-Nonane (21.134)
-Ethylbenzene (21.617)
m+p-Xylene (21.744)
-o-Xylene (22.515)
-n-Decane (23.417)
-n-Butylcyclohexane (24.792)
1,2,4-trimethylbenzene (24.645)
-Naphthalene (28.914)
-2,5-Dibromotoluene (FID) (31.080)

Raw QC Data Section

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Lab ID: WG303232-1
Client ID: Method Blank
SDG: SO4723
Lab File ID: 2OG10063.D

Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232
% Solids: NA

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		90.5	%					
2,5-Dibromotoluene (PID)		81.3	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10063.D
Report Date: 30-Jul-2021 09:57

Katahdin Analytical Services

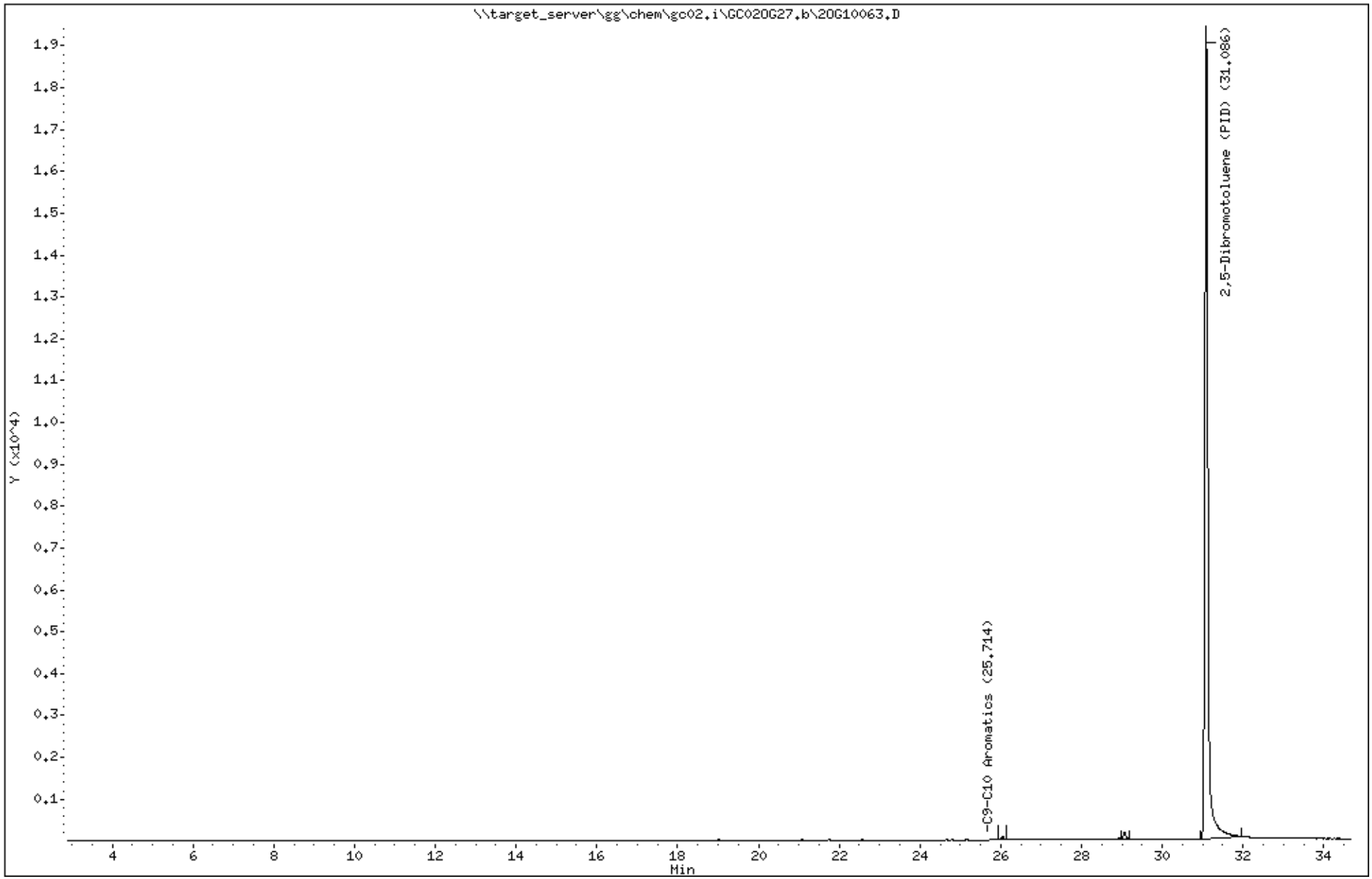
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10063.D
Lab Smp Id: WG303232-1 Client Smp ID: WG303232-Blank
Inj Date : 27-JUL-2021 09:26
Operator : DL Inst ID: gc02.i
Smp Info : WG303232-1,SO4723
Misc Info : WG303232,WG301241-4,SO4723-2
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07 Cal File: 2OF10009.D
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	31.086	31.083	0.003	203046	81.3099	81.3	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10063.D
Date : 27-JUL-2021 09:26
Client ID: WG303232-Blank
Instrument: gc02.i
Sample Info: WG303232-1,S04723
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000097

Data File: 2OG10063.D
Report Date: 30-Jul-2021 09:59

Katahdin Analytical Services

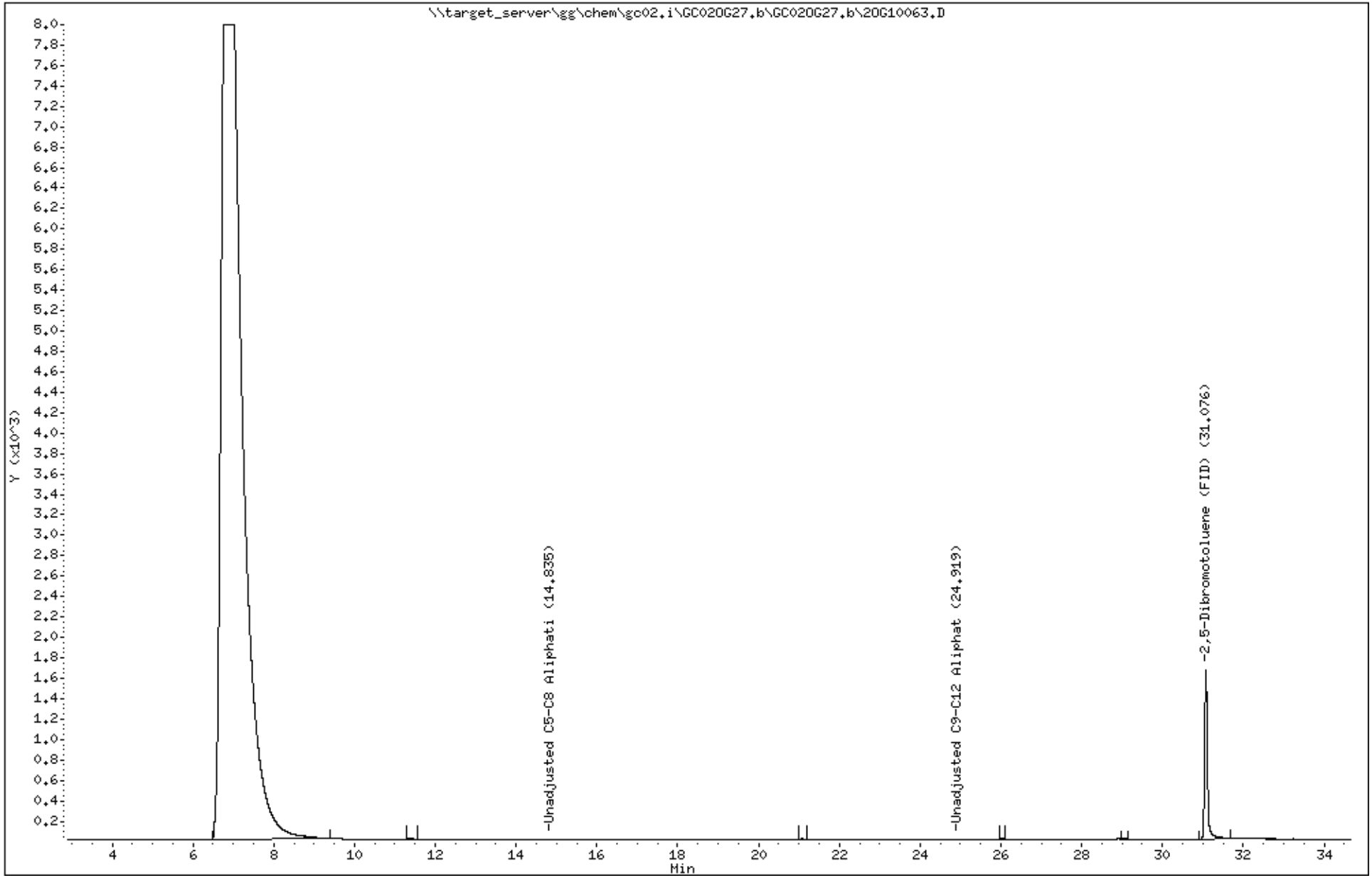
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10063.D
Lab Smp Id: WG303232-1 Client Smp ID: WG303232-Blank
Inj Date : 27-JUL-2021 09:26
Operator : DL Inst ID: gc02.i
Smp Info : WG303232-1,SO4723
Misc Info : WG303232,WG301241-4,SO4723-2
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	31.076	31.076	0.000	163483	90.5057	90.5	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20G10063.D
Date : 27-JUL-2021 09:26
Client ID: WG303232-Blank
Instrument: gc02.i
Sample Info: WG303232-1,S04723
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000099

Katahdin
ANALYTICAL SERVICES

LCS/LCSD Recovery Report

LCS ID: WG303232-2
LCSD ID: WG303232-3
SDG: SO4723
LCS File ID: 2OG10064.D

Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232
LCSD File ID: 2OG10065.D

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
Report Date: 30-JUL-21

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
C5-C8 Aliphatics	300.	278.	92.7	273.	91.0	ug/L	2	25	70-130
C9-C12 Aliphatics	200.	206.	103.	201.	100.	ug/L	2	25	70-130
C9-C10 Aromatics	100.	87.6	87.6	87.2	87.2	ug/L	0	25	70-130
Benzene	100.	83.9	83.9	83.9	83.9	ug/L	0	25	70-130
Ethylbenzene	100.	87.3	87.3	87.3	87.3	ug/L	0	25	70-130
Methyl tert-butylether	100.	83.8	83.8	83.7	83.7	ug/L	0	25	70-130
Naphthalene	100.	94.6	94.6	95.2	95.2	ug/L	1	25	70-130
Toluene	100.	84.8	84.8	84.7	84.7	ug/L	0	25	70-130
m+p-Xylenes	200.	170.	85.0	171.	85.5	ug/L	0	25	70-130
o-Xylene	100.	85.6	85.6	85.8	85.8	ug/L	0	25	70-130
2,5-Dibromotoluene (FID)			107.		106.				70-130
2,5-Dibromotoluene (PID)			96.0		96.0				70-130

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P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

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Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10064.D
Report Date: 30-Jul-2021 09:57

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Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10064.D
Lab Smp Id: WG303232-2 Client Smp ID: WG303232-LCS
Inj Date : 27-JUL-2021 10:07
Operator : DL Inst ID: gc02.i
Smp Info : WG303232-2,SO4723
Misc Info : WG303232,WG301241-4,SO4723-2
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07 Cal File: 2OF10009.D
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: LCS-MS.sub
Target Version: 4.12
Processing Host: V200T3

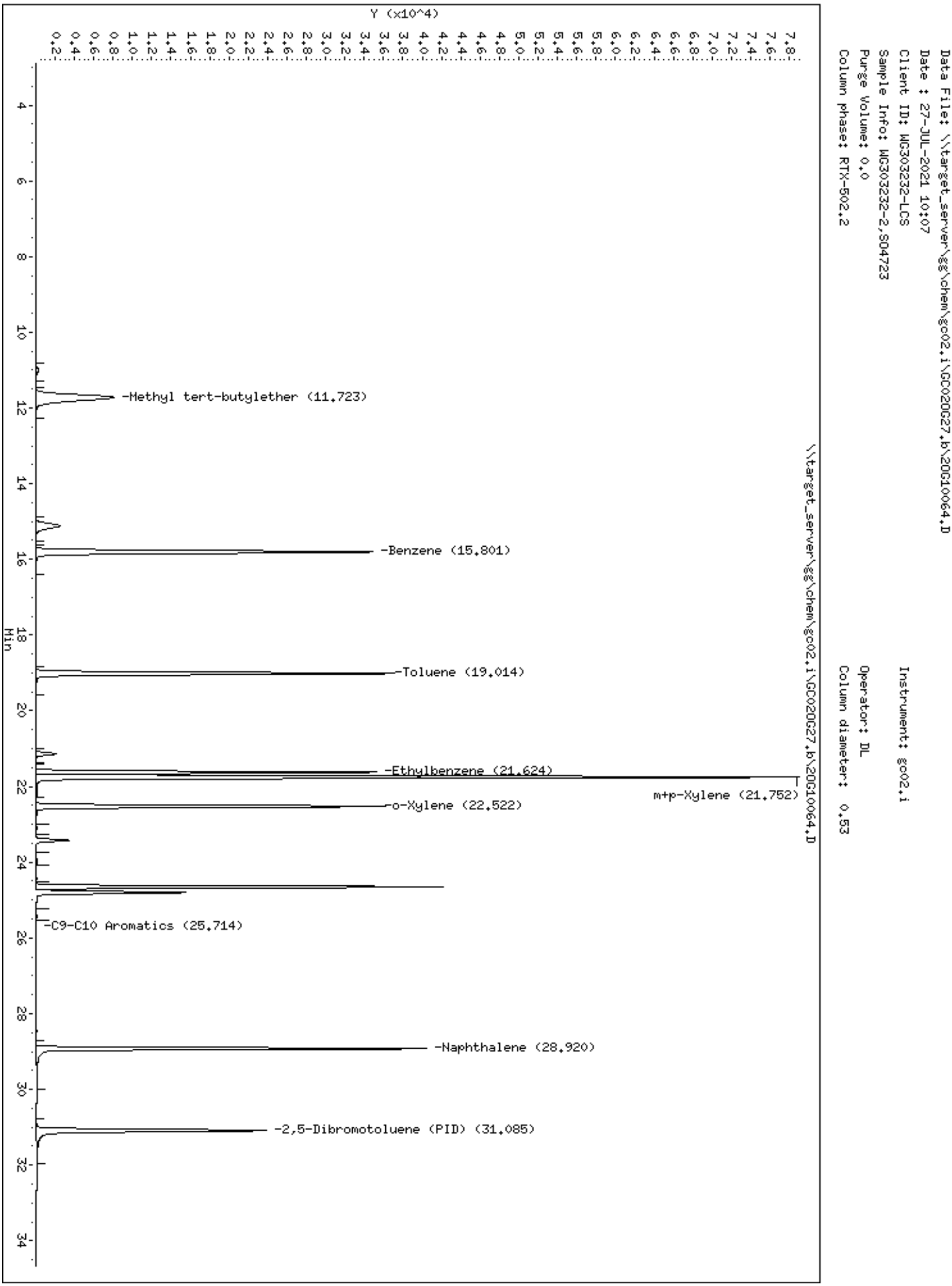
Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

			RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
	2	Methyl tert-butylether	11.722	11.696	0.026	181554	83.7714	83.8	
	3	Benzene	15.800	15.780	0.020	371503	83.9324	83.9	
	4	Toluene	19.013	18.998	0.015	338830	84.7938	84.8	
	5	Ethylbenzene	21.624	21.612	0.012	300689	87.3087	87.3	
	6	m+p-Xylene	21.751	21.739	0.012	686384	170.502	170	
	7	o-Xylene	22.522	22.511	0.011	301809	85.6248	85.6	
S	9	C9-C10 Aromatics	22.611-28.816			319440	87.5767	87.6(aM)	M3
	10	Naphthalene	28.919	28.916	0.003	316231	94.5576	94.6	
$	11	2,5-Dibromotoluene (PID)	31.084	31.083	0.001	239803	96.0293	96.0	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.


Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10064.D
Date : 27-JUL-2021 10:07
Client ID: WG303232-LCS
Sample Info: WG303232-2,S04723
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: DL
Column diameter: 0.53
\\target_server\gg\chem\gc02.i\GC020G27.b\20G10064.D
Y (x10^4)
Min
-Methyl tert-butylether (11.723)
-Benzene (15.801)
-Toluene (19.014)
-Ethylbenzene (21.624)
m+p-Xylene (21.752)
-o-Xylene (22.522)
-C9-C10 Aromatics (25.714)
-Naphthalene (28.920)
-2,5-Dibromotoluene (PID) (31.085)

Data File: 2OG10064.D
Report Date: 30-Jul-2021 09:59

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10064.D
Lab Smp Id: WG303232-2 Client Smp ID: WG303232-LCS
Inj Date : 27-JUL-2021 10:07
Operator : DL Inst ID: gc02.i
Smp Info : WG303232-2,SO4723
Misc Info : WG303232,WG301241-4,SO4723-2
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: LCS-MS.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

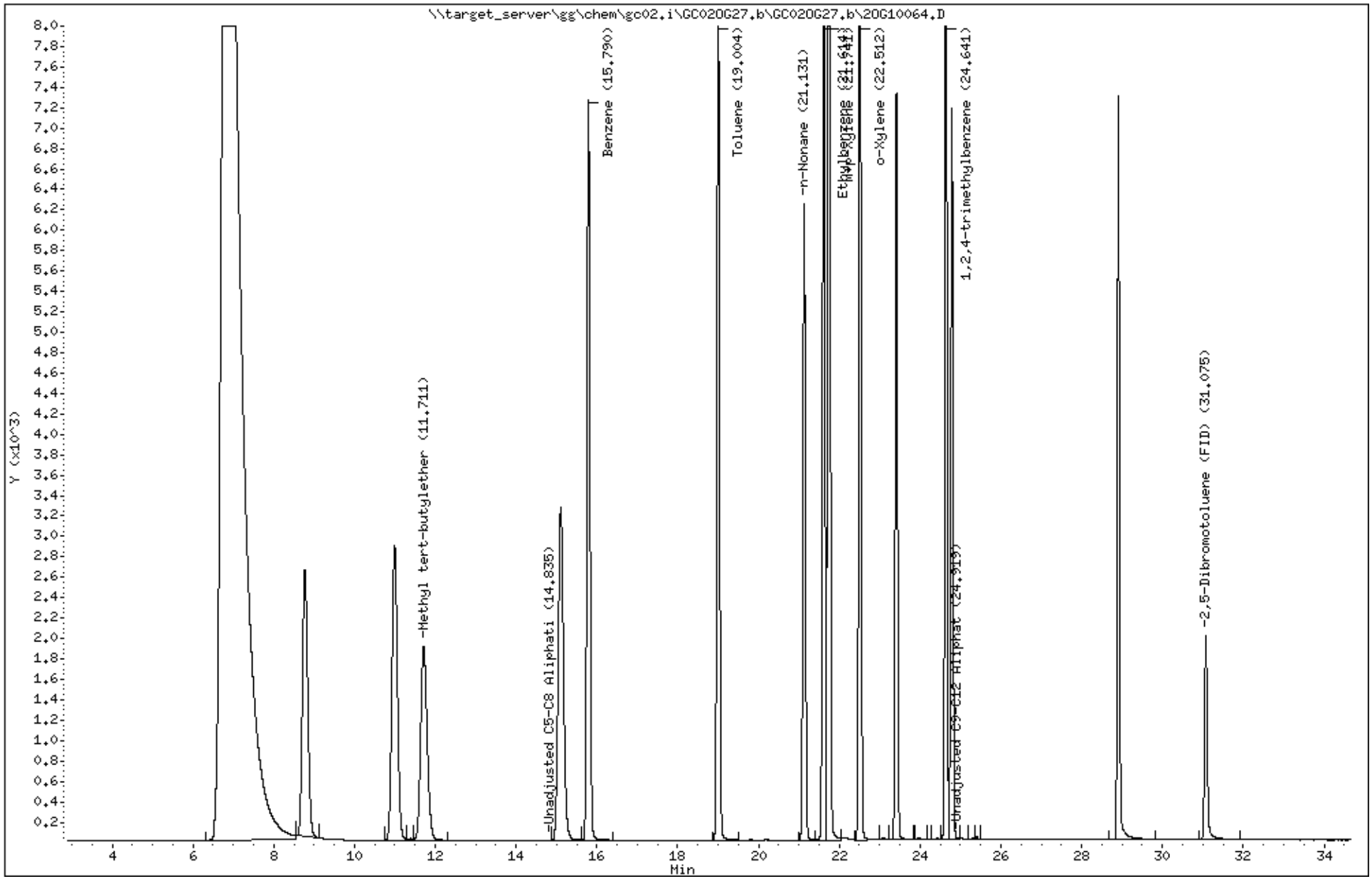
Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)	REVIEW CODE
	Compounds	RT	EXP RT	DLT RT	RESPONSE			
7	Methyl tert-butylether	11.711	11.687	0.024	424774	93.7834	93.8	
9	Benzene	15.790	15.769	0.021	747329	96.2093	96.2	
11	Toluene	19.003	18.989	0.014	738542	96.7314	96.7	
12	n-Nonane	21.131	21.127	0.004	537480	98.8101	98.8	
14	Ethylbenzene	21.614	21.606	0.008	727185	101.086	101	
15	m+p-Xylene	21.741	21.736	0.005	1470210	195.848	196	
16	o-Xylene	22.512	22.505	0.007	751514	98.4097	98.4	
18	1,2,4-trimethylbenzene	24.641	24.638	0.003	730172	99.7850	99.8	
S 10	Unadjusted C5-C8 Aliphatics	8.643-21.027			1613948	278.398	278(M)	M2
S 17	Unadjusted C9-C12 Aliphatics	21.028-28.810			1127897	205.570	206(M)	M2
$ 21	2,5-Dibromotoluene (FID)	31.074	31.076	-0.002	193636	107.199	107	

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20G10064.D
Date : 27-JUL-2021 10:07
Client ID: WG303232-LCS
Instrument: gc02.i
Sample Info: WG303232-2,S04723
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000104

Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10065.D
Report Date: 30-Jul-2021 09:57

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10065.D
Lab Smp Id: WG303232-3 Client Smp ID: WG303232-LCSD
Inj Date : 27-JUL-2021 10:48
Operator : DL Inst ID: gc02.i
Smp Info : WG303232-3,SO4723
Misc Info : WG303232,WG301241-4,SO4723-2
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07 Cal File: 2OF10009.D
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: LCS-MS.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

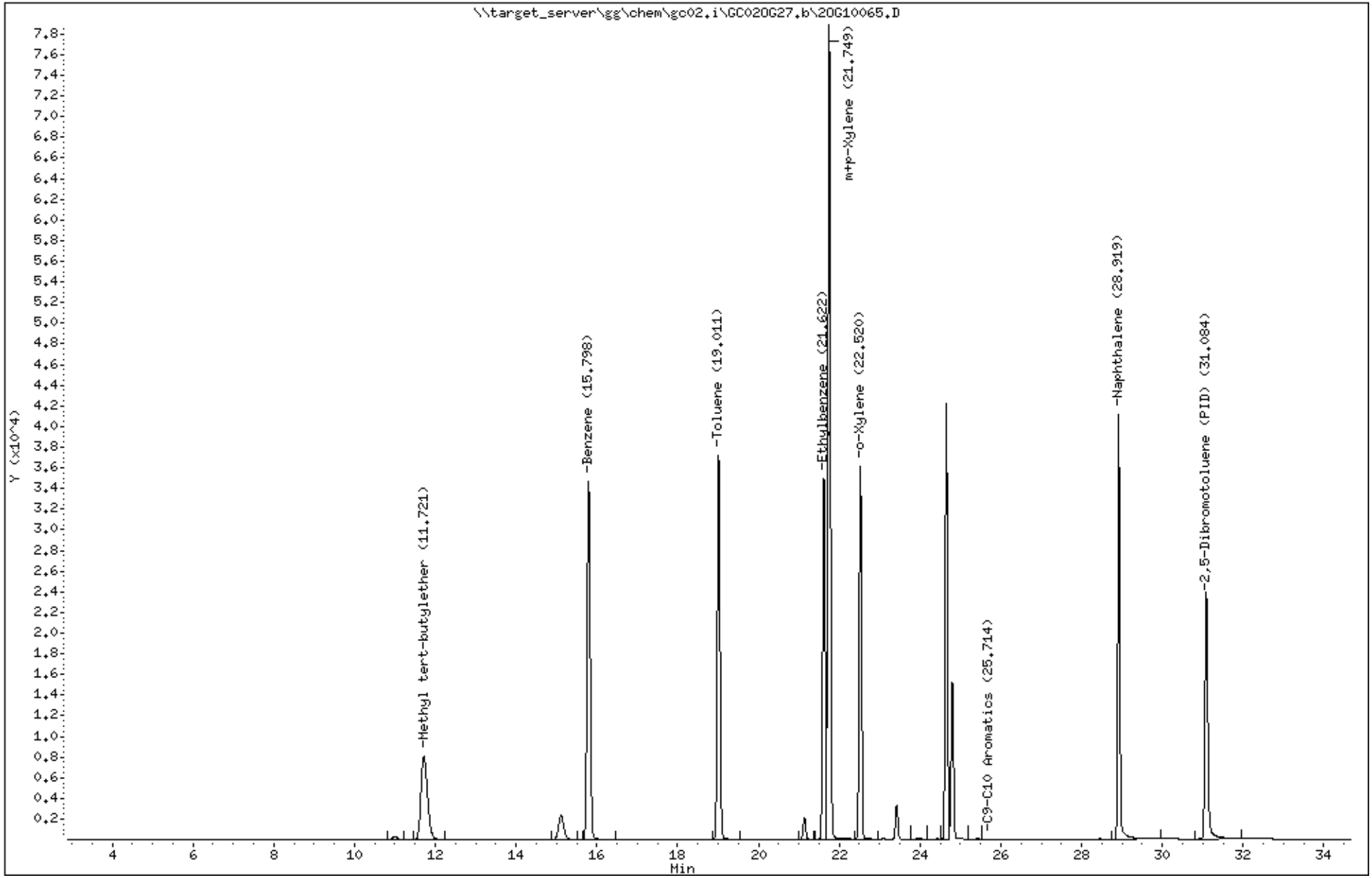
Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)	REVIEW CODE
	2 Methyl tert-butylether	11.720	11.696	0.024	181450	83.7234	83.7	
	3 Benzene	15.797	15.780	0.017	371197	83.8633	83.9	
	4 Toluene	19.011	18.998	0.013	338571	84.7289	84.7	
	5 Ethylbenzene	21.622	21.612	0.010	300561	87.2715	87.3	
	6 m+p-Xylene	21.749	21.739	0.010	686996	170.654	171	
	7 o-Xylene	22.520	22.511	0.009	302266	85.7545	85.8	
S	9 C9-C10 Aromatics	22.611	-28.816		317915	87.1586	87.2(aM)	M3
	10 Naphthalene	28.918	28.916	0.002	318261	95.1646	95.2	
$	11 2,5-Dibromotoluene (PID)	31.084	31.083	0.001	239707	95.9908	96.0	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10065.D
Date : 27-JUL-2021 10:48
Client ID: WG303232-LCSD
Instrument: gc02.i
Sample Info: WG303232-3,S04723
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000106

Data File: 2OG10065.D
Report Date: 30-Jul-2021 09:59

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10065.D
Lab Smp Id: WG303232-3 Client Smp ID: WG303232-LCSD
Inj Date : 27-JUL-2021 10:48
Operator : DL Inst ID: gc02.i
Smp Info : WG303232-3,SO4723
Misc Info : WG303232,WG301241-4,SO4723-2
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: LCS-MS.sub
Target Version: 4.12

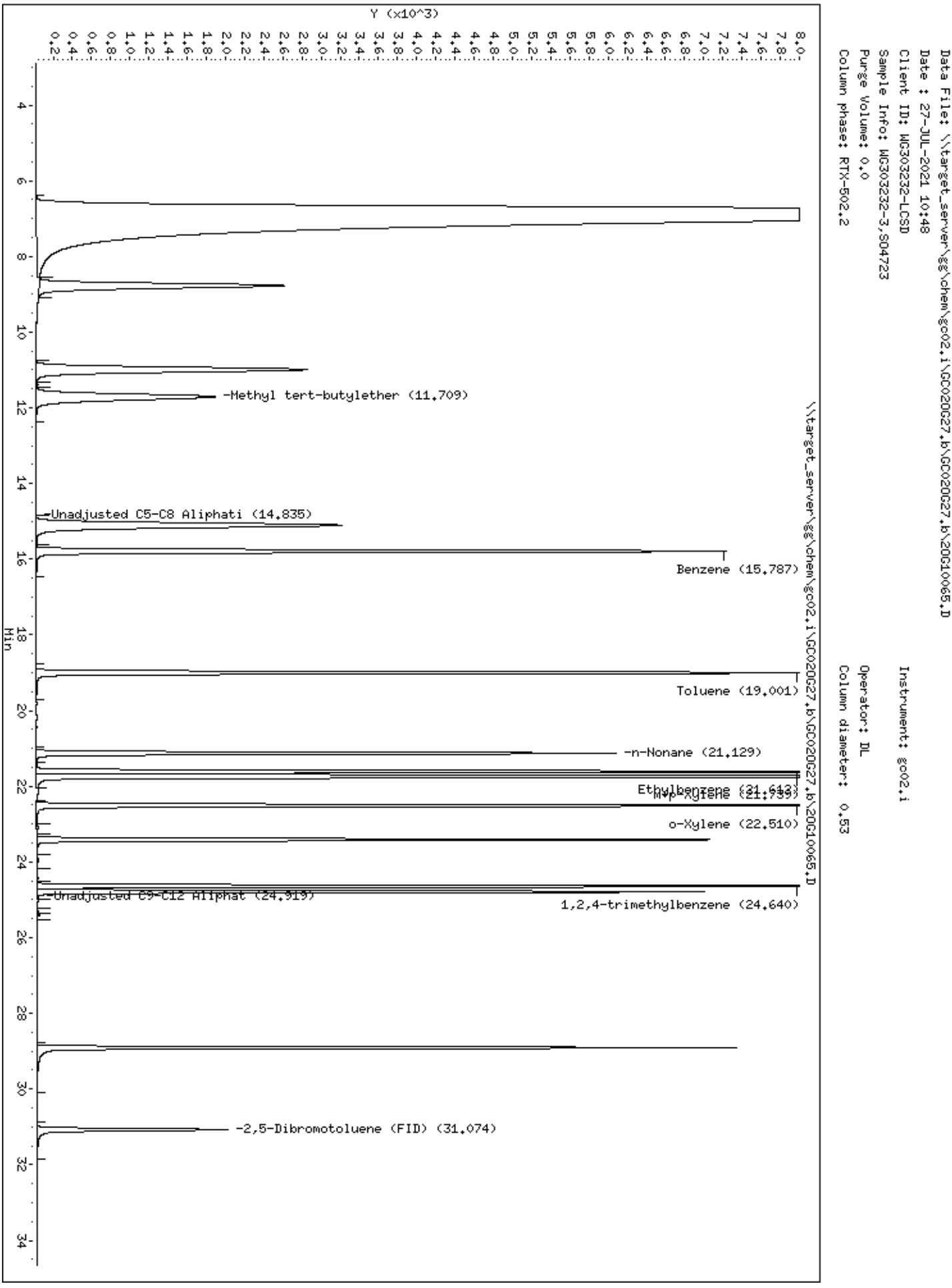
Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)	REVIEW CODE
Compounds		RT	EXP RT	DLT RT	RESPONSE			
7	Methyl tert-butylether	11.709	11.687	0.022	422566	93.2959	93.3	
9	Benzene	15.787	15.769	0.018	743257	95.6851	95.7	
11	Toluene	19.000	18.989	0.011	735723	96.3622	96.4	
12	n-Nonane	21.129	21.127	0.002	523632	96.2643	96.3	
14	Ethylbenzene	21.611	21.606	0.005	720192	100.114	100	
15	m+p-Xylene	21.739	21.736	0.003	1461740	194.720	195	
16	o-Xylene	22.509	22.505	0.004	747663	97.9054	97.9	
18	1,2,4-trimethylbenzene	24.639	24.638	0.001	724326	98.9860	99.0	
S 10	Unadjusted C5-C8 Aliphatics	8.643-21.027			1584866	273.382	273(M)	M2
S 17	Unadjusted C9-C12 Aliphatics	21.028-28.810			1102313	200.907	201(M)	M2
$ 21	2,5-Dibromotoluene (FID)	31.073	31.076	-0.003	191571	106.055	106	

QC Flag Legend

M - Compound response manually integrated.


Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20010065.D
Date : 27-JUL-2021 10:48
Client ID: WG303232-LCSD
Sample Info: WG303232-3,S04723
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: DL
Column diameter: 0.53
Y (x10^3)
Min
-Methyl tert-butylether (11.709)
Unadjusted C5-C8 Aliphati (14.835)
Benzene (15.787)
Toluene (19.001)
-n-Nonane (21.129)
Ethylbenzene (21.643)
m+p-Xylene (21.739)
o-Xylene (22.510)
Unadjusted C9-C12 Aliphat (24.919)
1,2,4-trimethylbenzene (24.640)
-2,5-Dibromotoluene (FID) (31.074)
\\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20010065.D

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MS/MSD Recovery Report

MS ID: WG303232-4
MSD ID: WG303232-5
Sample ID: SO4723-1
Client ID: MW-01-SUMMER2021
SDG: SO4723
MS File ID: 2OG10081.D

Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232
Report Date: 30-JUL-21
MSD File ID: 2OG10082.D

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
C5-C8 Aliphatics	300.	300.	ug/L	U75	301	296	100.	98.7	2	50	70-130
C9-C12 Aliphatics	200.	200.	ug/L	U75	190	184	95.0	92.0	3	50	70-130
C9-C10 Aromatics	100.	100.	ug/L	U75	86.7	87.6	86.7	87.6	1	50	70-130
Benzene	100.	100.	ug/L	U2.0	84.1	85.3	84.1	85.3	1	50	70-130
Ethylbenzene	100.	100.	ug/L	U3.8	87.5	88.8	87.5	88.8	1	50	70-130
Methyl tert-butylether	100.	100.	ug/L	U3.8	80.4	83.3	80.4	83.3	4	50	70-130
Naphthalene	100.	100.	ug/L	U3.8	92.4	93.6	92.4	93.6	1	50	70-130
Toluene	100.	100.	ug/L	U3.8	84.9	86.2	84.9	86.2	2	50	70-130
m+p-Xylenes	200.	200.	ug/L	U7.5	170	172	85.0	86.0	1	50	70-130
o-Xylene	100.	100.	ug/L	U3.8	85.1	86.2	85.1	86.2	1	50	70-130
2,5-Dibromotoluene (FID)							105.	102.			70-130
2,5-Dibromotoluene (PID)							93.9	92.5			70-130

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Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10081.D
Report Date: 30-Jul-2021 09:57

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10081.D
Lab Smp Id: WG303232-4 Client Smp ID: MW-01-SUMMER2021MS
Inj Date : 27-JUL-2021 22:37
Operator : DL Inst ID: gc02.i
Smp Info : WG303232-4,SO4723
Misc Info : WG303232,WG301241-4,SO4723-1
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07 Cal File: 2OF10009.D
Als bottle: 1 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: LCS-MS.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
2	Methyl tert-butylether	11.731	11.696	0.035	174207	80.3814	80.4	
3	Benzene	15.803	15.780	0.023	372252	84.1016	84.1	
4	Toluene	19.016	18.998	0.018	339335	84.9201	84.9	
5	Ethylbenzene	21.627	21.612	0.015	301255	87.4730	87.5	
6	m+p-Xylene	21.754	21.739	0.015	684169	169.952	170	
7	o-Xylene	22.525	22.511	0.014	299887	85.0795	85.1	
S 9	C9-C10 Aromatics	22.611-28.816			316303	86.7167	86.7(aM)	M3
10	Naphthalene	28.922	28.916	0.006	309053	92.4113	92.4	
$ 11	2,5-Dibromotoluene (PID)	31.088	31.083	0.005	234505	93.9077	93.9	

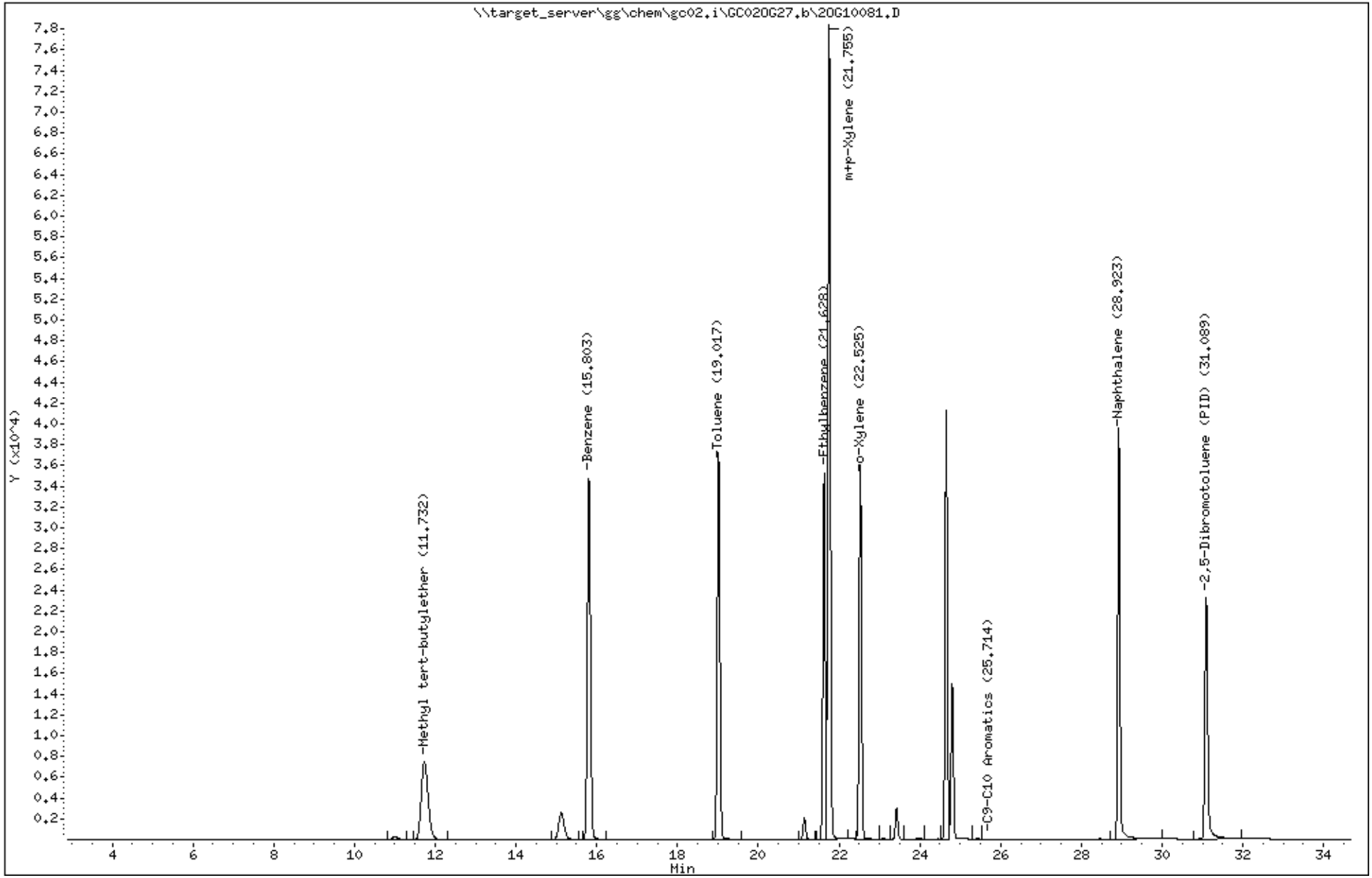
DL

10:14 am, Jul 30, 2021

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10081.D
Date : 27-JUL-2021 22:37
Client ID: MW-01-SUMMER2021MS
Instrument: gc02.i
Sample Info: WG303232-4,S04723
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000111

Data File: 2OG10081.D
Report Date: 30-Jul-2021 10:00

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10081.D
Lab Smp Id: WG303232-4 Client Smp ID: MW-01-SUMMER2021MS
Inj Date : 27-JUL-2021 22:37
Operator : DL Inst ID: gc02.i
Smp Info : WG303232-4,SO4723
Misc Info : WG303232,WG301241-4,SO4723-1
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: LCS-MS.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

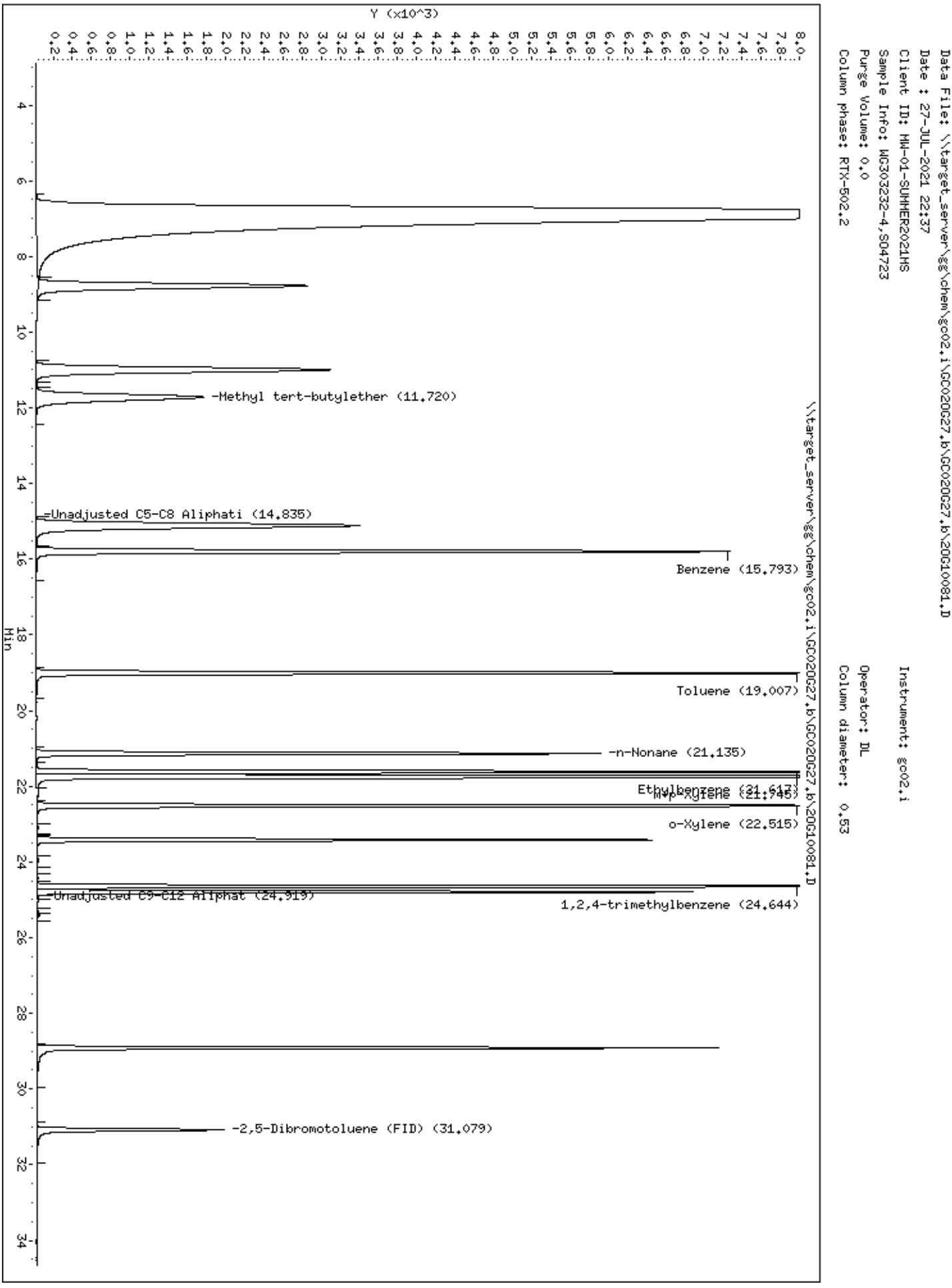
Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

			RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE	
	7	Methyl tert-butylether	11.720	11.687	0.033	410325	90.5933	90.6		
	9	Benzene	15.793	15.769	0.024	752548	96.8812	96.9		
	11	Toluene	19.006	18.989	0.017	741192	97.0785	97.1		
	12	n-Nonane	21.134	21.127	0.007	509962	93.7512	93.8		
	14	Ethylbenzene	21.617	21.606	0.011	726023	100.924	101		
	15	m+p-Xylene	21.744	21.736	0.008	1466568	195.363	195		
	16	o-Xylene	22.515	22.505	0.010	744103	97.4392	97.4		
	18	1,2,4-trimethylbenzene	24.644	24.638	0.006	720989	98.5300	98.5		
S	10	Unadjusted C5-C8 Aliphatics	8.643-21.027			1743963	300.825	301(M)	M2	
S	17	Unadjusted C9-C12 Aliphatics	21.028-28.810			1042181	189.948	190(M)	M2	
$	21	2,5-Dibromotoluene (FID)	31.078	31.076	0.002	189195	104.740	105		

DL
10:14 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.


Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20010084.D
Date : 27-JUL-2021 22:37
Client ID: MW-01-SUMMER2021MS
Sample Info: WG303232-4,S04723
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: DL
Column diameter: 0.53
Y (x10^3)
Min
-Methyl tert-butylether (11.720)
=Unadjusted C5-C8 Aliphati (14.835)
Benzene (15.793)
Toluene (19.007)
-n-Nonane (21.135)
Ethylbenzene (21.617)
m+p-Xylene (21.745)
o-Xylene (22.515)
=Unadjusted C9-C12 Aliphat (24.519)
1,2,4-trimethylbenzene (24.644)
-2,5-Dibromotoluene (FID) (31.079)
\\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20010081.D

Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10082.D
Report Date: 30-Jul-2021 09:57

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10082.D
Lab Smp Id: WG303232-5 Client Smp ID: MW-01-SUMMER2021MSD
Inj Date : 27-JUL-2021 23:19
Operator : DL Inst ID: gc02.i
Smp Info : WG303232-5,SO4723
Misc Info : WG303232,WG301241-4,SO4723-1
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07 Cal File: 2OF10009.D
Als bottle: 1 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: LCS-MS.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

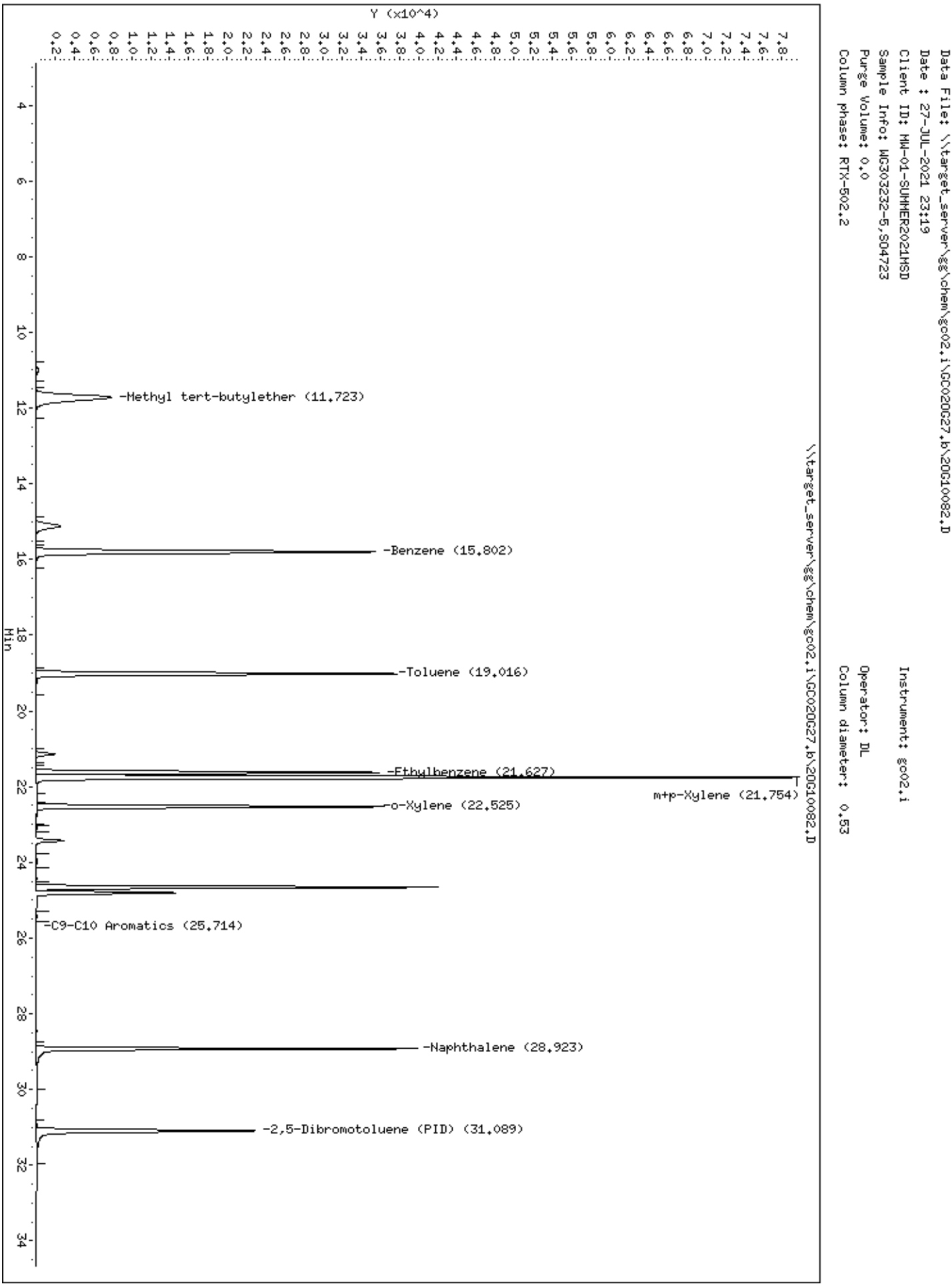
Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
2	Methyl tert-butylether	11.722	11.696	0.026	180623	83.3418	83.3	
3	Benzene	15.801	15.780	0.021	377550	85.2986	85.3	
4	Toluene	19.016	18.998	0.018	344362	86.1782	86.2	
5	Ethylbenzene	21.627	21.612	0.015	305783	88.7878	88.8	
6	m+p-Xylene	21.754	21.739	0.015	691914	171.876	172	
7	o-Xylene	22.525	22.511	0.014	303737	86.1718	86.2	
S 9	C9-C10 Aromatics	22.611-28.816			319717	87.6526	87.6(aM)	M3
10	Naphthalene	28.923	28.916	0.007	312950	93.5766	93.6	
$ 11	2,5-Dibromotoluene (PID)	31.088	31.083	0.005	230977	92.4949	92.5	

DL
10:14 am, Jul 30, 2021

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.


Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10082.D
Date : 27-JUL-2021 23:19
Client ID: MW-01-SUMMER2021HSD
Sample Info: WG303232-5,S04723
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: DL
Column diameter: 0.53
\\target_server\gg\chem\gc02.i\GC020G27.b\20G10082.D
Y (x10^4)
Min
-Methyl tert-butylether (11.723)
-Benzene (15.802)
-Toluene (19.016)
-Ethylbenzene (21.627)
m+p-Xylene (21.754)
-o-Xylene (22.525)
-C9-C10 Aromatics (25.714)
-Naphthalene (28.923)
-2,5-Dibromotoluene (PID) (31.089)

Data File: 2OG10082.D
Report Date: 30-Jul-2021 10:00

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10082.D
Lab Smp Id: WG303232-5 Client Smp ID: MW-01-SUMMER2021MSD
Inj Date : 27-JUL-2021 23:19
Operator : DL Inst ID: gc02.i
Smp Info : WG303232-5,SO4723
Misc Info : WG303232,WG301241-4,SO4723-1
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: LCS-MS.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

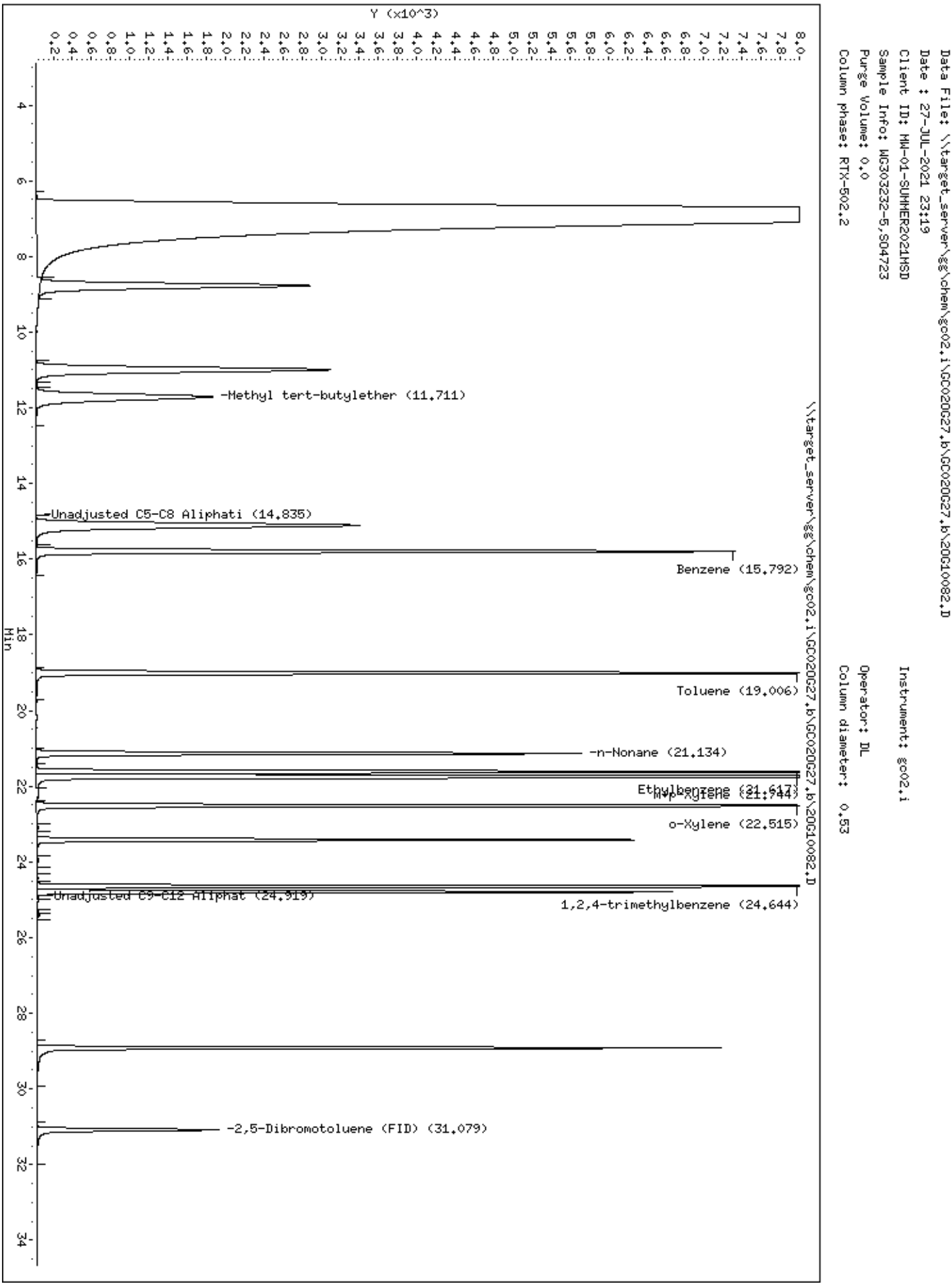
Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

			RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)	REVIEW CODE
	7	Methyl tert-butylether	11.711	11.687	0.024	420827	92.9120	92.9	
	9	Benzene	15.791	15.769	0.022	754800	97.1711	97.2	
	11	Toluene	19.005	18.989	0.016	746875	97.8228	97.8	
	12	n-Nonane	21.134	21.127	0.007	491680	90.3902	90.4	
	14	Ethylbenzene	21.617	21.606	0.011	732286	101.795	102	
	15	m+p-Xylene	21.744	21.736	0.008	1479429	197.076	197	
	16	o-Xylene	22.514	22.505	0.009	751581	98.4185	98.4	
	18	1,2,4-trimethylbenzene	24.644	24.638	0.006	726051	99.2218	99.2	
S	10	Unadjusted C5-C8 Aliphatics	8.643-21.027			1717749	296.303	296(M)	M2
S	17	Unadjusted C9-C12 Aliphatics	21.028-28.810			1012777	184.588	184(M)	M2
$	21	2,5-Dibromotoluene (FID)	31.078	31.076	0.002	184257	102.006	102	

DL
10:14 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.


Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20010082.D
Date : 27-JUL-2021 23:19
Client ID: MW-01-SUMMER2021HSD
Sample Info: WG303232-5,S04723
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: DL
Column diameter: 0.53
Y (x10^3)
Min
-Methyl tert-butylether (11.711)
Unadjusted C5-C8 Aliphati (14.835)
Benzene (15.792)
Toluene (19.006)
-n-Nonane (21.134)
Ethylbenzene (21.647)
m,p-Xylene (21.744)
o-Xylene (22.515)
Unadjusted C9-C12 Aliphat (24.519)
1,2,4-trimethylbenzene (24.644)
-2,5-Dibromotoluene (FID) (31.079)
\\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20010082.D

Logbooks and Supporting Documents

Katahdin Analytical Services
GC Laboratory Instrument Runlog

Instrument: GC02

Method (Circle): MADEP-VPH-98-1 MEDEP 4.2.17 SW846 8015(M)

Date	Init.	Sample Name	Amt. Purged	SP. #	Result File	Dil.	Y/N	Method	pH	Comments
6-22-21	DL	CV50	5mL	2	20F0002	1	N	VPHPJDFJDAS	—	PID Lamp off
		CV50		3	3		N			6hPID
		CV50		4	4		N			24PID
		ICal 50	5mL	5	5		Y	VPHPJDFJDAS		WG301211-4
		1	10mL	6	6		Y			-1
		5	50mL	7	7		Y			-2
		10	100mL	8	8		Y			-3
		100		9	9		Y			-5
		300	60mL	10	20F0003		Y			-6
		IND	50mL	11	11		Y			-7
6-23-21	DL	Rinse	5mL	1	20F0004	1	N	VPHPJDFJDAS	—	
		CV50		2	13		Y			WG301253-4
		WG301253-1	200mL	3	14		Y			
		-2		4	15		Y			
		-3		5	16		Y			
		S03730-1E		6	17		Y			
		-2E		7	18		Y			
		-3E		8	19		Y			
		-4E		9	20		Y			
		-5E		10	21		Y			
		CV50	5mL	11	22		Y			WG301253-5
6-24-21	DL	Rinse	5mL	1	20F0023	1	N	VPHPJDFJDAS	—	
		CV50		2	24		Y			WG301340-4
		WG301340-1		3	25		Y			200uL Antifoam
		-2		4	26		Y			
		-3		5	27		Y			
		S03655-1A		6	28		Y		<2	400uL Antifoam
		CV50		7	29		Y		—	WG301340-5

	Std. Name	Conc.	Std. Code	Std. Code
1	VPH Cal mix	50 ug/ml	GCV 4590	GCV
2	VPH Surr. mix	100 ug/ml	GCV 4682	GCV
3	VPH LCS mix	100 ug/ml	GCV 4583	GCV
4	GRO Cal mix	250 ug/mL Total	GCV	GCV
5	GRO Surr. Mix	50 ug/mL	GCV	GCV
6	GRO LCS mix	250 ug/mL Total	GCV	GCV
7	VPH Cal 4	250 ug/mL	GW 4592	
8	VPH Cal 6	500 ug/mL	GW 4591	

VPH CC = 50uL Std. 1
VPH LCS = 50uL Std. 3
VPH Samples = 50uL Std. 2

GRO CC = 20uL Std. 4
GRO LCS = 20uL Std. 5 and 6
GRO Samples = 20uL Std. 5

Antifoam lot #17 12/1/24

Katahdin Analytical Services
GC Laboratory Instrument Runlog

Instrument: GC02

Method (Circle): MADEP-VPH-98-1 MEDEP 4.2.17 SW846 8015(M)

Date	Init.	Sample Name	Amt. Purged	SP. #	Result File	Dil.	Y/N	Method	pH	Comments
7-27-21	DL	Rinse	5mL	1	20G10060	1	N	VPHPIDFIDAS	—	
		CV50		2	61		Y			WG303232-8
		Low Pt		3	62		Y			
		WG303232-1		4	63		Y			
		-2		5	64		Y			
		-3		6	65		Y			
		SO4724-7D		7	66		Y		12	
		SO4723-7D		8	67		Y			
		-8D		9	68		Y			
		-1S		10	69		Y			
		-2D		11	70		Y			
		-3D		12	71		Y			
		-4D		13	72		Y			
		-5D		14	73		Y			
		-6D		15	74		Y			
		SO4724-1D		16	75		Y			
		-2S		17	76		Y			
		-3D		18	77		Y			
		-4D		19	78		Y			
		-5D		20	79		Y			
		-6D		21	80		Y			
		WG303234		22	81		Y			SO4723-1KMS
		-5		23	82		Y			-1LMSD
7-28-21		-6		24	83		Y			SO4724-2KMS
		-7		25	84		Y			-2LMSD
		CV50		26	85		Y		—	WG303232-9
7-28-21	DL	Rinse	5mL	1	20G10086	1	N	VPHPIDFIDAS	—	
		CV50		2	87					

	Std. Name	Conc.	Std. Code	Std. Code
1	VPH Cal mix	50 ug/ml	GCV 4596	GCV
2	VPH Surr. mix	100 ug/ml	GCV 4593	GCV
3	VPH LCS mix	100 ug/ml	GCV 4594	GCV
4	GRO Cal mix	250 ug/mL Total	GCV	GCV
5	GRO Surr. Mix	50 ug/mL	GCV	GCV
6	GRO LCS mix	250 ug/mL Total	GCV	GCV
7	VPH Calc Low Surr mL		GCV 4597	
8				

VPH CC = 50uL Std. 1
VPH LCS = 50uL Std. 3
VPH Samples = 50uL Std. 2

GRO CC = 20uL Std. 4
GRO LCS = 20uL Std. 5 and 6
GRO Samples = 20uL Std. 5

PH lot # 603003

METALS DATA

Sample Data Section

METALS SAMPLE FLAGGING

FLAG	SPECIFIED MEANING
E	The reported value is estimated because of the presence of interference (as indicated by serial dilution).
N	The pre-digestion spiked sample recovery is not within control limits.
*	The duplicate sample analysis relative percent difference (RPD) is not within control limits.
B	Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.
A	The post-digestion spiked sample recovery is not within control limits.
•	Analytical run QC sample (e.g. ICV, CCV, ICB, CCB, ICSA, ICSAB) not within control limits.
U	The analyte was not detected above the specified level. This level may be the Practical Quantitation Level (PQL) (also called Limit of Quantitation (LOQ)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client. Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL, "U" LOQ or "U" LOD, where the rate of false negatives is <1%.
J	Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Practical Quantitation Level (PQL) (also called Limit of Quantitation (LOQ)), but above the Method Detection Limit (MDL).
Q	One or more quality control criteria failed (e.g., LCS recovery, surrogate spike recovery or CCV).

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: Katahdin Analytical Services

SDG Name: SO4723 **SOW No.** SW846

Client Field ID	Lab Sample ID
GW-EB-SUMMER2021	SO4723-008
MW-01-SUMMER2021	SO4723-001
MW-01-SUMMER2021P	SO4723-001P
MW-01-SUMMER2021S	SO4723-001S
MW-02-SUMMER2021	SO4723-002
MW-03-SUMMER2021	SO4723-003
MW-04-SUMMER2021	SO4723-004
MW-05-SUMMER2021	SO4723-005
MW-FD-SUMMER2021	SO4723-006

Were ICP interelement corrections applied ?	Yes
Were ICP background corrections applied ?	Yes
If yes - were raw data generated before application of background corrections ?	No

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: George Brewer Name: George Brewer

Date: 10/01/21 Title: Inorganics Dept. Mgr.

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** MW-01-SUMMER2021

Matrix: WATER **SDG Name:** SO4723

Percent Solids: 0.00 **Lab Sample ID:** SO4723-001

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7440-36-0	ANTIMONY, TOTAL	0.26	J	N	MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U	N	MS	5	5.0	2.3	4.0
7440-41-7	BERYLLIUM, TOTAL	0.072	J		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.063	J		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	67500		NA	MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	1.2	J	N	MS	5	5.0	0.22	4.0
7440-50-8	COPPER, TOTAL	3.29		B	MS	5	3.0	0.19	2.0
7439-92-1	LEAD, TOTAL	0.21	J	N	MS	5	1.0	0.075	0.50
7439-96-5	MANGANESE, TOTAL	2.3		N	MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.10	U	A	CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	0.70	J	N	MS	5	2.0	0.15	1.2
7782-49-2	SELENIUM, TOTAL	3.0	U		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-28-0	THALLIUM, TOTAL	0.099	J		MS	5	1.0	0.060	0.40
7440-66-6	ZINC, TOTAL	4.8	J		MS	5	10	3.9	8.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** MW-02-SUMMER2021

Matrix: WATER **SDG Name:** SO4723

Percent Solids: 0.00 **Lab Sample ID:** SO4723-002

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	LOQ	ADJUSTED MDL	LOD
7440-36-0	ANTIMONY, TOTAL	0.17	J		MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	2.3	4.0
7440-41-7	BERYLLIUM, TOTAL	0.10	J		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.069	J		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	95000			MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	2.24	J		MS	5	5.0	0.22	4.0
7440-50-8	COPPER, TOTAL	3.49		B	MS	5	3.0	0.19	2.0
7439-92-1	LEAD, TOTAL	0.17	J		MS	5	1.0	0.075	0.50
7439-96-5	MANGANESE, TOTAL	0.78	J		MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	0.75	J		MS	5	2.0	0.15	1.2
7782-49-2	SELENIUM, TOTAL	0.26	J		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-28-0	THALLIUM, TOTAL	0.092	J		MS	5	1.0	0.060	0.40
7440-66-6	ZINC, TOTAL	8.0	U		MS	5	10	3.9	8.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** MW-03-SUMMER2021

Matrix: WATER **SDG Name:** SO4723

Percent Solids: 0.00 **Lab Sample ID:** SO4723-003

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	LOQ	ADJUSTED MDL	LOD
7440-36-0	ANTIMONY, TOTAL	0.087	J		MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	2.3	4.0
7440-41-7	BERYLLIUM, TOTAL	0.079	J		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.074	J		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	75300			MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	1.2	J		MS	5	5.0	0.22	4.0
7440-50-8	COPPER, TOTAL	3.82		B	MS	5	3.0	0.19	2.0
7439-92-1	LEAD, TOTAL	0.13	J		MS	5	1.0	0.075	0.50
7439-96-5	MANGANESE, TOTAL	0.88	J		MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	0.66	J		MS	5	2.0	0.15	1.2
7782-49-2	SELENIUM, TOTAL	3.0	U		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	1.0	0.060	0.40
7440-66-6	ZINC, TOTAL	8.0	U		MS	5	10	3.9	8.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** MW-04-SUMMER2021

Matrix: WATER **SDG Name:** SO4723

Percent Solids: 0.00 **Lab Sample ID:** SO4723-004

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-36-0	ANTIMONY, TOTAL	0.057	J		MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	2.3	4.0
7440-41-7	BERYLLIUM, TOTAL	0.052	J		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.053	J		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	93500			MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	1.4	J		MS	5	5.0	0.22	4.0
7440-50-8	COPPER, TOTAL	3.57		B	MS	5	3.0	0.19	2.0
7439-92-1	LEAD, TOTAL	0.15	J		MS	5	1.0	0.075	0.50
7439-96-5	MANGANESE, TOTAL	1.8	J		MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	1.0	J		MS	5	2.0	0.15	1.2
7782-49-2	SELENIUM, TOTAL	3.0	U		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	1.0	0.060	0.40
7440-66-6	ZINC, TOTAL	8.0	U		MS	5	10	3.9	8.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** MW-05-SUMMER2021

Matrix: WATER **SDG Name:** SO4723

Percent Solids: 0.00 **Lab Sample ID:** SO4723-005

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	LOQ	ADJUSTED MDL	LOD
7440-36-0	ANTIMONY, TOTAL	0.50	U		MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	2.3	4.0
7440-41-7	BERYLLIUM, TOTAL	0.053	J		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.739	J		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	103000			MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	0.79	J		MS	5	5.0	0.22	4.0
7440-50-8	COPPER, TOTAL	6.26		B	MS	5	3.0	0.19	2.0
7439-92-1	LEAD, TOTAL	0.11	J		MS	5	1.0	0.075	0.50
7439-96-5	MANGANESE, TOTAL	621			MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	1.0	J		MS	5	2.0	0.15	1.2
7782-49-2	SELENIUM, TOTAL	3.0	U		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	1.0	0.060	0.40
7440-66-6	ZINC, TOTAL	6.5	J		MS	5	10	3.9	8.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** MW-FD-SUMMER2021

Matrix: WATER **SDG Name:** SO4723

Percent Solids: 0.00 **Lab Sample ID:** SO4723-006

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-36-0	ANTIMONY, TOTAL	0.078	J		MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	2.3	4.0
7440-41-7	BERYLLIUM, TOTAL	0.071	J		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.039	J		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	88400			MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	1.8	J		MS	5	5.0	0.22	4.0
7440-50-8	COPPER, TOTAL	3.84		B	MS	5	3.0	0.19	2.0
7439-92-1	LEAD, TOTAL	0.50	U		MS	5	1.0	0.075	0.50
7439-96-5	MANGANESE, TOTAL	0.58	J		MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.017	J		CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	0.50	J		MS	5	2.0	0.15	1.2
7782-49-2	SELENIUM, TOTAL	3.0	U		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	1.0	0.060	0.40
7440-66-6	ZINC, TOTAL	8.0	U		MS	5	10	3.9	8.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** GW-EB-SUMMER2021

Matrix: WATER **SDG Name:** SO4723

Percent Solids: 0.00 **Lab Sample ID:** SO4723-008

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-36-0	ANTIMONY, TOTAL	0.50	U		MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	2.3	4.0
7440-41-7	BERYLLIUM, TOTAL	0.20	U		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.20	U		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	130			MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	0.88	J		MS	5	5.0	0.22	4.0
7440-50-8	COPPER, TOTAL	5.01		B	MS	5	3.0	0.19	2.0
7439-92-1	LEAD, TOTAL	0.50	U		MS	5	1.0	0.075	0.50
7439-96-5	MANGANESE, TOTAL	0.36	J		MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	0.78	J		MS	5	2.0	0.15	1.2
7782-49-2	SELENIUM, TOTAL	3.0	U		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	1.0	0.060	0.40
7440-66-6	ZINC, TOTAL	8.0	U		MS	5	10	3.9	8.0

Comments:

QC Summary Section

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Concentration Units: ug/L

SAMPLE: ICV

File: HOG27A Jul 27, 2021 11:56

Analyte	True	Found	%R (1)
MERCURY	6.0	6.06	101.0

SAMPLE: CCV

File: HOG27A Jul 27, 2021 12:02

Analyte	True	Found	%R (1)
MERCURY	5.0	5.10	102.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Concentration Units: ug/L

SAMPLE: CCV

File: HOG27A Jul 27, 2021 12:25

Analyte	True	Found	%R (1)
MERCURY	5.0	5.07	101.4

SAMPLE: CCV

File: HOG27A Jul 27, 2021 12:51

Analyte	True	Found	%R (1)
MERCURY	5.0	5.18	103.6

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Concentration Units: ug/L

SAMPLE: ICV

File: LOH27A Aug 27, 2021 17:25

Analyte	True	Found	%R (1)
ALUMINUM	400.0	397.25	99.3
ANTIMONY	20.0	19.94	99.7
ARSENIC	20.0	19.79	98.9
BERYLLIUM	20.0	19.57	97.9
CADMIUM	20.0	20.19	101.0
CALCIUM	4000.0	4000.87	100.0
CHROMIUM	20.0	20.11	100.6
IRON	4000.0	3960.97	99.0
LEAD	20.0	19.88	99.4
MAGNESIUM	4000.0	3937.04	98.4
MANGANESE	20.0	20.49	102.5
MOLYBDENUM	40.0	39.91	99.8
NICKEL	20.0	20.39	102.0
POTASSIUM	4000.0	4326.34	108.2
SELENIUM	20.0	20.01	100.1
SODIUM	4000.0	4093.12	102.3
THALLIUM	20.0	20.25	101.3

SAMPLE: CCV

File: LOH27A Aug 27, 2021 17:53

Analyte	True	Found	%R (1)	
ALUMINUM	500.0	515.12	103.0	
ANTIMONY	25.0	25.70	102.8	
ARSENIC	25.0	25.50	102.0	
BERYLLIUM	25.0	25.12	100.5	
CADMIUM	25.0	25.31	101.2	
CALCIUM	5000.0	5096.02	101.9	
CHROMIUM	25.0	26.04	104.2	
IRON	5000.0	5035.02	100.7	
LEAD	25.0	25.28	101.1	
MAGNESIUM	5000.0	4982.76	99.7	
MANGANESE	25.0	25.93	103.7	
MOLYBDENUM	25.0	25.72	102.9	
NICKEL	25.0	26.38	105.5	
POTASSIUM	5000.0	5555.28	111.1	•
SELENIUM	25.0	25.25	101.0	
SODIUM	5000.0	5134.01	102.7	
THALLIUM	25.0	24.89	99.6	

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Concentration Units: ug/L

SAMPLE: CCV

File: LOH27A Aug 27, 2021 18:23

Analyte	True	Found	%R (1)	
ALUMINUM	500.0	507.13	101.4	
ANTIMONY	25.0	25.23	100.9	
ARSENIC	25.0	25.15	100.6	
BERYLLIUM	25.0	24.89	99.6	
CADMIUM	25.0	25.01	100.0	
CALCIUM	5000.0	5147.26	102.9	
CHROMIUM	25.0	26.01	104.0	
IRON	5000.0	5049.48	101.0	
LEAD	25.0	25.22	100.9	
MAGNESIUM	5000.0	4979.86	99.6	
MANGANESE	25.0	25.68	102.7	
MOLYBDENUM	25.0	25.58	102.3	
NICKEL	25.0	26.61	106.4	
POTASSIUM	5000.0	5551.26	111.0	•
SELENIUM	25.0	25.46	101.8	
SODIUM	5000.0	5152.41	103.0	
THALLIUM	25.0	24.95	99.8	

SAMPLE: CCV

File: LOH27A Aug 27, 2021 18:53

Analyte	True	Found	%R (1)	
ALUMINUM	500.0	506.76	101.4	
ANTIMONY	25.0	27.48	109.9	
ARSENIC	25.0	25.84	103.4	
BERYLLIUM	25.0	23.79	95.2	
CADMIUM	25.0	22.99	92.0	
CALCIUM	5000.0	5181.50	103.6	
CHROMIUM	25.0	27.44	109.8	
IRON	5000.0	5439.23	108.8	
LEAD	25.0	25.46	101.8	
MAGNESIUM	5000.0	5049.99	101.0	
MANGANESE	25.0	27.05	108.2	
MOLYBDENUM	25.0	23.98	95.9	
NICKEL	25.0	26.55	106.2	
POTASSIUM	5000.0	5362.25	107.2	
SELENIUM	25.0	25.66	102.6	
SODIUM	5000.0	8079.57	161.6	•
THALLIUM	25.0	25.35	101.4	

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Concentration Units: ug/L

SAMPLE: CCV

File: LOH27A Aug 27, 2021 19:23

Analyte	True	Found	%R (1)	
ALUMINUM	500.0	500.62	100.1	
ANTIMONY	25.0	27.74	111.0	•
ARSENIC	25.0	25.76	103.0	
BERYLLIUM	25.0	25.60	102.4	
CADMIUM	25.0	23.96	95.8	
CALCIUM	5000.0	5114.88	102.3	
CHROMIUM	25.0	27.07	108.3	
IRON	5000.0	5175.95	103.5	
LEAD	25.0	25.85	103.4	
MAGNESIUM	5000.0	5116.04	102.3	
MANGANESE	25.0	27.13	108.5	
MOLYBDENUM	25.0	24.71	98.8	
NICKEL	25.0	26.36	105.4	
POTASSIUM	5000.0	5637.00	112.7	•
SELENIUM	25.0	25.37	101.5	
SODIUM	5000.0	5898.64	118.0	•
THALLIUM	25.0	25.80	103.2	

SAMPLE: CCV

File: LOH27A Aug 27, 2021 19:53

Analyte	True	Found	%R (1)	
ALUMINUM	500.0	494.18	98.8	
ANTIMONY	25.0	26.12	104.5	
ARSENIC	25.0	25.95	103.8	
BERYLLIUM	25.0	25.30	101.2	
CADMIUM	25.0	24.68	98.7	
CALCIUM	5000.0	5085.04	101.7	
CHROMIUM	25.0	26.50	106.0	
IRON	5000.0	5143.60	102.9	
LEAD	25.0	24.88	99.5	
MAGNESIUM	5000.0	4983.42	99.7	
MANGANESE	25.0	26.23	104.9	
MOLYBDENUM	25.0	25.37	101.5	
NICKEL	25.0	27.09	108.4	
POTASSIUM	5000.0	5592.70	111.9	•
SELENIUM	25.0	25.57	102.3	
SODIUM	5000.0	5520.31	110.4	
THALLIUM	25.0	24.71	98.8	

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Concentration Units: ug/L

SAMPLE: CCV

File: LOH27A Aug 27, 2021 20:23

Analyte	True	Found	%R (1)	
ALUMINUM	500.0	497.67	99.5	
ANTIMONY	25.0	25.92	103.7	
ARSENIC	25.0	25.79	103.2	
BERYLLIUM	25.0	26.01	104.0	
CADMIUM	25.0	24.59	98.4	
CALCIUM	5000.0	4983.04	99.7	
CHROMIUM	25.0	26.70	106.8	
IRON	5000.0	5082.49	101.6	
LEAD	25.0	25.25	101.0	
MAGNESIUM	5000.0	4985.15	99.7	
MANGANESE	25.0	26.04	104.2	
MOLYBDENUM	25.0	25.58	102.3	
NICKEL	25.0	27.10	108.4	
POTASSIUM	5000.0	5601.56	112.0	•
SELENIUM	25.0	25.45	101.8	
SODIUM	5000.0	5417.26	108.3	
THALLIUM	25.0	25.04	100.2	

SAMPLE: CCV

File: LOH27A Aug 27, 2021 20:53

Analyte	True	Found	%R (1)	
ALUMINUM	500.0	480.01	96.0	
ANTIMONY	25.0	26.13	104.5	
ARSENIC	25.0	25.89	103.6	
BERYLLIUM	25.0	26.78	107.1	
CADMIUM	25.0	24.70	98.8	
CALCIUM	5000.0	4993.97	99.9	
CHROMIUM	25.0	26.37	105.5	
IRON	5000.0	5119.54	102.4	
LEAD	25.0	25.23	100.9	
MAGNESIUM	5000.0	4886.87	97.7	
MANGANESE	25.0	25.96	103.8	
MOLYBDENUM	25.0	25.37	101.5	
NICKEL	25.0	27.06	108.2	
POTASSIUM	5000.0	5569.45	111.4	•
SELENIUM	25.0	25.35	101.4	
SODIUM	5000.0	5268.37	105.4	
THALLIUM	25.0	25.31	101.2	

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Concentration Units: ug/L

SAMPLE: CCV

File: LOH27A Aug 27, 2021 21:24

Analyte	True	Found	%R (1)
ALUMINUM	500.0	481.37	96.3
ANTIMONY	25.0	26.30	105.2
ARSENIC	25.0	25.66	102.6
BERYLLIUM	25.0	26.72	106.9
CADMIUM	25.0	25.00	100.0
CALCIUM	5000.0	5044.39	100.9
CHROMIUM	25.0	26.42	105.7
IRON	5000.0	4985.37	99.7
LEAD	25.0	25.26	101.0
MAGNESIUM	5000.0	4873.28	97.5
MANGANESE	25.0	26.00	104.0
MOLYBDENUM	25.0	25.74	103.0
NICKEL	25.0	26.76	107.0
POTASSIUM	5000.0	5520.11	110.4
SELENIUM	25.0	24.85	99.4
SODIUM	5000.0	5153.11	103.1
THALLIUM	25.0	25.15	100.6

SAMPLE: CCV

File: LOH27A Aug 27, 2021 21:54

Analyte	True	Found	%R (1)
ALUMINUM	500.0	480.54	96.1
ANTIMONY	25.0	25.39	101.6
ARSENIC	25.0	25.96	103.8
BERYLLIUM	25.0	26.16	104.6
CADMIUM	25.0	25.07	100.3
CALCIUM	5000.0	5037.33	100.7
CHROMIUM	25.0	26.25	105.0
IRON	5000.0	5122.97	102.5
LEAD	25.0	24.81	99.2
MAGNESIUM	5000.0	4908.74	98.2
MANGANESE	25.0	25.79	103.2
MOLYBDENUM	25.0	25.47	101.9
NICKEL	25.0	26.43	105.7
POTASSIUM	5000.0	5503.89	110.1
SELENIUM	25.0	25.61	102.4
SODIUM	5000.0	5222.34	104.4
THALLIUM	25.0	24.53	98.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Concentration Units: ug/L

SAMPLE: ICV

File: LOI24A Sep 24, 2021 09:14

Analyte	True	Found	%R (1)
ALUMINUM	400.0	404.64	101.2
CALCIUM	4000.0	4057.38	101.4
COPPER	20.0	20.31	101.5
IRON	4000.0	3995.43	99.9
MAGNESIUM	4000.0	3965.50	99.1
MOLYBDENUM	40.0	39.14	97.9
POTASSIUM	4000.0	4333.05	108.3
SODIUM	4000.0	4056.42	101.4
ZINC	20.0	20.23	101.2

SAMPLE: ICV

File: LOI24A Sep 24, 2021 09:16

Analyte	True	Found	%R (1)
SILVER	20.0	20.76	103.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Concentration Units: ug/L

SAMPLE: CCV

File: LOI24A Sep 24, 2021 09:42

Analyte	True	Found	%R (1)
ALUMINUM	500.0	504.75	101.0
CALCIUM	5000.0	5152.06	103.0
COPPER	25.0	26.35	105.4
IRON	5000.0	5095.15	101.9
MAGNESIUM	5000.0	5225.76	104.5
MOLYBDENUM	25.0	25.41	101.6
POTASSIUM	5000.0	5192.78	103.9
SILVER	25.0	25.67	102.7
SODIUM	5000.0	5365.05	107.3
ZINC	25.0	25.43	101.7

SAMPLE: CCV

File: LOI24A Sep 24, 2021 10:14

Analyte	True	Found	%R (1)
ALUMINUM	500.0	499.69	99.9
CALCIUM	5000.0	5169.27	103.4
COPPER	25.0	26.54	106.2
IRON	5000.0	5046.41	100.9
MAGNESIUM	5000.0	5256.88	105.1
MOLYBDENUM	25.0	25.75	103.0
POTASSIUM	5000.0	5166.73	103.3
SILVER	25.0	26.41	105.6
SODIUM	5000.0	5360.08	107.2
ZINC	25.0	25.80	103.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Concentration Units: ug/L

SAMPLE: CCV

File: LOI24A Sep 24, 2021 10:45

Analyte	True	Found	%R (1)
ALUMINUM	500.0	508.74	101.7
CALCIUM	5000.0	5066.16	101.3
COPPER	25.0	25.84	103.4
IRON	5000.0	4965.66	99.3
MAGNESIUM	5000.0	5360.88	107.2
MOLYBDENUM	25.0	25.53	102.1
POTASSIUM	5000.0	5181.82	103.6
SILVER	25.0	26.27	105.1
SODIUM	5000.0	5430.47	108.6
ZINC	25.0	25.42	101.7

SAMPLE: CCV

File: LOI24A Sep 24, 2021 11:16

Analyte	True	Found	%R (1)
ALUMINUM	500.0	508.21	101.6
CALCIUM	5000.0	5130.63	102.6
COPPER	25.0	25.89	103.6
IRON	5000.0	4983.88	99.7
MAGNESIUM	5000.0	5329.48	106.6
MOLYBDENUM	25.0	25.80	103.2
POTASSIUM	5000.0	5152.72	103.1
SILVER	25.0	26.65	106.6
SODIUM	5000.0	5436.19	108.7
ZINC	25.0	25.37	101.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Concentration Units: ug/L

SAMPLE: CCV

File: LOI24A Sep 24, 2021 11:47

Analyte	True	Found	%R (1)
ALUMINUM	500.0	504.59	100.9
CALCIUM	5000.0	5145.88	102.9
COPPER	25.0	26.22	104.9
IRON	5000.0	5024.38	100.5
MAGNESIUM	5000.0	5256.08	105.1
MOLYBDENUM	25.0	25.60	102.4
POTASSIUM	5000.0	5190.05	103.8
SILVER	25.0	26.31	105.2
SODIUM	5000.0	5389.42	107.8
ZINC	25.0	25.56	102.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Concentration Units: ug/L

SAMPLE: PQL

File: HOG27A Jul 27, 2021 12:00

Analyte	TRUE	FOUND	% R
MERCURY	0.2	0.20	100.0

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Concentration Units: ug/L

SAMPLE: PQL

File: LOH27A Aug 27, 2021 17:36

Analyte	TRUE	FOUND	% R
ALUMINUM	20.0	19.90	99.5
ANTIMONY	0.2	0.21	105.0
ARSENIC	1.0	1.08	108.0
BERYLLIUM	0.2	0.21	105.0
CADMIUM	0.2	0.21	105.0
CALCIUM	20.0	21.64	108.2
CHROMIUM	1.0	1.08	108.0
IRON	20.0	24.68	123.4•
LEAD	0.2	0.22	110.0
MAGNESIUM	20.0	21.98	109.9
MANGANESE	0.4	0.42	105.0
MOLYBDENUM	1.0	1.08	108.0
NICKEL	0.4	0.44	110.0
POTASSIUM	200.0	227.10	113.6
SELENIUM	1.0	1.09	109.0
SODIUM	200.0	223.98	112.0
THALLIUM	0.2	0.21	105.0

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Concentration Units: ug/L

SAMPLE: PQL

File: LOI24A Sep 24, 2021 09:24

Analyte	TRUE	FOUND	% R
ALUMINUM	20.0	19.68	98.4
CALCIUM	20.0	21.00	105.0
COPPER	0.6	0.68	113.3
IRON	20.0	23.54	117.7
MAGNESIUM	20.0	19.60	98.0
MOLYBDENUM	1.0	1.02	102.0
POTASSIUM	200.0	214.45	107.2
SILVER	0.2	0.23	115.0
SODIUM	200.0	219.25	109.6
ZINC	2.0	2.03	101.5

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Concentration Units: ug/L

SAMPLE: ICB

File: HOG27A Jul 27, 2021 11:58

Analyte	Result	C
MERCURY	-0.018	U

SAMPLE: CCB

File: HOG27A Jul 27, 2021 12:04

Analyte	Result	C
MERCURY	0.016	U

SAMPLE: CCB

File: HOG27A Jul 27, 2021 12:27

Analyte	Result	C
MERCURY	-0.023	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Concentration Units: ug/L

SAMPLE: CCB

File: HOG27A Jul 27, 2021 12:53

Analyte	Result	C
MERCURY	0.016	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Concentration Units: ug/L

SAMPLE: ICB

File: LOH27A Aug 27, 2021 17:30

Analyte	Result	C
ALUMINUM	0.330	U
ANTIMONY	0.061	U
ARSENIC	0.250	U
BERYLLIUM	0.031	J
CADMIUM	0.025	U
CALCIUM	6.800	U
CHROMIUM	0.130	U
IRON	6.400	U
LEAD	0.029	J
MAGNESIUM	2.068	J
MANGANESE	0.027	J
MOLYBDENUM	0.036	J
NICKEL	0.024	J
POTASSIUM	12.000	U
SELENIUM	0.160	U
SODIUM	6.600	U
THALLIUM	0.023	J

SAMPLE: CCB

File: LOH27A Aug 27, 2021 17:56

Analyte	Result	C
ALUMINUM	9.490	J
ANTIMONY	0.061	U
ARSENIC	0.250	U
BERYLLIUM	0.030	J
CADMIUM	0.034	J
CALCIUM	11.087	B
CHROMIUM	0.130	U
IRON	10.633	B
LEAD	0.059	J
MAGNESIUM	11.138	B
MANGANESE	0.061	J
MOLYBDENUM	0.227	J
NICKEL	0.022	J
POTASSIUM	21.827	J
SELENIUM	0.160	U
SODIUM	35.177	J
THALLIUM	0.030	J

SAMPLE: CCB

File: LOH27A Aug 27, 2021 18:25

Analyte	Result	C
ALUMINUM	1.482	J
ANTIMONY	0.061	U
ARSENIC	0.250	U
BERYLLIUM	0.034	J
CADMIUM	0.025	U
CALCIUM	6.800	U
CHROMIUM	0.130	U
IRON	6.400	U
LEAD	0.037	J
MAGNESIUM	2.767	J
MANGANESE	0.051	J
MOLYBDENUM	0.090	J
NICKEL	0.017	J
POTASSIUM	12.000	U
SELENIUM	0.160	U
SODIUM	15.331	J
THALLIUM	0.037	J

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Concentration Units: ug/L

SAMPLE: CCB
File: LOH27A Aug 27, 2021 18:55

Analyte	Result	C
ALUMINUM	1.106	J
ANTIMONY	0.061	U
ARSENIC	0.250	U
BERYLLIUM	0.039	J
CADMIUM	0.025	U
CALCIUM	8.345	J
CHROMIUM	0.505	B
IRON	6.400	U
LEAD	0.043	J
MAGNESIUM	4.673	J
MANGANESE	0.105	J
MOLYBDENUM	0.068	J
NICKEL	0.163	J
POTASSIUM	72.646	J
SELENIUM	0.160	U
SODIUM	2791.640	B
THALLIUM	0.029	J

SAMPLE: CCB
File: LOH27A Aug 27, 2021 19:25

Analyte	Result	C
ALUMINUM	0.330	U
ANTIMONY	0.061	U
ARSENIC	0.250	U
BERYLLIUM	0.029	J
CADMIUM	0.025	U
CALCIUM	16.954	B
CHROMIUM	0.130	U
IRON	6.400	U
LEAD	0.019	J
MAGNESIUM	17.224	B
MANGANESE	0.269	B
MOLYBDENUM	0.045	J
NICKEL	0.211	B
POTASSIUM	35.115	J
SELENIUM	0.160	U
SODIUM	708.068	B
THALLIUM	0.025	J

SAMPLE: CCB
File: LOH27A Aug 27, 2021 19:55

Analyte	Result	C
ALUMINUM	0.330	U
ANTIMONY	0.061	U
ARSENIC	0.250	U
BERYLLIUM	0.025	J
CADMIUM	0.025	U
CALCIUM	9.542	J
CHROMIUM	0.130	U
IRON	6.400	U
LEAD	0.016	J
MAGNESIUM	11.892	B
MANGANESE	0.166	J
MOLYBDENUM	0.054	J
NICKEL	0.163	J
POTASSIUM	24.657	J
SELENIUM	0.160	U
SODIUM	305.516	B
THALLIUM	0.022	J

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Concentration Units: ug/L

SAMPLE: CCB
File: LOH27A Aug 27, 2021 20:26

Analyte	Result	C
ALUMINUM	1.664	J
ANTIMONY	0.061	U
ARSENIC	0.250	U
BERYLLIUM	0.071	J
CADMIUM	0.025	U
CALCIUM	6.800	U
CHROMIUM	0.130	U
IRON	8.439	J
LEAD	0.056	J
MAGNESIUM	4.924	J
MANGANESE	0.128	J
MOLYBDENUM	0.054	J
NICKEL	0.114	J
POTASSIUM	14.758	J
SELENIUM	0.160	U
SODIUM	155.098	B
THALLIUM	0.047	J

SAMPLE: CCB
File: LOH27A Aug 27, 2021 20:56

Analyte	Result	C
ALUMINUM	0.561	J
ANTIMONY	0.061	U
ARSENIC	0.250	U
BERYLLIUM	0.027	J
CADMIUM	0.025	U
CALCIUM	6.800	U
CHROMIUM	0.130	U
IRON	6.400	U
LEAD	0.019	J
MAGNESIUM	3.272	J
MANGANESE	0.069	J
MOLYBDENUM	0.042	J
NICKEL	0.075	J
POTASSIUM	12.000	U
SELENIUM	0.160	U
SODIUM	102.643	B
THALLIUM	0.025	J

SAMPLE: CCB
File: LOH27A Aug 27, 2021 21:26

Analyte	Result	C
ALUMINUM	0.330	U
ANTIMONY	0.061	U
ARSENIC	0.250	U
BERYLLIUM	0.032	J
CADMIUM	0.025	U
CALCIUM	6.800	U
CHROMIUM	0.130	U
IRON	6.400	U
LEAD	0.025	J
MAGNESIUM	2.362	J
MANGANESE	0.042	J
MOLYBDENUM	0.035	J
NICKEL	0.060	J
POTASSIUM	12.000	U
SELENIUM	0.160	U
SODIUM	75.573	J
THALLIUM	0.030	J

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Concentration Units: ug/L

SAMPLE: CCB

File: LOH27A Aug 27, 2021 21:56

Analyte	Result	C
ALUMINUM	0.330	U
ANTIMONY	0.061	U
ARSENIC	0.250	U
BERYLLIUM	0.033	J
CADMIUM	0.025	U
CALCIUM	6.800	U
CHROMIUM	0.130	U
IRON	6.400	U
LEAD	0.020	J
MAGNESIUM	2.464	J
MANGANESE	0.026	J
MOLYBDENUM	0.044	J
NICKEL	0.049	J
POTASSIUM	12.000	U
SELENIUM	0.160	U
SODIUM	65.229	J
THALLIUM	0.029	J

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Concentration Units: ug/L

SAMPLE: ICB

File: LOI24A Sep 24, 2021 09:19

Analyte	Result	C
ALUMINUM	0.330	U
CALCIUM	6.800	U
COPPER	0.087	U
IRON	6.400	U
MAGNESIUM	0.350	U
MOLYBDENUM	0.020	U
POTASSIUM	12.000	U
SILVER	0.011	U
SODIUM	6.600	U
ZINC	0.220	U

SAMPLE: CCB

File: LOI24A Sep 24, 2021 09:45

Analyte	Result	C
ALUMINUM	2.756	J
CALCIUM	6.800	U
COPPER	0.169	J
IRON	6.400	U
MAGNESIUM	4.917	J
MOLYBDENUM	0.121	J
POTASSIUM	12.000	U
SILVER	0.012	J
SODIUM	8.639	J
ZINC	0.220	U

SAMPLE: CCB

File: LOI24A Sep 24, 2021 10:16

Analyte	Result	C
ALUMINUM	0.432	J
CALCIUM	6.800	U
COPPER	0.117	J
IRON	6.400	U
MAGNESIUM	1.749	J
MOLYBDENUM	0.069	J
POTASSIUM	12.000	U
SILVER	0.011	U
SODIUM	-7.720	U
ZINC	0.220	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Concentration Units: ug/L

SAMPLE: CCB
File: LOI24A Sep 24, 2021 10:47

Analyte	Result	C
ALUMINUM	0.375	J
CALCIUM	6.800	U
COPPER	0.128	J
IRON	6.400	U
MAGNESIUM	0.737	J
MOLYBDENUM	0.047	J
POTASSIUM	12.000	U
SILVER	0.011	U
SODIUM	-8.517	U
ZINC	0.220	U

SAMPLE: CCB
File: LOI24A Sep 24, 2021 11:19

Analyte	Result	C
ALUMINUM	0.529	J
CALCIUM	6.800	U
COPPER	0.087	U
IRON	6.400	U
MAGNESIUM	2.294	J
MOLYBDENUM	0.054	J
POTASSIUM	12.000	U
SILVER	0.015	J
SODIUM	-9.121	U
ZINC	0.220	U

SAMPLE: CCB
File: LOI24A Sep 24, 2021 11:50

Analyte	Result	C
ALUMINUM	0.330	U
CALCIUM	6.800	U
COPPER	0.087	U
IRON	6.400	U
MAGNESIUM	0.484	J
MOLYBDENUM	0.041	J
POTASSIUM	12.000	U
SILVER	0.011	U
SODIUM	-16.999	U
ZINC	0.220	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWOG27HGW2

Matrix: WATER **SDG Name:** SO4723

QC Batch ID: OG27HGW2

Concentration Units : ug/L

Analyte	RESULT	C
MERCURY	0.10	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWOG29IMW2

Matrix: WATER **SDG Name:** SO4723

QC Batch ID: OG29IMW2

Concentration Units : ug/L

Analyte	RESULT	C
ANTIMONY	0.090	J
ARSENIC	4.0	U
BERYLLIUM	0.070	J
CADMIUM	0.20	U
CALCIUM	39	J
CHROMIUM	1.7	J
LEAD	0.10	J
MANGANESE	0.69	J
NICKEL	0.60	J
SELENIUM	3.0	U
THALLIUM	0.40	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWOI23IMW2

Matrix: WATER **SDG Name:** SO4723

QC Batch ID: OI23IMW2

Concentration Units : ug/L

Analyte	RESULT	C
COPPER	2.89	B
SILVER	0.40	U
ZINC	8.0	U

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Concentration Units: ug/L

SAMPLE: ICSA

File: LOH27A Aug 27, 2021 17:38

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	99573.88	99.6
ANTIMONY	0	0.07	
ARSENIC	0	0.03	
BERYLLIUM	0	0.02	
CADMIUM	0.40	0.39	
CALCIUM	100000.00	100027.68	100.0
CHROMIUM	2.30	2.14	
IRON	100000.00	99340.30	99.3
LEAD	0	0.09	
MAGNESIUM	100000.00	95620.82	95.6
MANGANESE	0.63	0.82	
MOLYBDENUM	2000.00	1995.28	99.8
NICKEL	0.30	0.27	
POTASSIUM	100000.00	97440.47	97.4
SELENIUM	0	0.18	
SODIUM	100000.00	96716.11	96.7
THALLIUM	0	0.01	

SAMPLE: ICSAB

File: LOH27A Aug 27, 2021 17:41

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	98765.82	98.8
ANTIMONY	20.00	20.43	100.0
ARSENIC	20.00	20.71	105.0
BERYLLIUM	20.00	20.53	105.0
CADMIUM	20.40	19.09	95.0
CALCIUM	100000.00	99419.61	99.4
CHROMIUM	22.30	22.27	100.0
IRON	100000.00	99196.45	99.2
LEAD	20.00	20.42	100.0
MAGNESIUM	100000.00	94444.73	94.4
MANGANESE	20.63	20.82	100.0
MOLYBDENUM	2000.00	1993.56	99.7
NICKEL	20.30	20.20	100.0
POTASSIUM	100000.00	97999.14	98.0
SELENIUM	20.00	20.44	100.0
SODIUM	100000.00	96147.50	96.1
THALLIUM	20.00	20.24	100.0

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Concentration Units: ug/L

SAMPLE: ICSA

File: LOI24A Sep 24, 2021 09:27

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	99043.80	99.0
CALCIUM	100000.00	100493.46	100.5
COPPER	0.16	0.52	•
IRON	100000.00	99011.40	99.0
MAGNESIUM	100000.00	96860.83	96.9
MOLYBDENUM	2000.00	1969.43	98.5
POTASSIUM	100000.00	97618.23	97.6
SILVER	0.29	0.28	
SODIUM	100000.00	100008.55	100.0
ZINC	0.28	0.67	

SAMPLE: ICSAB

File: LOI24A Sep 24, 2021 09:29

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	97815.86	97.8
CALCIUM	100000.00	102966.95	103.0
COPPER	20.16	19.53	100.0
IRON	100000.00	99897.64	99.9
MAGNESIUM	100000.00	95835.28	95.8
MOLYBDENUM	2000.00	1980.92	99.1
POTASSIUM	100000.00	97492.03	97.5
SILVER	20.29	18.32	90.0
SODIUM	100000.00	99036.23	99.0
ZINC	20.28	20.15	100.0

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services **Client Field ID:** MW-01-SUMMER2021P

Matrix: WATER **SDG Name:** SO4723

Percent Solids: 0.00 **Lab Sample ID:** SO4723-001P

Concentration Units : ug/L

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
ANTIMONY, TOTAL	118		0.26	J	100	117.4	N	85	117	MS
ARSENIC, TOTAL	116		4.0	U	100	116.6	N	84	116	MS
BERYLLIUM, TOTAL	57.5		0.072	J	50	114.8		83	121	MS
CADMIUM, TOTAL	283		0.063	J	250	113.0		87	115	MS
CALCIUM, TOTAL	79400		67500		2500	476.4	N	87	118	MS
CHROMIUM, TOTAL	237		1.2	J	200	117.7	N	85	116	MS
COPPER, TOTAL	266		3.29		250	105.0		85	118	MS
LEAD, TOTAL	116		0.21	J	100	115.5	N	88	115	MS
MANGANESE, TOTAL	585		2.3		500	116.5	N	87	115	MS
MERCURY, TOTAL	1.09		0.10	U	1	109.0		82	119	CV
NICKEL, TOTAL	592		0.70	J	500	118.3	N	85	117	MS
SELENIUM, TOTAL	113		3.0	U	100	112.8		80	120	MS
SILVER, TOTAL	53.0		0.40	U	50	106.1		85	116	MS
THALLIUM, TOTAL	116		0.099	J	100	115.4		82	116	MS
ZINC, TOTAL	511		4.8	J	500	101.2		83	119	MS

Comments:

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services **Client Field ID:** MW-01-SUMMER2021S

Matrix: WATER **SDG Name:** SO4723

Percent Solids: 0.00 **Lab Sample ID:** SO4723-001S

Concentration Units : ug/L

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
ANTIMONY, TOTAL	106		0.26	J	100	106.1		85	117	MS
ARSENIC, TOTAL	104		4.0	U	100	103.8		84	116	MS
BERYLLIUM, TOTAL	52.1		0.072	J	50	104.0		83	121	MS
CADMIUM, TOTAL	251		0.063	J	250	100.5		87	115	MS
CALCIUM, TOTAL	68700		67500		2500	48.4	N	87	118	MS
CHROMIUM, TOTAL	213		1.2	J	200	105.8		85	116	MS
COPPER, TOTAL	272		3.29		250	107.6		85	118	MS
LEAD, TOTAL	105		0.21	J	100	104.6		88	115	MS
MANGANESE, TOTAL	525		2.3		500	104.6		87	115	MS
MERCURY, TOTAL	0.945		0.10	U	1	94.5		82	119	CV
NICKEL, TOTAL	532		0.70	J	500	106.3		85	117	MS
SELENIUM, TOTAL	101		3.0	U	100	100.9		80	120	MS
SILVER, TOTAL	54.8		0.40	U	50	109.6		85	116	MS
THALLIUM, TOTAL	103		0.099	J	100	103.4		82	116	MS
ZINC, TOTAL	533		4.8	J	500	105.6		83	119	MS

Comments:

5B

POST DIGEST SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services **Client Field ID:** MW-01-SUMMER2021A

Matrix: WATER **SDG Name:** SO4723

Percent Solids: 0.00 **Lab Sample ID:** SO4723-001A

Concentration Units : ug/L

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
ANTIMONY, TOTAL	2.02		0.051	J	2	98.3		80	120	MS
ARSENIC, TOTAL	10.2		0.45	U	10	102.3		80	120	MS
BERYLLIUM, TOTAL	2.02		0.014	J	2	100.1		80	120	MS
CADMIUM, TOTAL	1.94		0.013	J	2	96.2		80	120	MS
CALCIUM, TOTAL	14000		13500		200	275.7	A	80	120	MS
CHROMIUM, TOTAL	10.6		0.24	J	10	104.1		80	120	MS
COPPER, TOTAL	7.06		0.658		6	106.7		80	120	MS
LEAD, TOTAL	2.02		0.043	J	2	98.8		80	120	MS
MANGANESE, TOTAL	4.54		0.46		4	101.9		80	120	MS
MERCURY, TOTAL	1.58		0.013	U	1	158.0	A	80	120	CV
NICKEL, TOTAL	4.18		0.14	J	4	101.0		80	120	MS
SELENIUM, TOTAL	9.78		0.037	U	10	97.8		80	120	MS
SILVER, TOTAL	1.68		0.010	U	2	84.1		80	120	MS
THALLIUM, TOTAL	1.98		0.020	J	2	98.3		80	120	MS
ZINC, TOTAL	20.4		0.95	J	20	97.3		80	120	MS

Comments:

5D

SPIKE DUPLICATES

Lab Name: Katahdin Analytical Services **Client Field ID:** MW-01-SUMMER2021

Matrix: WATER **SDG Name:** SO4723

Percent Solids: 0.00 **Lab Sample ID:** SO4723-001

Concentration Units : ug/L

Analyte	Control Limits	Spike Result	C	Spike Dup. Result	C	RPD	Q	M
ANTIMONY, TOTAL		106		118		10.1		MS
ARSENIC, TOTAL		104		116		11.6		MS
BERYLLIUM, TOTAL		52.1		57.5		9.9		MS
CADMIUM, TOTAL		251		283		11.7		MS
CALCIUM, TOTAL		68700		79400		14.4		MS
CHROMIUM, TOTAL		213		237		10.6		MS
COPPER, TOTAL		272		266		2.4		MS
LEAD, TOTAL		105		116		9.9		MS
MANGANESE, TOTAL		525		585		10.7		MS
MERCURY, TOTAL		0.945		1.09		14.3		CV
NICKEL, TOTAL		532		592		10.7		MS
SELENIUM, TOTAL		101		113		11.1		MS
SILVER, TOTAL		54.8		53.0		3.2		MS
THALLIUM, TOTAL		103		116		11.0		MS
ZINC, TOTAL		533		511		4.2		MS

Comments:

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWOG27HGW2

Matrix: WATER **SDG Name:** SO4723

QC Batch ID: OG27HGW2

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
MERCURY	5.00	5.68	113.6	82	119

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWOG29IMW2

Matrix: WATER **SDG Name:** SO4723

QC Batch ID: OG29IMW2

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
ANTIMONY	100	104	103.9	85	117
ARSENIC	100	102	101.7	84	116
BERYLLIUM	50.0	49.7	99.5	83	121
CADMIUM	250	246	98.5	87	115
CALCIUM	2500	2720	108.7	87	118
CHROMIUM	200	205	102.5	85	116
LEAD	100	103	102.8	88	115
MANGANESE	500	504	100.9	87	115
NICKEL	500	522	104.4	85	117
SELENIUM	100	98.6	98.6	80	120
THALLIUM	100	100	100.5	82	116

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWOI23IMW2

Matrix: WATER **SDG Name:** SO4723

QC Batch ID: OI23IMW2

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
COPPER	250	270	108.2	85	118
SILVER	50.0	53.2	106.3	85	116
ZINC	500	518	103.5	83	119

ICP SERIAL DILUTION

Lab Name: Katahdin Analytical Services **Client Field ID:** MW-01-SUMMER2021L

Matrix: WATER **SDG Name:** SO4723

Lab Sample ID: SO4723-001L

Concentration Units: ug/L

Analyte	Sample Result	C	Dilution Result	C	% Difference	Q	M
ANTIMONY, TOTAL	0.051	J	0.062	J	21.6		MS
ARSENIC, TOTAL	0.45	U	2.3	U			MS
BERYLLIUM, TOTAL	0.014	J	0.069	J	392.9		MS
CADMIUM, TOTAL	0.013	J	0.054	J	315.4		MS
CALCIUM, TOTAL	13500		13400		0.7		MS
CHROMIUM, TOTAL	0.24	J	0.26	J	8.3		MS
COPPER, TOTAL	0.658		1.0	J	52.0		MS
LEAD, TOTAL	0.043	J	0.080	J	86.0		MS
MANGANESE, TOTAL	0.46		0.77	J	67.4		MS
MERCURY, TOTAL	0.013	U	0.065	U			CV
NICKEL, TOTAL	0.14	J	0.67	J	378.6		MS
SELENIUM, TOTAL	0.037	U	0.19	U			MS
SILVER, TOTAL	0.010	U	0.050	U			MS
THALLIUM, TOTAL	0.020	J	0.060	U	100.0		MS
ZINC, TOTAL	0.95	J	3.9	U	100.0		MS

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** H

Instrument Name: CETAC M6100 **Date:** 01/17/2019

Concentration Units: ug/L

Analyte	PQL/LOQ	IDL	M
MERCURY	0.20	0.016	CV

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** L

Instrument Name: AGILENT 7800 ICP-MS **Date:** 06/11/2018

Concentration Units: ug/L

Analyte	PQL/LOQ	IDL	M
ALUMINUM	20	0.33	MS
ANTIMONY	0.20	0.061	MS
ARSENIC	1.0	0.25	MS
BERYLLIUM	0.20	0.0077	MS
CADMIUM	0.20	0.025	MS
CALCIUM	20	6.8	MS
CHROMIUM	1.0	0.13	MS
COPPER	0.60	0.087	MS
IRON	20	6.4	MS
LEAD	0.20	0.0049	MS
MAGNESIUM	20	0.35	MS
MANGANESE	0.40	0.013	MS
MOLYBDENUM	1.0	0.020	MS
NICKEL	0.40	0.014	MS
POTASSIUM	200	12	MS
SELENIUM	1.0	0.16	MS
SILVER	0.20	0.011	MS
SODIUM	200	6.6	MS
THALLIUM	0.20	0.0031	MS
ZINC	2.0	0.22	MS

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** H

Instrument Name: CETAC M6100 **Date:** 06/11/2010

Analyte	LOD	Units	M	EPA Prep./Anal. Method
MERCURY	0.10	ug/L	CV	SW846 7470A / SW846 7470A

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** L

Instrument Name: AGILENT 7800 ICP-MS **Date:** 06/11/2010

Analyte	LOD	Units	M	EPA Prep./Anal. Method
ANTIMONY	0.10	ug/L	MS	SW846 3010A / SW846 6020A
ARSENIC	0.80	ug/L	MS	SW846 3010A / SW846 6020A
BERYLLIUM	0.040	ug/L	MS	SW846 3010A / SW846 6020A
CADMIUM	0.040	ug/L	MS	SW846 3010A / SW846 6020A
CALCIUM	16	ug/L	MS	SW846 3010A / SW846 6020A
CHROMIUM	0.80	ug/L	MS	SW846 3010A / SW846 6020A
COPPER	0.40	ug/L	MS	SW846 3010A / SW846 6020A
LEAD	0.10	ug/L	MS	SW846 3010A / SW846 6020A
MANGANESE	0.20	ug/L	MS	SW846 3010A / SW846 6020A
NICKEL	0.24	ug/L	MS	SW846 3010A / SW846 6020A
SELENIUM	0.60	ug/L	MS	SW846 3010A / SW846 6020A
SILVER	0.080	ug/L	MS	SW846 3010A / SW846 6020A
THALLIUM	0.080	ug/L	MS	SW846 3010A / SW846 6020A
ZINC	1.6	ug/L	MS	SW846 3010A / SW846 6020A

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** H

Instrument Name: CETAC M6100 **Date:** 02/09/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
MERCURY	0.013	ug/L	CV	SW846 7470A / SW846 7470A

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METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** L

Instrument Name: AGILENT 7800 ICP-MS **Date:** 01/25/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
ANTIMONY	0.011	ug/L	MS	SW846 3010A / SW846 6020A
ARSENIC	0.45	ug/L	MS	SW846 3010A / SW846 6020A
BERYLLIUM	0.0067	ug/L	MS	SW846 3010A / SW846 6020A
CADMIUM	0.0059	ug/L	MS	SW846 3010A / SW846 6020A
CALCIUM	4.1	ug/L	MS	SW846 3010A / SW846 6020A
CHROMIUM	0.044	ug/L	MS	SW846 3010A / SW846 6020A
COPPER	0.037	ug/L	MS	SW846 3010A / SW846 6020A
LEAD	0.015	ug/L	MS	SW846 3010A / SW846 6020A
MANGANESE	0.070	ug/L	MS	SW846 3010A / SW846 6020A
NICKEL	0.030	ug/L	MS	SW846 3010A / SW846 6020A
SELENIUM	0.037	ug/L	MS	SW846 3010A / SW846 6020A
SILVER	0.010	ug/L	MS	SW846 3010A / SW846 6020A
THALLIUM	0.012	ug/L	MS	SW846 3010A / SW846 6020A
ZINC	0.78	ug/L	MS	SW846 3010A / SW846 6020A

ICP LINEAR RANGES

Lab Name: Katahdin Analytical Services **Instrument Code:** L

Instrument Name: AGILENT 7800 ICP-MS **Date:** 12/05/2020

Concentration Units: ug/L

Analyte	Integration Time (sec)	Linear Range	M
ALUMINUM	0.01	200000	MS
ANTIMONY	0.10	1000	MS
ARSENIC	0.30	1000	MS
BERYLLIUM	0.30	100	MS
CADMIUM	0.10	1000	MS
CALCIUM	0.03	200000	MS
CHROMIUM	0.10	2000	MS
COPPER	0.10	2000	MS
IRON	0.03	100000	MS
LEAD	0.10	2000	MS
MAGNESIUM	0.05	200000	MS
MANGANESE	0.10	2000	MS
MOLYBDENUM	0.10	1000	MS
NICKEL	0.10	1000	MS
POTASSIUM	0.01	200000	MS
SELENIUM	0.30	1000	MS
SILVER	0.10	100	MS
SODIUM	0.01	200000	MS
THALLIUM	0.10	1000	MS
ZINC	0.10	2000	MS

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** OG27HGW2

Matrix: WATER **SDG Name:** SO4723

Method: CV **Prep Date:** 07/27/2021

Client ID	Lab Sample ID	Initial (L)	Final (L)	Bottle ID
LCSWOG27HGW2	LCSWOG27HGW2	0.025	0.025	
PBWOG27HGW2	PBWOG27HGW2	0.025	0.025	
MW-01-SUMMER2021	SO4723-001	0.025	0.025	P
MW-01-SUMMER2021P	SO4723-001P	0.025	0.025	P
MW-01-SUMMER2021S	SO4723-001S	0.025	0.025	P
MW-02-SUMMER2021	SO4723-002	0.025	0.025	F
MW-03-SUMMER2021	SO4723-003	0.025	0.025	F
MW-04-SUMMER2021	SO4723-004	0.025	0.025	F
MW-05-SUMMER2021	SO4723-005	0.025	0.025	F
MW-FD-SUMMER2021	SO4723-006	0.025	0.025	F
GW-EB-SUMMER2021	SO4723-008	0.025	0.025	F

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** OG29IMW2

Matrix: WATER **SDG Name:** SO4723

Method: MS **Prep Date:** 07/29/2021

Client ID	Lab Sample ID	Initial (L)	Final (L)	Bottle ID
LCSWOG29IMW2	LCSWOG29IMW2	0.05	0.05	
PBWOG29IMW2	PBWOG29IMW2	0.05	0.05	
MW-01-SUMMER2021	SO4723-001	0.05	0.05	Q
MW-01-SUMMER2021P	SO4723-001P	0.05	0.05	Q
MW-01-SUMMER2021S	SO4723-001S	0.05	0.05	Q
MW-02-SUMMER2021	SO4723-002	0.05	0.05	F
MW-03-SUMMER2021	SO4723-003	0.05	0.05	F
MW-04-SUMMER2021	SO4723-004	0.05	0.05	F
MW-05-SUMMER2021	SO4723-005	0.05	0.05	F
MW-FD-SUMMER2021	SO4723-006	0.05	0.05	F
GW-EB-SUMMER2021	SO4723-008	0.05	0.05	F

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** OI23IMW2

Matrix: WATER **SDG Name:** SO4723

Method: MS **Prep Date:** 09/23/2021

Client ID	Lab Sample ID	Initial (L)	Final (L)	Bottle ID
LCSWOI23IMW2	LCSWOI23IMW2	0.05	0.05	
PBWOI23IMW2	PBWOI23IMW2	0.05	0.05	
MW-01-SUMMER2021	SO4723-001R	0.05	0.05	R
MW-01-SUMMER2021P	SO4723-001RP	0.05	0.05	R
MW-01-SUMMER2021S	SO4723-001RS	0.05	0.05	R
MW-02-SUMMER2021	SO4723-002R	0.05	0.05	F
MW-03-SUMMER2021	SO4723-003R	0.05	0.05	F
MW-04-SUMMER2021	SO4723-004R	0.05	0.05	F
MW-05-SUMMER2021	SO4723-005R	0.05	0.05	F
MW-FD-SUMMER2021	SO4723-006R	0.05	0.05	F
GW-EB-SUMMER2021	SO4723-008R	0.05	0.05	F

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Instrument ID: CETAC M6100 **File Name:** HOG27A

Date: 07/27/2021 **Method:** CV

Lab Sample ID	Client ID	D.F.	Time	Elements
Calibration Blank		1	11:43	Hg
Standard #1 (0.2 ppb		1	11:45	Hg
Standard #2 (0.5 ppb		1	11:47	Hg
Standard #3 (1.0 ppb		1	11:49	Hg
Standard #4 (5.0 ppb		1	11:51	Hg
Standard #5 (10.0 pp		1	11:54	Hg
ICV		1	11:56	HG
ICB		1	11:58	HG
PQL		1	12:00	HG
CCV		1	12:02	HG
CCB		1	12:04	HG
ZZZZZZ		1	12:06	
LCSWOG27HGW2		1	12:08	HG
ZZZZZZ		1	12:10	
PBWOG27HGW2		1	12:13	HG
ZZZZZZ		1	12:15	
ZZZZZZ		1	12:17	
ZZZZZZ		1	12:19	
ZZZZZZ		1	12:21	
SO4723-001	MW-01-SUMMER2021	1	12:23	HG
CCV		1	12:25	HG
CCB		1	12:27	HG
SO4723-001L	MW-01-SUMMER2021L	5	12:30	HG
SO4723-001A	MW-01-SUMMER2021A	1	12:32	HG
SO4723-001P	MW-01-SUMMER2021P	1	12:34	HG
SO4723-001S	MW-01-SUMMER2021S	1	12:36	HG
SO4723-002	MW-02-SUMMER2021	1	12:38	HG

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Instrument ID: CETAC M6100 **File Name:** HOG27A

Date: 07/27/2021 **Method:** CV

Lab Sample ID	Client ID	D.F.	Time	Elements
SO4723-003	MW-03-SUMMER2021	1	12:40	HG
SO4723-004	MW-04-SUMMER2021	1	12:42	HG
SO4723-005	MW-05-SUMMER2021	1	12:44	HG
SO4723-006	MW-FD-SUMMER2021	1	12:47	HG
SO4723-008	GW-EB-SUMMER2021	1	12:49	HG
CCV		1	12:51	HG
CCB		1	12:53	HG

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Instrument ID: AGILENT 7800 ICP-MS **File Name:** LOH27A

Date: 08/27/2021 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements
CalBlank		1	17:19	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
CalStd		1	17:23	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
ICV		1	17:25	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
ZZZZZZ		1	17:28	
ICB		1	17:30	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
ZZZZZZ		1	17:33	
PQL		1	17:36	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
ICSA		1	17:38	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
ICSAB		1	17:41	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
ZZZZZZ		1	17:43	
ZZZZZZ		1	17:45	
ZZZZZZ		1	17:48	
ZZZZZZ		1	17:51	
CCV		1	17:53	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
CCB		1	17:56	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
ZZZZZZ		1	17:58	
ZZZZZZ		1	18:01	
ZZZZZZ		1	18:03	
ZZZZZZ		1	18:06	
ZZZZZZ		5	18:08	
ZZZZZZ		1	18:11	
ZZZZZZ		1	18:13	
ZZZZZZ		1	18:16	
ZZZZZZ		1	18:18	
ZZZZZZ		1	18:20	
CCV		1	18:23	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
CCB		1	18:25	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Instrument ID: AGILENT 7800 ICP-MS **File Name:** LOH27A

Date: 08/27/2021 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements
ZZZZZZ		1	18:28	
ZZZZZZ		1	18:30	
ZZZZZZ		1	18:33	
ZZZZZZ		1	18:35	
ZZZZZZ		1	18:38	
ZZZZZZ		1	18:41	
ZZZZZZ		1	18:43	
ZZZZZZ		1	18:46	
ZZZZZZ		1	18:48	
ZZZZZZ		1	18:50	
CCV		1	18:53	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
CCB		1	18:55	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
ZZZZZZ		1	18:58	
ZZZZZZ		1	19:00	
ZZZZZZ		5	19:03	
ZZZZZZ		5	19:05	
ZZZZZZ		5	19:08	
ZZZZZZ		5	19:10	
ZZZZZZ		5	19:13	
ZZZZZZ		5	19:15	
ZZZZZZ		1	19:18	
ZZZZZZ		25	19:20	
CCV		1	19:23	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
CCB		1	19:25	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
ZZZZZZ		5	19:28	
ZZZZZZ		5	19:30	
ZZZZZZ		5	19:33	

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Instrument ID: AGILENT 7800 ICP-MS **File Name:** LOH27A

Date: 08/27/2021 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements
ZZZZZZ		1	19:35	
ZZZZZZ		5	19:38	
ZZZZZZ		5	19:40	
ZZZZZZ		5	19:43	
ZZZZZZ		1	19:45	
ZZZZZZ		5	19:48	
ZZZZZZ		1	19:50	
CCV		1	19:53	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
CCB		1	19:55	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
ZZZZZZ		5	19:58	
ZZZZZZ		5	20:01	
ZZZZZZ		5	20:03	
ZZZZZZ		5	20:05	
ZZZZZZ		1	20:08	
ZZZZZZ		5	20:11	
ZZZZZZ		5	20:13	
ZZZZZZ		25	20:16	
ZZZZZZ		5	20:18	
ZZZZZZ		1	20:21	
CCV		1	20:23	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
CCB		1	20:26	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
ZZZZZZ		5	20:28	
ZZZZZZ		5	20:31	
ZZZZZZ		5	20:33	
ZZZZZZ		5	20:36	
ZZZZZZ		1	20:38	
ZZZZZZ		5	20:41	

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Instrument ID: AGILENT 7800 ICP-MS **File Name:** LOH27A

Date: 08/27/2021 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements
ZZZZZZ		5	20:43	
ZZZZZZ		5	20:46	
ZZZZZZ		5	20:48	
ZZZZZZ		1	20:51	
CCV		1	20:53	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
CCB		1	20:56	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
PBWOG29IMW2		5	20:58	Sb As Be Cd Ca Cr Pb Mn Ni Se Tl
LCSWOG29IMW2		5	21:01	Sb As Be Cd Ca Cr Pb Mn Ni Se Tl
SO4723-001	MW-01-SUMMER2021	5	21:03	Sb As Be Cd Ca Cr Pb Mn Ni Se Tl
SO4723-001A	MW-01-SUMMER2021A	5	21:06	Sb As Be Cd Ca Cr Pb Mn Ni Se Tl
SO4723-001L	MW-01-SUMMER2021L	25	21:08	Sb As Be Cd Ca Cr Pb Mn Ni Se Tl
ZZZZZZ		1	21:11	
SO4723-001P	MW-01-SUMMER2021P	5	21:13	Sb As Be Cd Ca Cr Pb Mn Ni Se Tl
SO4723-001S	MW-01-SUMMER2021S	5	21:16	Sb As Be Cd Ca Cr Pb Mn Ni Se Tl
SO4723-002	MW-02-SUMMER2021	5	21:18	Sb As Be Cd Ca Cr Pb Mn Ni Se Tl
ZZZZZZ		1	21:21	
CCV		1	21:24	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
CCB		1	21:26	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
SO4723-003	MW-03-SUMMER2021	5	21:29	Sb As Be Cd Ca Cr Pb Mn Ni Se Tl
SO4723-004	MW-04-SUMMER2021	5	21:31	Sb As Be Cd Ca Cr Pb Mn Ni Se Tl
SO4723-005	MW-05-SUMMER2021	5	21:34	Sb As Be Cd Ca Cr Pb Mn Ni Se Tl
SO4723-006	MW-FD-SUMMER2021	5	21:36	Sb As Be Cd Ca Cr Pb Mn Ni Se Tl
ZZZZZZ		1	21:39	
SO4723-008	GW-EB-SUMMER2021	5	21:41	Sb As Be Cd Ca Cr Pb Mn Ni Se Tl
ZZZZZZ		5	21:44	
ZZZZZZ		5	21:46	
ZZZZZZ		5	21:49	

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Instrument ID: AGILENT 7800 ICP-MS **File Name:** LOH27A

Date: 08/27/2021 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements
ZZZZZZ		1	21:51	
CCV		1	21:54	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
CCB		1	21:56	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Instrument ID: AGILENT 7800 ICP-MS **File Name:** LOI24A

Date: 09/24/2021 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements								
CalBlank		1	09:07	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn
CalStd		1	09:11	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn
ICV		1	09:14	Al	Ca	Cu	Fe	Mg	Mo	K		Na	Zn
ICV		1	09:16								Ag		
ICB		1	09:19	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn
ZZZZZZ		1	09:21										
PQL		1	09:24	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn
ICSA		1	09:27	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn
ICSAB		1	09:29	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn
ZZZZZZ		1	09:32										
ZZZZZZ		1	09:34										
ZZZZZZ		1	09:37										
ZZZZZZ		1	09:40										
CCV		1	09:42	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn
CCB		1	09:45	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn
PBWOI23IMW2		5	09:48								Ag		Zn
LCSWOI23IMW2		5	09:50			Cu					Ag		Zn
SO4723-001R	MW-01-SUMMER2021	5	09:53			Cu					Ag		Zn
SO4723-001RA	MW-01-SUMMER2021A	5	09:55			Cu					Ag		Zn
SO4723-001RL	MW-01-SUMMER2021L	25	09:58			Cu					Ag		Zn
ZZZZZZ		1	10:01										
SO4723-001RP	MW-01-SUMMER2021P	5	10:03			Cu					Ag		Zn
SO4723-001RS	MW-01-SUMMER2021S	5	10:06			Cu					Ag		Zn
SO4723-002R	MW-02-SUMMER2021	5	10:08			Cu					Ag		Zn
ZZZZZZ		1	10:11										
CCV		1	10:14	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn
CCB		1	10:16	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Instrument ID: AGILENT 7800 ICP-MS **File Name:** LOI24A

Date: 09/24/2021 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements								
SO4723-003R	MW-03-SUMMER2021	5	10:19			Cu				Ag		Zn
SO4723-004R	MW-04-SUMMER2021	5	10:21			Cu				Ag		Zn
SO4723-005R	MW-05-SUMMER2021	5	10:24			Cu				Ag		Zn
SO4723-006R	MW-FD-SUMMER2021	5	10:26			Cu				Ag		Zn
SO4723-008R	GW-EB-SUMMER2021	5	10:29			Cu				Ag		Zn
ZZZZZZ		1	10:32									
ZZZZZZ		5	10:34									
ZZZZZZ		5	10:37									
ZZZZZZ		5	10:40									
ZZZZZZ		1	10:42									
CCV		1	10:45	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn
CCB		1	10:47	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn
ZZZZZZ		25	10:50									
ZZZZZZ		5	10:53									
ZZZZZZ		5	10:55									
ZZZZZZ		1	10:58									
ZZZZZZ		5	11:00									
ZZZZZZ		5	11:03									
ZZZZZZ		5	11:06									
ZZZZZZ		5	11:08									
ZZZZZZ		1	11:11									
ZZZZZZ		1	11:13									
CCV		1	11:16	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn
CCB		1	11:19	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn
ZZZZZZ		5	11:21									
ZZZZZZ		5	11:24									
ZZZZZZ		5	11:26									

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SO4723

Instrument ID: AGILENT 7800 ICP-MS **File Name:** LOI24A

Date: 09/24/2021 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements									
ZZZZZZ		5	11:29										
ZZZZZZ		1	11:32										
ZZZZZZ		1	11:34										
PBWOI23IMW2		5	11:37			Cu							
ZZZZZZ		5	11:39										
ZZZZZZ		1	11:42										
ZZZZZZ		1	11:45										
CCV		1	11:47	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn
CCB		1	11:50	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn

Raw Data Section

KATAHDIN ANALYTICAL SERVICES, LLC
METALS ANALYSIS RUN INFORMATION SHEET

INSTR. ID: Cetac M6100 (H) **ANALYST**: SF **ANALYSIS DATE**: 07/27/2021

FILE NAME: HOG27A **METHOD**: **CVAA**

Analyte : Mercury

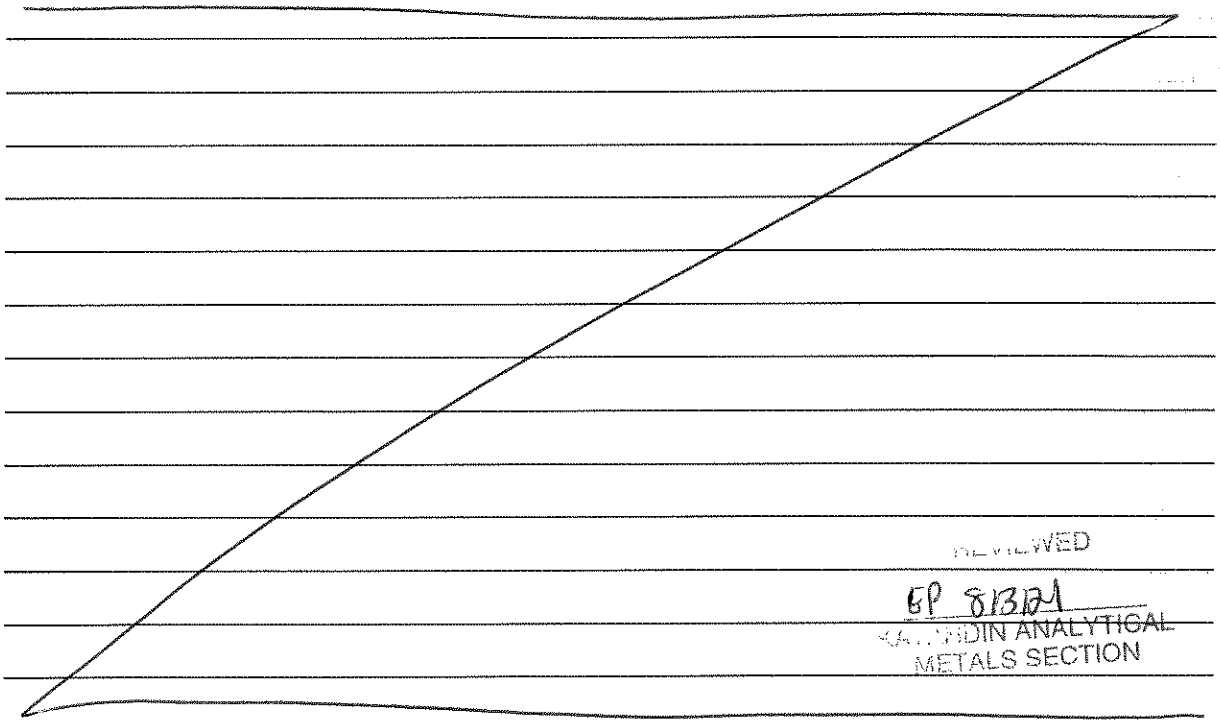
✓ 245.1
✓ 7470
7471
✓ DoD

$SnCl_2$ Lot : MR3085

STANDARDS USED:

Standard Name	Prep. Date 07/27/2021	Expiration Date	Standard Conc.
Cal. Blank / ICB / CCB	07/27/2021	07/27/2021	0.00 ug/L
Standard #1 / PQL	07/27/2021	07/27/2021	0.20 ug/L
Standard #2	07/27/2021	07/27/2021	0.50 ug/L
Standard #3	07/27/2021	07/27/2021	1.00 ug/L
Standard #4 / CCV	07/27/2021	07/27/2021	5.00 ug/L
Standard #5	07/27/2021	07/27/2021	10.00 ug/L
ICV	07/27/2021	07/27/2021	6.00 ug/L

Additional Comments and Notes:



Dilutions:

5x Diln.: 6.4 mL (pipet M26) of Cal. Blank + 1.6mL (pipet M26) of sample

Post Spike (7470/245.1): 0.005 mL MW20321 (pipet M17) + 8.0mL (pipet M26) of sample

INSTRUMENT RUNLOG

Instrument: CETAC M6100

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
Calibration Blank	1.0000	HOG27A	07/27/2021	11:43	SF
Standard #1 (0.2 ppb)	1.0000	HOG27A	07/27/2021	11:45	SF
Standard #2 (0.5 ppb)	1.0000	HOG27A	07/27/2021	11:47	SF
Standard #3 (1.0 ppb)	1.0000	HOG27A	07/27/2021	11:49	SF
Standard #4 (5.0 ppb)	1.0000	HOG27A	07/27/2021	11:51	SF
Standard #5 (10.0 ppb)	1.0000	HOG27A	07/27/2021	11:54	SF
ICV	1.0000	HOG27A	07/27/2021	11:56	SF
ICB	1.0000	HOG27A	07/27/2021	11:58	SF
PQL	1.0000	HOG27A	07/27/2021	12:00	SF
CCV	1.0000	HOG27A	07/27/2021	12:02	SF
CCB	1.0000	HOG27A	07/27/2021	12:04	SF
LCSWOG27HGW1	1.0000	HOG27A	07/27/2021	12:06	SF
LCSWOG27HGW2	1.0000	HOG27A	07/27/2021	12:08	SF
PBWOG27HGW1	1.0000	HOG27A	07/27/2021	12:10	SF
PBWOG27HGW2	1.0000	HOG27A	07/27/2021	12:13	SF
SO4676-001	1.0000	HOG27A	07/27/2021	12:15	SF
SO4698-001	1.0000	HOG27A	07/27/2021	12:17	SF
SO4698-002	1.0000	HOG27A	07/27/2021	12:19	SF
SO4699-001	1.0000	HOG27A	07/27/2021	12:21	SF
SO4723-001	1.0000	HOG27A	07/27/2021	12:23	SF
CCV	1.0000	HOG27A	07/27/2021	12:25	SF
CCB	1.0000	HOG27A	07/27/2021	12:27	SF
SO4723-001L	5.0000	HOG27A	07/27/2021	12:30	SF
SO4723-001A	1.0000	HOG27A	07/27/2021	12:32	SF
SO4723-001P	1.0000	HOG27A	07/27/2021	12:34	SF
SO4723-001S	1.0000	HOG27A	07/27/2021	12:36	SF
SO4723-002	1.0000	HOG27A	07/27/2021	12:38	SF
SO4723-003	1.0000	HOG27A	07/27/2021	12:40	SF
SO4723-004	1.0000	HOG27A	07/27/2021	12:42	SF
SO4723-005	1.0000	HOG27A	07/27/2021	12:44	SF
SO4723-006	1.0000	HOG27A	07/27/2021	12:47	SF
SO4723-008	1.0000	HOG27A	07/27/2021	12:49	SF
CCV	1.0000	HOG27A	07/27/2021	12:51	SF
CCB	1.0000	HOG27A	07/27/2021	12:53	SF
SO4725-001	1.0000	HOG27A	07/27/2021	12:55	SF
CCV	1.0000	HOG27A	07/27/2021	12:57	SF
CCB	1.0000	HOG27A	07/27/2021	12:59	SF

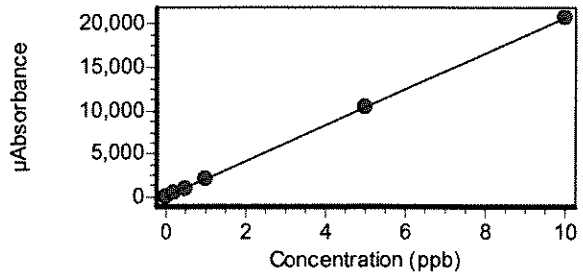
Report Generated By CETAC QuickTrace
Analyst: kasgc
Worksheet file: C:\Program Files\QuickTrace\Worksheets\HOG27A.wsz
Date Started: 7/27/2021 11:14:31 AM
Comment:

Results

Sample Name				Type	Conc (ppb)	µAbs	%RSD	Flags	DF
Calibration Blank				STD	0.000	39	99.04		1.00
Replicates	70.9	37.7	62.1	-14.9					
Standard #1 (0.2 ppb)				STD	0.200	413	6.60		1.00
Replicates	410.8	379.8	415.5	446.5					
Standard #2 (0.5 ppb)				STD	0.500	1054	1.03		1.00
Replicates	1061.7	1065.5	1044.7	1045.2					
Standard #3 (1.0 ppb)				STD	1.000	2083	0.43		1.00
Replicates	2075.2	2080.5	2096.0	2081.0					
Standard #4 (5.0 ppb)				STD	5.000	10496	0.20		1.00
Replicates	10519.5	10486.5	10472.6	10505.6					
Standard #5 (10.0 ppb)				STD	10.000	20768	0.38		1.00
Replicates	20873.5	20769.8	20682.3	20745.0					

Calibration

Equation: A = 25.104 + 2077.998C
R2: 0.99997
SEE: 48.4868
Flags:



ICV				ICV	6.060	12612	0.58		1.00
Replicates	12694.6	12547.9	12553.2	12652.9					
% Recovery	100.95								
ICB				ICB	-0.018	-13	256.44		1.00
Replicates	-39.1	19.7	-44.1	11.6					

Katahdin Analytical Services 4000071

Sample Name					Type	Conc (ppb)	µAbs	%RSD	Flags	DF
PQL					CRDL	0.200	440	1.34		1.00
	Replicates	448.9	439.8	436.8	436.1					
	% Recovery	99.93								
CCV					CCV	5.100	10627	0.30		1.00
	Replicates	10657.5	10648.9	10592.1	10608.9					
	% Recovery	102.04								
CCB					CCB	-0.008	8	185.48		1.00
	Replicates	7.9	26.8	-7.6	3.8					
LCSWOG27HGW1					LCS	5.650	11769	1.78		1.00
	Replicates	11467.9	11783.6	11919.4	11906.1					
	% Recovery	113.03								
LCSWOG27HGW2					LCS	5.680	11825	0.52		1.00
	Replicates	11875.8	11863.2	11818.6	11740.6					
	% Recovery	113.57								
PBWOG27HGW1					PBK	0.011	47	65.97		1.00
	Replicates	62.9	8.0	79.3	38.2					
PBWOG27HGW2					PBK	0.000	25	81.90		1.00
	Replicates	30.6	46.4	-3.3	27.7					
SO4676-001					UNK	0.044	117	40.15		1.00
	Replicates	152.9	160.7	71.2	81.3					
SO4698-001					UNK	-0.011	3	338.64		1.00
	Replicates	16.8	5.7	-2.8	-7.3					
SO4698-002					UNK	0.001	28	121.87		1.00
	Replicates	15.0	-13.9	49.8	60.5					
SO4699-001					UNK	-0.006	12	266.69		1.00
	Replicates	5.8	11.8	-23.4	52.8					
SO4723-001					UNK	-0.033	-43	20.85		1.00
	Replicates	-49.3	-30.5	-50.0	-43.8					

Sample Name					Type	Conc (ppb)	µAbs	%RSD	Flags	DF
CCV					CCV	5.070	10560	0.39		1.00
	Replicates	10620.6	10549.1	10529.5	10540.0					
	% Recovery	101.39								
CCB					CCB	-0.023	-22	42.05		1.00
	Replicates	-13.6	-30.5	-30.0	-14.7					
SO4723-001L					UNK	-0.093	-14	62.26		5.00
	Replicates	-26.4	-10.2	-10.4	-7.9					
SO4723-001A					UNK	1.580	3315	1.00		1.00
	Replicates	3347.7	3279.3	3338.5	3295.6					
SO4723-001P					UNK	1.090	2298	1.69		1.00
	Replicates	2298.7	2258.7	2283.7	2350.7					
SO4723-001S					UNK	0.945	1988	0.37		1.00
	Replicates	1979.8	1983.9	1995.7	1992.6					
SO4723-002					UNK	-0.038	-54	21.74		1.00
	Replicates	-66.6	-51.9	-38.9	-58.7					
SO4723-003					UNK	-0.003	19	108.30		1.00
	Replicates	24.4	24.3	-10.4	38.3					
SO4723-004					UNK	-0.006	13	167.86		1.00
	Replicates	13.7	-15.7	39.0	16.3					
SO4723-005					UNK	-0.012	0	903.79		1.00
	Replicates	8.6	2.3	-0.6	-9.2					
SO4723-006					UNK	0.017	59	41.02		1.00
	Replicates	29.1	74.1	83.2	50.7					
SO4723-008					UNK	-0.010	4	073.72		1.00
	Replicates	-44.4	44.5	36.1	-20.2					

Katahdin Analytical Services 4000073

Sample Name					Type	Conc (ppb)	µAbs	%RSD	Flags	DF
CCV					CCV	5.180	10788	0.28		1.00
	Replicates	10794.2	10757.3	10773.9	10827.9					
	% Recovery	103.59								
CCB					CCB	0.008	41	104.91		1.00
	Replicates	67.0	-7.5	18.4	85.4					
SO4725-001					UNK	-0.013	-1	679.03		1.00
	Replicates	12.6	-9.5	22.9	-29.5					
CCV					CCV	5.060	10539	0.35		1.00
	Replicates	10553.4	10570.9	10486.2	10544.7					
	% Recovery	101.19								
CCB					CCB	0.008	42	22.45		1.00
	Replicates	53.1	33.0	46.7	35.5					

Katahdin Analytical Services 4000074

KATAHDIN ANALYTICAL SERVICES, LLC
METALS ANALYSIS RUN INFORMATION SHEET

INSTR. ID: L (Agilent 7800) **ANALYST**: NWA REVIEWED **ANALYSIS DATE**: 08/27/21

METHOD: **ICP-MS**
- ☑ 200.8
- ☑ 6020
- ☐ DOD

EQ 9/2/21
KATAHDIN ANALYTICAL METALS SECTION

FILE NAME: LOH27A

The pHs of all samples that were tested by direct analysis in this analytical run were checked just prior to analysis and confirmed to be <2. The time of preservation of these samples was checked in the "Measured Turbidity and Preservation of Incoming Samples" logbook to verify that they had been preserved at least 16 hours prior to analysis. These verifications were performed by _____ (initials) on _____ (date).

STANDARDS USED:

tandard Name	Standard ID	Prep Date	Expiration Date	Standard Conc.
. Blk/ICB/CCB	MW20423 70	08/10/21	08/10/22	0 ug/L
Standard 1	MW20479	08/27/21	09/15/21	Varies by Element
ICV	MW20477	08/27/21	11/27/21	Varies by Element
PQL	MW20456	08/18/21	09/15/21	Varies by Element
LRS1	MW20460	08/19/21	09/15/21	Varies by Element
LRS2	MW20458	08/19/21	09/15/21	Varies by Element
ICSA	MW20476	08/27/21	09/03/21	Varies by Element
ICSAB	MW20480	08/27/21	09/03/21	Varies by Element
CCV	MW20481	08/27/21	09/15/21	Varies by Element
l Standard (ISTD)	MW20375	07/29/21	10/27/21	0.4 mg/L (Li,Sc,Ge/Y,Tb,Bi)

Additional Comments and Notes:

All Run QC and Batch QC Failed High for Cu due to a hardware issue.

ICV (17:43) Failed Low for Ag (14.620 ug/L). Ag specific ICV failed.

PQL (17:36) Failed High DoD for Fe (25.735 ug/L); PQL (23:27) Failed High for Fe (29.433 ug/L), Low for Ni (0.015 ug/L) and Low DoD for Mn (0.144 ug/L) and Ag (0.159 ug/L). Fe specific opening and closing PQL failed.

ICSA (17:38) Fails High DoD for Zn (1.544 ug/L).

EQ 9/2/21

Dilutions: Some samples were diluted based on history or due to interfering element concentrations.

Dilution preparations are as follows:

5x, 25x, 50x diln.: 2.0 mL of sample, 5x dilute sample, or 10x dilute sample (pipet M25) + 8.0 mL of MW19528 (pipet M22)

Post Spike: 0.10 mL of MW19464 (pipet M27) into 10 mL final volume of appropriately diluted sample (pipet M22)

INSTRUMENT RUNLOG

Instrument: AGILENT 7800

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
CalBlank	1	LOH27A	08/27/2021	17:19	NWA
CalStd	1	LOH27A	08/27/2021	17:23	NWA
ICV	1	LOH27A	08/27/2021	17:25	NWA
SILVER ICV	1	LOH27A	08/27/2021	17:28	NWA
ICB	1	LOH27A	08/27/2021	17:30	NWA
IRON PQL	1	LOH27A	08/27/2021	17:33	NWA
PQL	1	LOH27A	08/27/2021	17:36	NWA
ICSA	1	LOH27A	08/27/2021	17:38	NWA
ICSAB	1	LOH27A	08/27/2021	17:41	NWA
LRS1	1	LOH27A	08/27/2021	17:43	NWA
LRS2	1	LOH27A	08/27/2021	17:45	NWA
RINSE	1	LOH27A	08/27/2021	17:48	NWA
RINSE	1	LOH27A	08/27/2021	17:51	NWA
CCV	1	LOH27A	08/27/2021	17:53	NWA
CCB	1	LOH27A	08/27/2021	17:56	NWA
PBWOG29IMW1	1	LOH27A	08/27/2021	17:58	NWA
LCSWOG29IMW1	1	LOH27A	08/27/2021	18:01	NWA
SO4787-001	1	LOH27A	08/27/2021	18:03	NWA
SO4787-001A	1	LOH27A	08/27/2021	18:06	NWA
SO4787-001L	5	LOH27A	08/27/2021	18:08	NWA
RINSE	1	LOH27A	08/27/2021	18:11	NWA
SO4787-001P	1	LOH27A	08/27/2021	18:13	NWA
SO4787-001S	1	LOH27A	08/27/2021	18:16	NWA
SO4787-002	1	LOH27A	08/27/2021	18:18	NWA
RINSE	1	LOH27A	08/27/2021	18:20	NWA
CCV	1	LOH27A	08/27/2021	18:23	NWA
CCB	1	LOH27A	08/27/2021	18:25	NWA
SO4788-001	1	LOH27A	08/27/2021	18:28	NWA
SO4790-001	1	LOH27A	08/27/2021	18:30	NWA
SO4792-001	1	LOH27A	08/27/2021	18:33	NWA
RINSE	1	LOH27A	08/27/2021	18:35	NWA
SO4818-001	1	LOH27A	08/27/2021	18:38	NWA
SO4839-001	1	LOH27A	08/27/2021	18:41	NWA
SO4839-002	1	LOH27A	08/27/2021	18:43	NWA
SO4857-001	1	LOH27A	08/27/2021	18:46	NWA
SO4857-002	1	LOH27A	08/27/2021	18:48	NWA
RINSE	1	LOH27A	08/27/2021	18:50	NWA
CCV	1	LOH27A	08/27/2021	18:53	NWA
CCB	1	LOH27A	08/27/2021	18:55	NWA
SO4857-003	1	LOH27A	08/27/2021	18:58	NWA
RINSE	1	LOH27A	08/27/2021	19:00	NWA
PBWOG16IMW2	5	LOH27A	08/27/2021	19:03	NWA
LCSWOG16IMW2	5	LOH27A	08/27/2021	19:05	NWA
SO4465-001	5	LOH27A	08/27/2021	19:08	NWA

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
SO4465-002	5	LOH27A	08/27/2021	19:10	NWA
SO4465-003	5	LOH27A	08/27/2021	19:13	NWA
SO4465-003A	5	LOH27A	08/27/2021	19:15	NWA
RINSE	1	LOH27A	08/27/2021	19:18	NWA
SO4465-003L	25	LOH27A	08/27/2021	19:20	NWA
CCV	1	LOH27A	08/27/2021	19:23	NWA
CCB	1	LOH27A	08/27/2021	19:25	NWA
SO4465-003P	5	LOH27A	08/27/2021	19:28	NWA
SO4465-003S	5	LOH27A	08/27/2021	19:30	NWA
SO4465-004	5	LOH27A	08/27/2021	19:33	NWA
RINSE	1	LOH27A	08/27/2021	19:35	NWA
SO4465-005	5	LOH27A	08/27/2021	19:38	NWA
SO4468-001	5	LOH27A	08/27/2021	19:40	NWA
SO4468-002	5	LOH27A	08/27/2021	19:43	NWA
RINSE	1	LOH27A	08/27/2021	19:45	NWA
PBWOG19IMW1	5	LOH27A	08/27/2021	19:48	NWA
RINSE	1	LOH27A	08/27/2021	19:50	NWA
CCV	1	LOH27A	08/27/2021	19:53	NWA
CCB	1	LOH27A	08/27/2021	19:55	NWA
LCSWOG19IMW1	5	LOH27A	08/27/2021	19:58	NWA
SO4968-003	5	LOH27A	08/27/2021	20:01	NWA
SO4968-005	5	LOH27A	08/27/2021	20:03	NWA
SO4968-007	5	LOH27A	08/27/2021	20:05	NWA
RINSE	1	LOH27A	08/27/2021	20:08	NWA
SO4519-005	5	LOH27A	08/27/2021	20:11	NWA
SO4519-005A	5	LOH27A	08/27/2021	20:13	NWA
SO4519-005L	25	LOH27A	08/27/2021	20:16	NWA
SO4519-005P	5	LOH27A	08/27/2021	20:18	NWA
RINSE	1	LOH27A	08/27/2021	20:21	NWA
CCV	1	LOH27A	08/27/2021	20:23	NWA
CCB	1	LOH27A	08/27/2021	20:26	NWA
SO4519-005S	5	LOH27A	08/27/2021	20:28	NWA
SO4519-008	5	LOH27A	08/27/2021	20:31	NWA
SO4519-010	5	LOH27A	08/27/2021	20:33	NWA
SO4519-012	5	LOH27A	08/27/2021	20:36	NWA
RINSE	1	LOH27A	08/27/2021	20:38	NWA
PBWOG19IMW2	5	LOH27A	08/27/2021	20:41	NWA
LCSWOG19IMW2	5	LOH27A	08/27/2021	20:43	NWA
SO4519-001	5	LOH27A	08/27/2021	20:46	NWA
SO4519-007	5	LOH27A	08/27/2021	20:48	NWA
RINSE	1	LOH27A	08/27/2021	20:51	NWA
CCV	1	LOH27A	08/27/2021	20:53	NWA
CCB	1	LOH27A	08/27/2021	20:56	NWA
PBWOG29IMW2	5	LOH27A	08/27/2021	20:58	NWA
LCSWOG29IMW2	5	LOH27A	08/27/2021	21:01	NWA
SO4723-001	5	LOH27A	08/27/2021	21:03	NWA
SO4723-001A	5	LOH27A	08/27/2021	21:06	NWA

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
SO4723-001L	25	LOH27A	08/27/2021	21:08	NWA
RINSE	1	LOH27A	08/27/2021	21:11	NWA
SO4723-001P	5	LOH27A	08/27/2021	21:13	NWA
SO4723-001S	5	LOH27A	08/27/2021	21:16	NWA
SO4723-002	5	LOH27A	08/27/2021	21:18	NWA
RINSE	1	LOH27A	08/27/2021	21:21	NWA
CCV	1	LOH27A	08/27/2021	21:24	NWA
CCB	1	LOH27A	08/27/2021	21:26	NWA
SO4723-003	5	LOH27A	08/27/2021	21:29	NWA
SO4723-004	5	LOH27A	08/27/2021	21:31	NWA
SO4723-005	5	LOH27A	08/27/2021	21:34	NWA
SO4723-006	5	LOH27A	08/27/2021	21:36	NWA
RINSE	1	LOH27A	08/27/2021	21:39	NWA
SO4723-008	5	LOH27A	08/27/2021	21:41	NWA
SO4724-001	5	LOH27A	08/27/2021	21:44	NWA
SO4724-002	5	LOH27A	08/27/2021	21:46	NWA
SO4724-002A	5	LOH27A	08/27/2021	21:49	NWA
RINSE	1	LOH27A	08/27/2021	21:51	NWA
CCV	1	LOH27A	08/27/2021	21:54	NWA
CCB	1	LOH27A	08/27/2021	21:56	NWA
SO4724-002L	25	LOH27A	08/27/2021	21:59	NWA
SO4724-002P	5	LOH27A	08/27/2021	22:01	NWA
SO4724-002S	5	LOH27A	08/27/2021	22:04	NWA
SO4724-003	5	LOH27A	08/27/2021	22:06	NWA
RINSE	1	LOH27A	08/27/2021	22:09	NWA
SO4724-004	5	LOH27A	08/27/2021	22:11	NWA
SO4724-005	5	LOH27A	08/27/2021	22:14	NWA
SO4724-006	5	LOH27A	08/27/2021	22:16	NWA
RINSE	1	LOH27A	08/27/2021	22:19	NWA
RINSE	1	LOH27A	08/27/2021	22:21	NWA
CCV	1	LOH27A	08/27/2021	22:24	NWA
CCB	1	LOH27A	08/27/2021	22:26	NWA
PBSOG26IMS1	5	LOH27A	08/27/2021	22:29	NWA
LCSOOG26IMS1	5	LOH27A	08/27/2021	22:31	NWA
SO4364-001	5	LOH27A	08/27/2021	22:34	NWA
SO4364-002	5	LOH27A	08/27/2021	22:36	NWA
RINSE	1	LOH27A	08/27/2021	22:39	NWA
SO4364-003	5	LOH27A	08/27/2021	22:42	NWA
SO4467-001	5	LOH27A	08/27/2021	22:44	NWA
SO4467-001A	5	LOH27A	08/27/2021	22:47	NWA
SO4467-001L	25	LOH27A	08/27/2021	22:49	NWA
RINSE	1	LOH27A	08/27/2021	22:52	NWA
CCV	1	LOH27A	08/27/2021	22:54	NWA
CCB	1	LOH27A	08/27/2021	22:57	NWA
SO4467-001P	5	LOH27A	08/27/2021	22:59	NWA
SO4467-001S	5	LOH27A	08/27/2021	23:02	NWA
SO4467-002	5	LOH27A	08/27/2021	23:04	NWA

US EPA Tune Check Report

Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq. Date-Time	8/27/2021 13:29:20
Report Comment	---
Instrument Name	G8421A SG18503526

[No Gas]

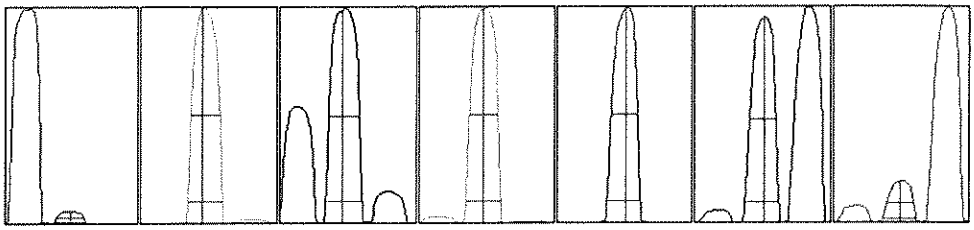
Sensitivity

Mass	Count	CPS	RSD%	RSD% (Required)	RSD% (Flag)
7	4772	47716.36	0.201	5.000	
9	2370	23699.83	1.075	5.000	
24	65737	657371.45	0.722	5.000	
59	12588	125877.04	0.486	5.000	
115	173787	1737874.76	0.456	5.000	
205	11839	118388.90	1.044	5.000	
208	26144	261438.32	0.894	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	4773	4763	4782	4761	4780
9	2329	2394	2376	2387	2365
24	65368	65366	65561	65899	66492
59	12552	12527	12679	12618	12562
115	173563	173906	173237	173135	175097
205	11676	11824	11834	11836	12024
208	25913	25885	26205	26325	26391

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	7839.19	7.00	6.90 - 7.10	
9	3833.30	8.90	8.90 - 9.10	
24	100174.71	23.90	23.90 - 24.10	
59	20346.32	58.95	58.90 - 59.10	
115	299595.16	115.05	114.90 - 115.10	
205	20751.14	205.05	204.90 - 205.10	
208	45650.59	208.00	207.90 - 208.10	

US EPA Tune Check Report

Mass	W-50%	W-10%	W-10% (Required)	W-10% (Flag)
7	0.62	0.719	0.900	
9	0.65	0.769	0.900	
24	0.67	0.805	0.900	
59	0.64	0.770	0.900	
115	0.61	0.752	0.900	
205	0.59	0.754	0.900	
208	0.59	0.733	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	247
Y Axis	Linear

US EPA Tune Check Report

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	0.99 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.20 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	7.4 V	Deflect	13.2 V
Extract 2	-155.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-75 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.5 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	150 V		

QP Parameters

Mass Gain	122	Axis Gain	0.9988	QP Bias	-2.5 V
Mass Offset	125	Axis Offset	0.03		

Hardware Settings

Torch

Torch H	-0.1 mm	Torch V	0.0 mm

EM

Discriminator	3.2 mV	Analog HV	2729 V	Pulse HV	1389 V

[H2]

Sensitivity

Mass	Count	CPS	RSD%	RSD% (Required)	RSD% (Flag)
59	828	8283.23	0.867	5.000	
89	96200	962004.70	0.963	5.000	
205	10841	108412.44	0.458	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
59	832	830	820	822	838
89	94830	95986	96409	96380	97398
205	10773	10908	10827	10863	10834

Integration Time [sec] 0.1

US EPA Tune Check Report

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	0.99 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.20 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	7.4 V	Deflect	1.4 V
Extract 2	-155.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-75 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.5 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	122	Axis Gain	0.9990	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	-0.03		

Hardware Settings

Torch

Torch H	-0.1 mm	Torch V	0.0 mm

EM

Discriminator	3.2 mV	Analog HV	2729 V	Pulse HV	1389 V

[He]

Sensitivity

Mass	Count	CPS	RSD%	RSD% (Required)	RSD% (Flag)
59	2777	27770.91	0.964	5.000	
89	25092	250915.89	1.532	5.000	
205	6147	61469.49	0.276	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
59	2735	2780	2779	2782	2810
89	24465	24987	25259	25356	25391
205	6119	6146	6149	6157	6164

Integration Time [sec] 0.1

US EPA Tune Check Report

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	0.99 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.20 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	7.4 V	Deflect	0.4 V
Extract 2	-155.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-75 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	4.5 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	122	Axis Gain	0.9990	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	-0.03		

Hardware Settings

Torch

Torch H	-0.1 mm	Torch V	0.0 mm

EM

Discriminator	3.2 mV	Analog HV	2729 V	Pulse HV	1389 V

Calibration Blank Report

Sample Name	CalBlank
File Name	006CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 17:19:56
Sample Type	CalBlk
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	CPS	RSD
9	Be	6	No Gas	8.89	43.3
11	B	6	No Gas	5599.07	0.8
23	Na	45	He	7824.20	3.6
24	Mg	45	He	140.01	4.8
27	Al	45	He	31.11	40.6
28	Si	45	H2	8411.89	3.0
39	K	45	He	14882.72	1.4
40	Ca	45	H2	2040.23	5.4
51	V	89	He	110.00	19.9
52	Cr	89	He	411.93	8.0
55	Mn	89	He	32.66	15.4
56	Fe	89	H2	2035.76	4.0
59	Co	89	He	48.89	41.7
60	Ni	89	He	72.22	9.6
63	Cu	89	He	35374.62	1.0
66	Zn	89	He	344.46	5.3
75	As	89	He	215.36	9.6
78	Se	89	H2	0.67	114.6
88	Sr	89	He	33.33	30.0
95	Mo	89	He	14.45	93.3
107	Ag	89	He	30.00	29.4
111	Cd	89	He	0.37	173.2
118	Sn	159	He	106.67	19.0
121	Sb	159	No Gas	33.37	96.4
137	Ba	159	No Gas	347.06	9.3
182	W	159	No Gas	33.37	45.8
205	Tl	209	No Gas	40.05	43.3
208	Pb	209	No Gas	160.18	16.5
232	Th	209	No Gas	70.08	0.0
238	U	209	No Gas	6.67	86.6

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD
Li	6	No Gas	2459183.84	0.6
Sc	45	No Gas	4376311.73	1.2
Sc	45	H2	563225.15	2.1
Sc	45	He	146730.33	0.5
Ge	72	No Gas	936426.06	2.5
Ge	72	H2	183420.15	1.0
Ge	72	He	97408.84	0.3
Y	89	H2	2733952.55	1.1
Y	89	He	791301.87	0.3
Tb	159	No Gas	9359761.39	0.3
Tb	159	He	3741562.06	0.6
Bi	209	No Gas	4534931.80	1.2

Calibration Standard Report

Sample Name	CalStd
File Name	007CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 17:23:00
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	CPS	RSD
9	Be	6	No Gas	145360.63	1.5
11	B	6	No Gas	100858.52	1.1
23	Na	45	He	2237640.53	1.4
24	Mg	45	He	1343283.40	0.7
27	Al	45	He	49843.36	1.9
28	Si	45	H2	81734.32	1.8
39	K	45	He	1067932.90	1.0
40	Ca	45	H2	6860040.04	2.2
51	V	89	He	85637.29	1.0
52	Cr	89	He	108802.13	0.4
55	Mn	89	He	51007.67	0.7
56	Fe	89	H2	23076801.20	1.5
59	Co	89	He	169209.92	0.5
60	Ni	89	He	45802.52	0.8
63	Cu	89	He	189325.20	2.6
66	Zn	89	He	19412.95	1.9
75	As	89	He	15354.13	1.9
78	Se	89	H2	6309.98	0.8
88	Sr	89	He	64740.84	1.0
95	Mo	89	He	71425.62	1.7
107	Ag	89	He	234389.62	0.4
111	Cd	89	He	31611.32	0.6
118	Sn	159	He	63302.42	1.4
121	Sb	159	No Gas	478653.98	1.1
137	Ba	159	No Gas	171066.95	1.4
182	W	159	No Gas	397961.89	0.6
205	Tl	209	No Gas	796119.73	0.8
208	Pb	209	No Gas	1092365.23	0.7
232	Th	209	No Gas	1037594.10	0.9
238	U	209	No Gas	990078.20	0.4

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2436004.77	1.2	2459183.84	99.06	29.5	120.4	
Sc	45	No Gas	4413869.08	1.9	4376311.73	100.86	29.5	120.4	
Sc	45	H2	569172.62	2.0	563225.15	101.06	29.5	120.4	
Sc	45	He	148717.41	1.3	146730.33	101.35	29.5	120.4	
Ge	72	No Gas	973206.44	4.0	936426.06	103.93	29.5	120.4	
Ge	72	H2	184156.92	1.3	183420.15	100.4	29.5	120.4	
Ge	72	He	98606.43	1.0	97408.84	101.23	29.5	120.4	
Y	89	H2	2742241.34	1.8	2733952.55	100.3	29.5	120.4	
Y	89	He	797401.43	1.0	791301.87	100.77	29.5	120.4	
Tb	159	No Gas	9398393.96	1.7	9359761.39	100.41	29.5	120.4	
Tb	159	He	3746547.06	1.0	3741562.06	100.13	29.5	120.4	
Bi	209	No Gas	4517022.07	2.1	4534931.8	99.61	29.5	120.4	

Initial Calibration Verification (ICV) Report

Sample Name	ICV
File Name	008_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 17:25:57
Sample Type	ICV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	19.572	ppb	2.0	57601.94	20	97.86	89.6	110.4	
11	B	6	No Gas	20.234	ppb	1.8	44656.31	20	101.17	89.6	110.4	
23	Na	45	He	4093.120	ppb	0.3	906994.62	4000	102.33	89.6	110.4	
24	Mg	45	He	3937.037	ppb	0.3	521140.05	4000	98.43	89.6	110.4	
27	Al	45	He	397.253	ppb	1.0	19525.01	400	99.31	89.6	110.4	
28	Si	45	H2	501.209	ppb	2.1	44970.72	400	125.3	89.6	110.4	> +/- 10%
39	K	45	He	4326.338	ppb	0.6	463629.96	4000	108.16	89.6	110.4	
40	Ca	45	H2	4000.866	ppb	0.2	2731282.74	4000	100.02	89.6	110.4	
51	V	89	He	19.646	ppb	0.7	33408.24	20	98.23	89.6	110.4	
52	Cr	89	He	20.113	ppb	1.1	43617.68	20	100.56	89.6	110.4	
55	Mn	89	He	20.493	ppb	0.4	20734.80	20	102.46	89.6	110.4	
56	Fe	89	H2	3960.967	ppb	1.2	9178588.68	4000	99.02	89.6	110.4	
59	Co	89	He	20.169	ppb	0.9	67666.82	20	100.85	89.6	110.4	
60	Ni	89	He	20.394	ppb	0.8	18556.22	20	101.97	89.6	110.4	
63	Cu	89	He	29.397	ppb	1.8	124841.89	20	146.98	89.6	110.4	> +/- 10%
66	Zn	89	He	20.518	ppb	0.3	8095.98	20	102.59	89.6	110.4	
75	As	89	He	19.787	ppb	3.2	6150.03	20	98.94	89.6	110.4	
78	Se	89	H2	20.009	ppb	3.1	2535.28	20	100.04	89.6	110.4	
88	Sr	89	He	21.063	ppb	1.6	27042.97	20	105.32	89.6	110.4	
95	Mo	89	He	39.906	ppb	0.7	56489.31	40	99.76	89.6	110.4	
107	Ag	89	He	14.512	ppb	0.5	67436.96	20	72.56	89.6	110.4	> +/- 10%
111	Cd	89	He	20.188	ppb	0.9	12648.24	20	100.94	89.6	110.4	
118	Sn	159	He	19.491	ppb	0.8	24617.64	20	97.46	89.6	110.4	
121	Sb	159	No Gas	19.937	ppb	3.3	192957.27	20	99.68	89.6	110.4	
137	Ba	159	No Gas	19.860	ppb	4.3	68901.95	20	99.3	89.6	110.4	
182	W	159	No Gas	19.249	ppb	3.4	154898.58	20	96.24	89.6	110.4	
205	Tl	209	No Gas	20.255	ppb	0.9	329640.03	20	101.28	89.6	110.4	
208	Pb	209	No Gas	19.878	ppb	1.5	443929.34	20	99.39	89.6	110.4	
232	Th	209	No Gas	21.074	ppb	3.0	446940.31	20	105.37	89.6	110.4	
238	U	209	No Gas	20.991	ppb	2.4	424753.02	20	104.96	89.6	110.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2465493.82	0.6	2459183.84	100.26	29.5	120.4	
Sc	45	No Gas	4421786.94	1.2	4376311.73	101.04	29.5	120.4	
Sc	45	H2	566157.00	1.4	563225.15	100.52	29.5	120.4	
Sc	45	He	146517.31	0.4	146730.33	99.85	29.5	120.4	
Ge	72	No Gas	940913.09	2.1	936426.06	100.48	29.5	120.4	
Ge	72	H2	182875.14	2.6	183420.15	99.7	29.5	120.4	
Ge	72	He	97234.91	0.2	97408.84	99.82	29.5	120.4	
Y	89	H2	2753570.19	2.1	2733952.55	100.72	29.5	120.4	
Y	89	He	790122.75	0.3	791301.87	99.85	29.5	120.4	
Tb	159	No Gas	9500283.40	1.1	9359761.39	101.5	29.5	120.4	
Tb	159	He	3727686.37	0.5	3741562.06	99.63	29.5	120.4	
Bi	209	No Gas	4614742.49	0.2	4534931.8	101.76	29.5	120.4	

Initial Calibration Verification (ICV) Report

Sample Name	SILVER ICV
File Name	009_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 17:28:28
Sample Type	ICV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	20.539	ppb	9.5	58717.66	20	102.7	89.6	110.4	
11	B	6	No Gas	0.380	ppb	66.9	6175.98	20	1.9	89.6	110.4	> +/- 10%
23	Na	45	He	3.327	ppb	36.7	8485.24	4000	0.08	89.6	110.4	> +/- 10%
24	Mg	45	He	0.941	ppb	40.2	262.24	4000	0.02	89.6	110.4	> +/- 10%
27	Al	45	He	20.975	ppb	1.0	1053.41	400	5.24	89.6	110.4	> +/- 10%
28	Si	45	H2	21.181	ppb	31.6	9797.62	400	5.3	89.6	110.4	> +/- 10%
39	K	45	He	1.403	ppb	88.3	14907.72	4000	0.04	89.6	110.4	> +/- 10%
40	Ca	45	H2	1.221	ppb	11.1	2827.05	4000	0.03	89.6	110.4	> +/- 10%
51	V	89	He	19.609	ppb	1.9	33280.12	20	98.04	89.6	110.4	
52	Cr	89	He	19.781	ppb	2.1	42814.05	20	98.9	89.6	110.4	
55	Mn	89	He	20.161	ppb	1.7	20360.29	20	100.8	89.6	110.4	
56	Fe	89	H2	1.459	ppb	8.6	5343.62	4000	0.04	89.6	110.4	> +/- 10%
59	Co	89	He	20.483	ppb	1.5	68584.24	20	102.42	89.6	110.4	
60	Ni	89	He	20.933	ppb	3.6	19002.39	20	104.66	89.6	110.4	
63	Cu	89	He	31.585	ppb	2.5	131229.76	20	157.93	89.6	110.4	> +/- 10%
66	Zn	89	He	20.186	ppb	2.1	7958.15	20	100.93	89.6	110.4	
75	As	89	He	19.619	ppb	1.9	6087.66	20	98.1	89.6	110.4	
78	Se	89	H2	19.842	ppb	1.2	2475.28	20	99.21	89.6	110.4	
88	Sr	89	He	0.011	ppb	48.5	47.78	20	0.05	89.6	110.4	> +/- 10%
95	Mo	89	He	0.086	ppb	24.8	136.67	40	0.22	89.6	110.4	> +/- 10%
107	Ag	89	He	14.589	ppb	2.7	67645.81	20	72.95	89.6	110.4	> +/- 10%
111	Cd	89	He	20.376	ppb	1.3	12740.55	20	101.88	89.6	110.4	
118	Sn	159	He	0.050	ppb	42.4	168.90	20	0.25	89.6	110.4	> +/- 10%
121	Sb	159	No Gas	21.020	ppb	7.8	191817.59	20	105.1	89.6	110.4	
137	Ba	159	No Gas	21.445	ppb	9.1	70079.19	20	107.22	89.6	110.4	
182	W	159	No Gas	0.088	ppb	34.6	690.79	20	0.44	89.6	110.4	> +/- 10%
205	Tl	209	No Gas	21.244	ppb	9.2	333381.91	20	106.22	89.6	110.4	
208	Pb	209	No Gas	21.223	ppb	8.6	457168.09	20	106.12	89.6	110.4	
232	Th	209	No Gas	0.047	ppb	7.5	1031.20	20	0.24	89.6	110.4	> +/- 10%
238	U	209	No Gas	0.012	ppb	42.9	246.95	20	0.06	89.6	110.4	> +/- 10%

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2408343.89	8.9	2459183.84	97.93	29.5	120.4	
Sc	45	No Gas	4217420.84	7.3	4376311.73	96.37	29.5	120.4	
Sc	45	H2	554754.58	1.8	563225.15	98.5	29.5	120.4	
Sc	45	He	145566.44	1.8	146730.33	99.21	29.5	120.4	
Ge	72	No Gas	884916.22	11.2	936426.06	94.5	29.5	120.4	
Ge	72	H2	180014.84	0.8	183420.15	98.14	29.5	120.4	
Ge	72	He	96708.59	1.6	97408.84	99.28	29.5	120.4	
Y	89	H2	2709803.41	0.6	2733952.55	99.12	29.5	120.4	
Y	89	He	788680.99	2.1	791301.87	99.67	29.5	120.4	
Tb	159	No Gas	8991896.81	7.9	9359761.39	96.07	29.5	120.4	
Tb	159	He	3727005.95	2.1	3741562.06	99.61	29.5	120.4	
Bi	209	No Gas	4472421.48	8.3	4534931.8	98.62	29.5	120.4	

Initial Calibration Blank (ICB) Report

Sample Name	ICB
File Name	010_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 17:30:58
Sample Type	ICB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.031	ppb	15.5	100.00	0.2	
11	B	6	No Gas	0.050	ppb	79.0	5778.01	4	
23	Na	45	He	4.136	ppb	4.5	8642.31	200	
24	Mg	45	He	2.068	ppb	50.8	408.93	20	
27	Al	45	He	0.097	ppb	399.1	35.56	20	
28	Si	45	H2	2.606	ppb	254.4	8532.06	100	
39	K	45	He	1.742	ppb	266.4	14902.76	200	
40	Ca	45	H2	-0.028	ppb	N/A	2005.77	20	
51	V	89	He	0.003	ppb	236.8	114.45	1	
52	Cr	89	He	0.013	ppb	165.6	437.93	1	
55	Mn	89	He	0.027	ppb	83.9	59.32	0.4	
56	Fe	89	H2	0.192	ppb	63.8	2446.28	20	
59	Co	89	He	0.014	ppb	95.9	95.56	0.2	
60	Ni	89	He	0.024	ppb	85.9	93.34	0.4	
63	Cu	89	He	13.102	ppb	1.8	75011.44	0.6	Fail All Methods□ Fail 6020/DoD
66	Zn	89	He	-0.117	ppb	N/A	298.90	2	
75	As	89	He	0.042	ppb	58.8	227.03	1	
78	Se	89	H2	0.044	ppb	37.9	6.17	1	
88	Sr	89	He	0.015	ppb	114.0	52.23	1	
95	Mo	89	He	0.036	ppb	25.5	65.56	1	
107	Ag	89	He	0.020	ppb	31.2	121.12	0.2	
111	Cd	89	He	0.018	ppb	36.1	11.48	0.2	
118	Sn	159	He	0.012	ppb	302.0	121.11	1	
121	Sb	159	No Gas	0.027	ppb	30.5	293.66	0.2	
137	Ba	159	No Gas	0.013	ppb	221.0	390.45	0.4	
182	W	159	No Gas	0.020	ppb	18.4	193.55	1	
205	Tl	209	No Gas	0.023	ppb	28.6	420.48	0.2	
208	Pb	209	No Gas	0.029	ppb	27.5	814.26	0.2	
232	Th	209	No Gas	0.002	ppb	54.4	123.47	1	
238	U	209	No Gas	0.001	ppb	60.4	26.69	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2494897.10	1.5	2459183.84	101.45	29.5	120.4	
Sc	45	No Gas	4379304.20	1.7	4376311.73	100.07	29.5	120.4	
Sc	45	H2	558225.41	1.1	563225.15	99.11	29.5	120.4	
Sc	45	He	145195.39	1.0	146730.33	98.95	29.5	120.4	
Ge	72	No Gas	921699.42	0.2	936426.06	98.43	29.5	120.4	
Ge	72	H2	180251.18	1.0	183420.15	98.27	29.5	120.4	
Ge	72	He	96346.31	0.6	97408.84	98.91	29.5	120.4	
Y	89	H2	2698582.60	0.4	2733952.55	98.71	29.5	120.4	
Y	89	He	787955.84	1.3	791301.87	99.58	29.5	120.4	
Tb	159	No Gas	9350263.12	1.8	9359761.39	99.9	29.5	120.4	
Tb	159	He	3716591.51	0.4	3741562.06	99.33	29.5	120.4	
Bi	209	No Gas	4618396.20	2.2	4534931.8	101.84	29.5	120.4	

Low Level Initial Calibration Verification (LLICV) Report

Sample Name	IRON PQL
File Name	011LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 17:33:30
Sample Type	LLICV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High
9	Be	6	No Gas	0.018	ppb	25.1	62.23	0.2	9	79.5	120.4
11	B	6	No Gas	-0.024	ppb	N/A	5672.43	4	-0.6	79.5	120.4
23	Na	45	He	2.433	ppb	29.1	8238.13	200	1.22	79.5	120.4
24	Mg	45	He	0.986	ppb	18.6	266.69	20	4.93	79.5	120.4
27	Al	45	He	-0.060	ppb	N/A	27.78	20	-0.3	79.5	120.4
28	Si	45	H2	1.558	ppb	338.3	8355.10	100	1.56	79.5	120.4
39	K	45	He	2.056	ppb	97.9	14877.80	200	1.03	79.5	120.4
40	Ca	45	H2	1.786	ppb	8.8	3188.25	20	8.93	79.5	120.4
51	V	89	He	-0.004	ppb	N/A	102.23	1	-0.4	79.5	120.4
52	Cr	89	He	0.019	ppb	85.6	447.26	1	1.9	79.5	120.4
55	Mn	89	He	0.020	ppb	37.0	51.99	0.4	5	79.5	120.4
56	Fe	89	H2	24.735	ppb	2.7	58181.94	20	123.68	79.5	120.4
59	Co	89	He	0.012	ppb	33.8	88.90	0.2	6	79.5	120.4
60	Ni	89	He	0.009	ppb	305.6	78.89	0.4	2.25	79.5	120.4
63	Cu	89	He	10.935	ppb	1.7	67729.83	0.6	1822.5	79.5	120.4
66	Zn	89	He	0.037	ppb	158.3	353.35	2	1.85	79.5	120.4
75	As	89	He	-0.001	ppb	N/A	212.02	1	-0.1	79.5	120.4
78	Se	89	H2	0.026	ppb	24.4	3.83	1	2.6	79.5	120.4
88	Sr	89	He	0.004	ppb	305.0	37.78	1	0.4	79.5	120.4
95	Mo	89	He	0.013	ppb	55.9	32.22	1	1.3	79.5	120.4
107	Ag	89	He	0.012	ppb	25.6	86.67	0.2	6	79.5	120.4
111	Cd	89	He	0.009	ppb	49.9	5.93	0.2	4.5	79.5	120.4
118	Sn	159	He	0.021	ppb	67.6	132.23	1	2.1	79.5	120.4
121	Sb	159	No Gas	0.014	ppb	27.4	173.53	0.2	7	79.5	120.4
137	Ba	159	No Gas	0.007	ppb	125.1	373.76	0.4	1.75	79.5	120.4
182	W	159	No Gas	0.019	ppb	14.0	183.54	1	1.9	79.5	120.4
205	Tl	209	No Gas	0.014	ppb	17.5	270.31	0.2	7	79.5	120.4
208	Pb	209	No Gas	0.016	ppb	16.8	513.91	0.2	8	79.5	120.4
232	Th	209	No Gas	0.008	ppb	26.5	246.95	0.2	4	79.5	120.4
238	U	209	No Gas	0.010	ppb	12.3	206.90	0.2	5	79.5	120.4

QC Flag
Failed DoD □ Failed 6020/EPA
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Low Level Initial Calibration Verification (LLICV) Report

QC Flag
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Failed DoD □ Failed 6020/EPA

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2512302.58	1.1	2459183.84	102.16	29.5	120.4	
Sc	45	No Gas	4406008.62	1.3	4376311.73	100.68	29.5	120.4	
Sc	45	H2	551831.57	0.5	563225.15	97.98	29.5	120.4	
Sc	45	He	144614.81	0.6	146730.33	98.56	29.5	120.4	
Ge	72	No Gas	953755.87	4.4	936426.06	101.85	29.5	120.4	
Ge	72	H2	179304.56	0.6	183420.15	97.76	29.5	120.4	
Ge	72	He	95944.39	0.8	97408.84	98.5	29.5	120.4	
Y	89	H2	2698989.26	0.7	2733952.55	98.72	29.5	120.4	
Y	89	He	779874.42	0.4	791301.87	98.56	29.5	120.4	
Tb	159	No Gas	9467922.01	1.2	9359761.39	101.16	29.5	120.4	
Tb	159	He	3694233.90	1.1	3741562.06	98.74	29.5	120.4	
Bi	209	No Gas	4631927.86	2.3	4534931.8	102.14	29.5	120.4	

Low Level Initial Calibration Verification (LLICV) Report

Sample Name	PQL
File Name	012LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 17:36:03
Sample Type	LLICV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High
9	Be	6	No Gas	0.209	ppb	3.4	617.81	0.2	104.5	79.5	120.4
11	B	6	No Gas	3.509	ppb	10.1	12271.15	4	87.72	79.5	120.4
23	Na	45	He	223.979	ppb	1.4	56543.55	200	111.99	79.5	120.4
24	Mg	45	He	21.978	ppb	5.7	3022.78	20	109.89	79.5	120.4
27	Al	45	He	19.898	ppb	5.2	998.96	20	99.49	79.5	120.4
28	Si	45	H2	87.731	ppb	5.3	14747.38	100	87.73	79.5	120.4
39	K	45	He	227.096	ppb	1.3	38098.51	200	113.55	79.5	120.4
40	Ca	45	H2	21.643	ppb	1.4	16698.17	20	108.21	79.5	120.4
51	V	89	He	1.048	ppb	2.5	1877.97	1	104.8	79.5	120.4
52	Cr	89	He	1.084	ppb	2.3	2728.44	1	108.4	79.5	120.4
55	Mn	89	He	0.423	ppb	9.3	457.93	0.4	105.75	79.5	120.4
56	Fe	89	H2	24.681	ppb	1.1	57984.53	20	123.41	79.5	120.4
59	Co	89	He	0.203	ppb	6.1	726.74	0.2	101.5	79.5	120.4
60	Ni	89	He	0.435	ppb	6.9	464.47	0.4	108.75	79.5	120.4
63	Cu	89	He	11.995	ppb	2.9	71515.07	0.6	1999.17	79.5	120.4
66	Zn	89	He	2.174	ppb	4.4	1160.10	2	108.7	79.5	120.4
75	As	89	He	1.076	ppb	3.6	535.40	1	107.6	79.5	120.4
78	Se	89	H2	1.087	ppb	1.6	135.49	1	108.7	79.5	120.4
88	Sr	89	He	1.068	ppb	8.0	1396.79	1	106.8	79.5	120.4
95	Mo	89	He	1.077	ppb	5.6	1532.37	1	107.7	79.5	120.4
107	Ag	89	He	0.163	ppb	4.1	785.61	0.2	81.5	79.5	120.4
111	Cd	89	He	0.214	ppb	0.4	134.08	0.2	107	79.5	120.4
118	Sn	159	He	1.080	ppb	6.1	1449.02	1	108	79.5	120.4
121	Sb	159	No Gas	0.206	ppb	5.5	1972.35	0.2	103	79.5	120.4
137	Ba	159	No Gas	0.385	ppb	7.8	1635.26	0.4	96.25	79.5	120.4
182	W	159	No Gas	1.033	ppb	3.4	8125.03	1	103.3	79.5	120.4
205	Tl	209	No Gas	0.211	ppb	6.7	3437.64	0.2	105.5	79.5	120.4
208	Pb	209	No Gas	0.220	ppb	1.6	5016.03	0.2	110	79.5	120.4
232	Th	209	No Gas	0.201	ppb	2.3	4288.89	0.2	100.5	79.5	120.4
238	U	209	No Gas	0.220	ppb	8.8	4402.39	0.2	110	79.5	120.4

QC Flag
Failed DoD

Low Level Initial Calibration Verification (LLICV) Report

QC Flag
Failed DoD □ Failed 6020/EPA

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2444376.63	1.7	2459183.84	99.4	29.5	120.4	
Sc	45	No Gas	4275986.57	2.0	4376311.73	97.71	29.5	120.4	
Sc	45	H2	562139.19	1.2	563225.15	99.81	29.5	120.4	
Sc	45	He	145303.42	0.6	146730.33	99.03	29.5	120.4	
Ge	72	No Gas	958785.68	6.5	936426.06	102.39	29.5	120.4	
Ge	72	H2	178386.65	1.8	183420.15	97.26	29.5	120.4	
Ge	72	He	96451.93	0.4	97408.84	99.02	29.5	120.4	
Y	89	H2	2695185.51	0.9	2733952.55	98.58	29.5	120.4	
Y	89	He	786518.41	0.8	791301.87	99.4	29.5	120.4	
Tb	159	No Gas	9243363.47	1.9	9359761.39	98.76	29.5	120.4	
Tb	159	He	3689459.39	0.3	3741562.06	98.61	29.5	120.4	
Bi	209	No Gas	4557639.25	1.5	4534931.8	100.5	29.5	120.4	

Interference Check Solution A (ICS-A) Report

Sample Name	ICSA
File Name	013ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 17:38:33
Sample Type	ICSA
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Low	%High	QC Flag
Be	9	6	No Gas	0.018	ppb	31.8	57.78	-0.1	100	100	
B	11	6	No Gas	0.249	ppb	24.4	5749.15	-2	100	100	
Na	23	45	He	96716.109	ppb	0.1	22387075.46	100000	80	120	
Mg	24	45	He	95620.825	ppb	0.4	13328359.38	100000	80	120	
Al	27	45	He	99573.880	ppb	1.5	5147034.47	100000	80	120	
Si	28	45	H2	2.512	ppb	41.6	8835.94	-50	100	100	
K	39	45	He	97440.470	ppb	1.3	10662091.89	100000	80	120	
Ca	40	45	H2	100027.678	ppb	0.6	69761853.96	100000	80	120	
V	51	89	He	0.035	ppb	6.7	175.56	-0.5	100	100	
Cr	52	89	He	2.138	ppb	0.9	5181.36	1.8	100	100	
Mn	55	89	He	0.821	ppb	10.2	893.20	0.55211	100	100	
Fe	56	89	H2	99340.298	ppb	0.8	228745425.70	100000	80	120	
Co	59	89	He	0.108	ppb	8.1	426.70	0.04	100	100	
Ni	60	89	He	0.271	ppb	18.5	328.90	0.02	100	100	
Cu	63	89	He	-5.728	ppb	N/A	18517.30	0.184875	100	100	DoD□ 6020/EPA
Zn	66	89	He	1.544	ppb	5.3	960.07	-0.72	100	100	DoD
As	75	89	He	0.033	ppb	115.9	233.03	-0.5	100	100	
Se	78	89	H2	0.180	ppb	19.2	23.33	-0.5	100	100	
Sr	88	89	He	1.059	ppb	3.5	1440.13	0.41	100	100	
Mo	95	89	He	1995.284	ppb	0.2	2923976.52	2000	80	120	
Ag	107	89	He	0.293	ppb	3.2	1439.01	0.2	100	100	
Cd	111	89	He	0.394	ppb	1.4	256.30	0.2743	100	100	
Sn	118	159	He	0.045	ppb	44.3	161.12	-0.5	100	100	
Sb	121	159	No Gas	0.071	ppb	2.5	677.45	-0.1	100	100	
Ba	137	159	No Gas	0.331	ppb	11.3	1404.97	0.1	100	100	
W	182	159	No Gas	0.157	ppb	14.9	1218.09	-0.3	100	100	
Tl	205	209	No Gas	0.010	ppb	40.3	190.22	-0.1	100	100	
Pb	208	209	No Gas	0.093	ppb	5.9	2052.38	-0.1	100	100	
Th	232	209	No Gas	0.023	ppb	39.5	510.60	-0.1	100	100	
U	238	209	No Gas	0.007	ppb	23.1	136.82	-0.1	100	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2325842.22	0.4	2459183.84	94.58	29.5	120.4	
Sc	45	No Gas	4299266.93	2.4	4376311.73	98.24	29.5	120.4	
Sc	45	H2	578790.19	1.3	563225.15	102.76	29.5	120.4	
Sc	45	He	154325.24	0.6	146730.33	105.18	29.5	120.4	
Ge	72	No Gas	956590.43	5.7	936426.06	102.15	29.5	120.4	
Ge	72	H2	182003.28	1.5	183420.15	99.23	29.5	120.4	
Ge	72	He	101241.17	1.2	97408.84	103.93	29.5	120.4	
Y	89	H2	2736183.80	1.1	2733952.55	100.08	29.5	120.4	
Y	89	He	818169.81	0.5	791301.87	103.4	29.5	120.4	
Tb	159	No Gas	8935492.85	3.1	9359761.39	95.47	29.5	120.4	
Tb	159	He	3697668.10	0.4	3741562.06	98.83	29.5	120.4	
Bi	209	No Gas	4209241.70	0.3	4534931.8	92.82	29.5	120.4	

Interference Check Solution AB (ICS-AB) Report

Sample Name	ICSAB
File Name	014ICSB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 17:41:03
Sample Type	ICSB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Low	%High	QC Flag
9	Be	6	No Gas	20.529	ppb	4.3	59485.19	20	79.5	120.4	
11	B	6	No Gas	20.035	ppb	2.1	43596.86	20	79.5	120.4	
23	Na	45	He	96147.501	ppb	0.9	23926545.08	100000	79.5	120.4	
24	Mg	45	He	94444.726	ppb	0.4	14153636.32	100000	79.5	120.4	
27	Al	45	He	98765.818	ppb	0.4	5488604.50	100000	79.5	120.4	
28	Si	45	H2	508.845	ppb	1.6	50940.60	500	79.5	120.4	
39	K	45	He	97999.137	ppb	0.4	11528521.22	100000	79.5	120.4	
40	Ca	45	H2	99419.614	ppb	1.2	75886451.65	100000	79.5	120.4	
51	V	89	He	20.729	ppb	2.1	38520.25	20	79.5	120.4	
52	Cr	89	He	22.275	ppb	1.3	52745.52	20	79.5	120.4	
55	Mn	89	He	20.817	ppb	0.7	23022.60	20	79.5	120.4	
56	Fe	89	H2	99196.453	ppb	0.5	249202346.90	100000	79.5	120.4	
59	Co	89	He	19.861	ppb	1.1	72830.35	20	79.5	120.4	
60	Ni	89	He	20.200	ppb	1.8	20087.28	20	79.5	120.4	
63	Cu	89	He	11.798	ppb	2.2	77883.99	20	79.5	120.4	> +/- 10%
66	Zn	89	He	21.279	ppb	3.9	9164.46	20	79.5	120.4	
75	As	89	He	20.705	ppb	1.5	7023.55	20	79.5	120.4	
78	Se	89	H2	20.441	ppb	2.1	2809.16	20	79.5	120.4	
88	Sr	89	He	20.485	ppb	2.4	28741.95	20	79.5	120.4	
95	Mo	89	He	1993.563	ppb	0.5	3083718.11	2000	79.5	120.4	
107	Ag	89	He	18.486	ppb	1.1	93875.11	20	79.5	120.4	
111	Cd	89	He	19.093	ppb	2.1	13071.96	20	79.5	120.4	
118	Sn	159	He	20.395	ppb	2.2	26211.82	20	79.5	120.4	
121	Sb	159	No Gas	20.431	ppb	1.9	192320.76	20	79.5	120.4	
137	Ba	159	No Gas	20.866	ppb	0.8	70393.90	20	79.5	120.4	
182	W	159	No Gas	19.813	ppb	1.3	155065.62	20	79.5	120.4	
205	Tl	209	No Gas	20.245	ppb	1.0	299157.79	20	79.5	120.4	
208	Pb	209	No Gas	20.416	ppb	0.6	414015.79	20	79.5	120.4	
232	Th	209	No Gas	21.837	ppb	2.1	420498.03	20	79.5	120.4	
238	U	209	No Gas	21.883	ppb	2.9	402012.27	20	79.5	120.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2428225.66	1.2	2459183.84	98.74	29.5	120.4	
Sc	45	No Gas	4689855.00	0.4	4376311.73	107.16	29.5	120.4	
Sc	45	H2	633505.99	1.4	563225.15	112.48	29.5	120.4	
Sc	45	He	165924.78	1.4	146730.33	113.08	29.5	120.4	
Ge	72	No Gas	967681.13	0.7	936426.06	103.34	29.5	120.4	
Ge	72	H2	197110.42	0.7	183420.15	107.46	29.5	120.4	
Ge	72	He	107540.31	1.7	97408.84	110.4	29.5	120.4	
Y	89	H2	2985437.23	0.9	2733952.55	109.2	29.5	120.4	
Y	89	He	863636.26	1.5	791301.87	109.14	29.5	120.4	
Tb	159	No Gas	9238393.68	0.5	9359761.39	98.7	29.5	120.4	
Tb	159	He	3793540.91	0.6	3741562.06	101.39	29.5	120.4	
Bi	209	No Gas	4190362.98	0.9	4534931.8	92.4	29.5	120.4	

Linear Range Sample (LRS) Report

Sample Name	LRS1
File Name	015_LRS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 17:43:35
Sample Type	LRS
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High	QC Flag
9	Be	6	No Gas	98.975	ppb	1.5	306253.66	100	98.98	89.5	110.4	
11	B	6	No Gas	493.186	ppb	2.1	1006475.65	500	98.64	89.5	110.4	
51	V	89	He	1024.243	ppb	0.7	1864224.55	1000	102.42	89.5	110.4	
52	Cr	89	He	1914.296	ppb	1.4	4416022.11	2000	95.71	89.5	110.4	
55	Mn	89	He	1935.842	ppb	1.1	2099962.31	2000	96.79	89.5	110.4	
59	Co	89	He	1029.209	ppb	0.9	3705252.27	1000	102.92	89.5	110.4	
60	Ni	89	He	1006.218	ppb	0.5	979388.26	1000	100.62	89.5	110.4	
63	Cu	89	He	1628.076	ppb	0.7	5361403.88	2000	81.4	89.5	110.4	> +/- 10%
66	Zn	89	He	1953.134	ppb	1.0	792741.14	2000	97.66	89.5	110.4	
75	As	89	He	1002.941	ppb	1.1	323268.37	1000	100.29	89.5	110.4	
78	Se	89	H2	991.898	ppb	0.6	135205.16	1000	99.19	89.5	110.4	
88	Sr	89	He	1971.680	ppb	1.4	2714923.46	2000	98.58	89.5	110.4	
95	Mo	89	He	1004.649	ppb	0.7	1526705.00	1000	100.46	89.5	110.4	
107	Ag	89	He	94.755	ppb	1.2	472620.82	100	94.76	89.5	110.4	
111	Cd	89	He	987.788	ppb	1.1	664502.16	1000	98.78	89.5	110.4	
118	Sn	159	He	1041.506	ppb	1.8	1348372.02	1000	104.15	89.5	110.4	
121	Sb	159	No Gas	902.632	ppb	2.0	8891098.60	1000	90.26	89.5	110.4	
137	Ba	159	No Gas	1817.726	ppb	2.3	6387124.56	2000	90.89	89.5	110.4	
182	W	159	No Gas	901.166	ppb	2.9	7379589.95	1000	90.12	89.5	110.4	
205	Tl	209	No Gas	906.262	ppb	2.0	14936500.77	1000	90.63	89.5	110.4	
208	Pb	209	No Gas	1795.031	ppb	1.9	40590066.45	2000	89.75	89.5	110.4	
232	Th	209	No Gas	939.742	ppb	2.4	20184887.72	1000	93.97	89.5	110.4	
238	U	209	No Gas	925.355	ppb	3.2	18964338.25	1000	92.54	89.5	110.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2592807.82	1.5	2459183.84	105.43	29.5	120.4	
Sc	45	No Gas	4863689.98	2.1	4376311.73	111.14	29.5	120.4	
Ge	72	No Gas	1000942.94	1.2	936426.06	106.89	29.5	120.4	
Tb	159	No Gas	9670920.06	2.0	9359761.39	103.32	29.5	120.4	
Bi	209	No Gas	4675082.78	1.7	4534931.8	103.09	29.5	120.4	
Sc	45	H2	620055.89	1.4	563225.15	110.09	29.5	120.4	
Ge	72	H2	196450.84	2.1	183420.15	107.1	29.5	120.4	
Y	89	H2	2961841.84	0.7	2733952.55	108.34	29.5	120.4	
Sc	45	He	158968.68	1.1	146730.33	108.34	29.5	120.4	
Ge	72	He	105755.77	0.4	97408.84	108.57	29.5	120.4	
Y	89	He	848447.59	0.6	791301.87	107.22	29.5	120.4	
Tb	159	He	3837913.41	2.1	3741562.06	102.58	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	019_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 17:53:34
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	25.123	ppb	3.9	76379.41	25	100.49	89.8	110.2	
11	B	6	No Gas	25.069	ppb	4.8	55763.94	25	100.28	89.8	110.2	
23	Na	45	He	5134.015	ppb	1.6	1226033.14	5000	102.68	89.8	110.2	
24	Mg	45	He	4982.760	ppb	1.6	712008.88	5000	99.66	89.8	110.2	
27	Al	45	He	515.120	ppb	1.4	27325.86	500	103.02	89.8	110.2	
28	Si	45	H2	498.187	ppb	2.0	48093.79	500	99.64	89.8	110.2	
39	K	45	He	5555.283	ppb	0.6	638225.39	5000	111.11	89.8	110.2	> +/- 10%
40	Ca	45	H2	5096.020	ppb	1.9	3738056.89	5000	101.92	89.8	110.2	
51	V	89	He	25.952	ppb	1.2	46671.56	25	103.81	89.8	110.2	
52	Cr	89	He	26.035	ppb	0.4	59631.44	25	104.14	89.8	110.2	
55	Mn	89	He	25.931	ppb	1.6	27758.82	25	103.72	89.8	110.2	
56	Fe	89	H2	5035.021	ppb	0.4	12405353.04	5000	100.7	89.8	110.2	
59	Co	89	He	26.217	ppb	2.4	93080.02	25	104.87	89.8	110.2	
60	Ni	89	He	26.385	ppb	1.4	25385.98	25	105.54	89.8	110.2	
63	Cu	89	He	49.214	ppb	1.4	195996.53	25	196.86	89.8	110.2	> +/- 10%
66	Zn	89	He	25.876	ppb	1.7	10711.14	25	103.5	89.8	110.2	
75	As	89	He	25.505	ppb	3.1	8324.74	25	102.02	89.8	110.2	
78	Se	89	H2	25.252	ppb	1.8	3402.26	25	101.01	89.8	110.2	
88	Sr	89	He	25.367	ppb	1.3	34464.30	25	101.47	89.8	110.2	
95	Mo	89	He	25.715	ppb	0.8	38532.95	25	102.86	89.8	110.2	
107	Ag	89	He	25.347	ppb	1.6	124639.00	25	101.39	89.8	110.2	
111	Cd	89	He	25.310	ppb	1.7	16782.73	25	101.24	89.8	110.2	
118	Sn	159	He	25.973	ppb	1.9	33427.94	25	103.89	89.8	110.2	
121	Sb	159	No Gas	25.701	ppb	2.3	251984.95	25	102.8	89.8	110.2	
137	Ba	159	No Gas	25.858	ppb	3.4	90769.81	25	103.43	89.8	110.2	
182	W	159	No Gas	24.558	ppb	2.6	200177.76	25	98.23	89.8	110.2	
205	Tl	209	No Gas	24.894	ppb	3.6	404248.86	25	99.58	89.8	110.2	
208	Pb	209	No Gas	25.276	ppb	2.7	563248.79	25	101.1	89.8	110.2	
232	Th	209	No Gas	26.309	ppb	2.8	556790.97	25	105.24	89.8	110.2	
238	U	209	No Gas	26.225	ppb	3.1	529502.12	25	104.9	89.8	110.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2548294.72	2.2	2459183.84	103.62	29.5	120.4	
Sc	45	No Gas	4706958.25	0.7	4376311.73	107.56	29.5	120.4	
Sc	45	H2	608607.48	2.2	563225.15	108.06	29.5	120.4	
Sc	45	He	158198.95	1.4	146730.33	107.82	29.5	120.4	
Ge	72	No Gas	979136.99	1.4	936426.06	104.56	29.5	120.4	
Ge	72	H2	193781.10	1.7	183420.15	105.65	29.5	120.4	
Ge	72	He	105215.43	0.6	97408.84	108.01	29.5	120.4	
Y	89	H2	2927484.75	1.6	2733952.55	107.08	29.5	120.4	
Y	89	He	836305.93	0.8	791301.87	105.69	29.5	120.4	
Tb	159	No Gas	9623561.38	0.9	9359761.39	102.82	29.5	120.4	
Tb	159	He	3803359.81	1.7	3741562.06	101.65	29.5	120.4	
Bi	209	No Gas	4605689.85	1.1	4534931.8	101.56	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	020_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 17:56:04
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.030	ppb	38.6	101.11	0.2	
11	B	6	No Gas	0.442	ppb	8.0	6705.14	4	
23	Na	45	He	35.177	ppb	4.3	16898.73	200	
24	Mg	45	He	11.138	ppb	12.1	1753.57	20	Failed DoD
27	Al	45	He	9.490	ppb	10.1	540.03	20	
28	Si	45	H2	-0.401	ppb	N/A	9073.00	100	
39	K	45	He	21.827	ppb	6.4	18620.46	200	
40	Ca	45	H2	11.087	ppb	1.0	10349.68	20	Failed DoD
51	V	89	He	0.023	ppb	65.7	160.01	1	
52	Cr	89	He	0.041	ppb	19.6	533.91	1	
55	Mn	89	He	0.061	ppb	18.2	100.65	0.4	
56	Fe	89	H2	10.633	ppb	5.8	28163.09	20	Failed DoD
59	Co	89	He	0.037	ppb	36.8	186.68	0.2	
60	Ni	89	He	0.022	ppb	82.9	98.89	0.4	
63	Cu	89	He	21.893	ppb	1.8	109195.04	0.6	Fail All Methods□ Failed DoD
66	Zn	89	He	-0.024	ppb	N/A	358.91	2	
75	As	89	He	0.031	ppb	74.1	240.36	1	
78	Se	89	H2	0.089	ppb	19.8	12.67	1	
88	Sr	89	He	0.047	ppb	14.6	100.00	1	
95	Mo	89	He	0.227	ppb	11.6	358.91	1	
107	Ag	89	He	0.010	ppb	51.7	81.12	0.2	
111	Cd	89	He	0.034	ppb	34.8	22.96	0.2	
118	Sn	159	He	0.116	ppb	10.7	262.24	1	
121	Sb	159	No Gas	0.047	ppb	6.6	487.22	0.2	
137	Ba	159	No Gas	0.002	ppb	289.6	360.41	0.4	
182	W	159	No Gas	0.148	ppb	11.6	1228.10	1	
205	Tl	209	No Gas	0.030	ppb	18.5	520.59	0.2	
208	Pb	209	No Gas	0.059	ppb	9.0	1485.03	0.2	
232	Th	209	No Gas	0.053	ppb	10.6	1184.72	1	
238	U	209	No Gas	0.025	ppb	28.2	507.25	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2556497.21	1.6	2459183.84	103.96	29.5	120.4	
Sc	45	No Gas	4681895.27	3.1	4376311.73	106.98	29.5	120.4	
Sc	45	H2	609348.24	1.3	563225.15	108.19	29.5	120.4	
Sc	45	He	159308.51	0.9	146730.33	108.57	29.5	120.4	
Ge	72	No Gas	972145.05	1.7	936426.06	103.81	29.5	120.4	
Ge	72	H2	195793.53	1.1	183420.15	106.75	29.5	120.4	
Ge	72	He	105577.99	0.6	97408.84	108.39	29.5	120.4	
Y	89	H2	2907401.96	1.7	2733952.55	106.34	29.5	120.4	
Y	89	He	845959.45	1.1	791301.87	106.91	29.5	120.4	
Tb	159	No Gas	9502297.29	1.0	9359761.39	101.52	29.5	120.4	
Tb	159	He	3869214.35	1.1	3741562.06	103.41	29.5	120.4	
Bi	209	No Gas	4602626.53	1.9	4534931.8	101.49	29.5	120.4	

Prep Blank (PB) Report

Sample Name	PBWOG29IMW1
File Name	021_PBE.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 17:58:36
Sample Type	PB200.8
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	6	No Gas	0.019	ppb	28.5	64.45	0.1	
B	11	6	No Gas	0.793	ppb	28.0	7183.14	2	
Na	23	45	He	46.943	ppb	1.5	19588.50	100	
Mg	24	45	He	17.610	ppb	12.9	2667.12	10	200.8 PB Fails DoD
Al	27	45	He	15.369	ppb	3.6	848.94	10	200.8 PB Fails DoD
Si	28	45	H2	24.970	ppb	18.4	11013.19	50	
K	39	45	He	26.935	ppb	10.1	19079.21	100	
Ca	40	45	H2	19.444	ppb	3.0	16407.87	10	200.8 PB Fails DoD
V	51	89	He	0.039	ppb	47.4	190.01	0.5	
Cr	52	89	He	0.096	ppb	20.4	663.23	0.5	
Mn	55	89	He	0.231	ppb	13.1	285.29	0.2	200.8 PB Fails DoD
Fe	56	89	H2	20.182	ppb	1.6	51860.13	10	200.8 PB Fails DoD□ 200.8 PB Fails non-DoD
Co	59	89	He	0.039	ppb	10.6	193.35	0.1	
Ni	60	89	He	0.055	ppb	7.2	131.12	0.2	
Cu	63	89	He	20.980	ppb	1.3	106518.54	0.3	200.8 PB Fails DoD□ 200.8 PB Fails non-DoD
Zn	66	89	He	0.806	ppb	17.7	696.71	1	
As	75	89	He	0.064	ppb	60.8	251.70	0.5	
Se	78	89	H2	0.065	ppb	0.7	9.50	0.5	
Sr	88	89	He	0.085	ppb	14.5	152.23	0.5	
Mo	95	89	He	0.161	ppb	19.6	261.12	0.5	
Ag	107	89	He	0.011	ppb	43.2	86.67	0.1	
Cd	111	89	He	0.038	ppb	11.2	25.93	0.1	
Sn	118	159	He	0.242	ppb	18.2	422.25	0.5	
Sb	121	159	No Gas	0.052	ppb	19.4	527.27	0.1	
Ba	137	159	No Gas	1.090	ppb	12.5	4055.14	0.2	200.8 PB Fails DoD□ 200.8 PB Fails non-DoD
W	182	159	No Gas	0.077	ppb	21.8	640.73	0.5	
Tl	205	209	No Gas	0.037	ppb	28.8	630.72	0.1	
[Pb]	206	209	No Gas	0.118	ppb	7.3	687.47	0.1	200.8 PB Fails DoD
[Pb]	207	209	No Gas	0.095	ppb	5.0	477.22	0.1	
Pb	208	209	No Gas	0.107	ppb	14.2	2472.89	0.1	200.8 PB Fails DoD
Th	232	209	No Gas	0.036	ppb	30.1	817.61	0.5	
U	238	209	No Gas	0.030	ppb	33.5	587.35	0.1	

QC ISTD Table

Prep Blank (PB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2484914.98	6.2	2459183.84	101.05	29.5	120.4	
Sc	45	No Gas	4559804.23	4.1	4376311.73	104.19	29.5	120.4	
Sc	45	H2	606482.40	1.2	563225.15	107.68	29.5	120.4	
Sc	45	He	158358.69	1.3	146730.33	107.92	29.5	120.4	
Ge	72	No Gas	936244.77	6.9	936426.06	99.98	29.5	120.4	
Ge	72	H2	192858.10	1.3	183420.15	105.15	29.5	120.4	
Ge	72	He	105491.31	1.0	97408.84	108.3	29.5	120.4	
Y	89	H2	2925199.44	0.6	2733952.55	107	29.5	120.4	
Y	89	He	848389.50	1.0	791301.87	107.21	29.5	120.4	
Tb	159	No Gas	9381280.90	3.5	9359761.39	100.23	29.5	120.4	
Tb	159	He	3832733.38	0.8	3741562.06	102.44	29.5	120.4	
Bi	209	No Gas	4501928.02	4.3	4534931.8	99.27	29.5	120.4	

Laboratory Control Sample (LCS) Report

Sample Name	LCSWOG29IMW1
File Name	022_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 18:01:06
Sample Type	LCS
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	6	No Gas	43.582	ppb	1.8	147038.36	50	87.16	79.5	120.4	
B	11	6	No Gas	429.518	ppb	1.5	956582.55	500	85.9	79.5	120.4	
Na	23	45	He	7689.300	ppb	1.3	1846588.89	7500	102.52	79.5	120.4	
Mg	24	45	He	4978.117	ppb	1.5	716984.61	5000	99.56	79.5	120.4	
Al	27	45	He	1954.168	ppb	1.3	104384.07	2000	97.71	79.5	120.4	
Si	28	45	H2	1057.333	ppb	1.2	91114.40	1000	105.73	79.5	120.4	
K	39	45	He	10156.514	ppb	0.5	1162695.18	10000	101.57	79.5	120.4	
Ca	40	45	H2	2584.223	ppb	0.7	1881330.30	2500	103.37	79.5	120.4	
V	51	89	He	494.447	ppb	0.8	898268.45	500	98.89	79.5	120.4	
Cr	52	89	He	197.350	ppb	1.0	454781.12	200	98.68	79.5	120.4	
Mn	55	89	He	493.627	ppb	0.4	534484.97	500	98.73	79.5	120.4	
Fe	56	89	H2	1046.065	ppb	0.2	2533946.88	1000	104.61	79.5	120.4	
Co	59	89	He	506.016	ppb	0.4	1818290.74	500	101.2	79.5	120.4	
Ni	60	89	He	503.186	ppb	1.6	488819.17	500	100.64	79.5	120.4	
Cu	63	89	He	213.414	ppb	1.1	734317.66	250	85.37	79.5	120.4	
Zn	66	89	He	490.423	ppb	1.4	198937.83	500	98.08	79.5	120.4	
As	75	89	He	101.260	ppb	1.0	32782.66	100	101.26	79.5	120.4	
Se	78	89	H2	100.265	ppb	0.4	13272.87	100	100.26	79.5	120.4	
Sr	88	89	He	495.860	ppb	0.9	681503.84	500	99.17	79.5	120.4	
Mo	95	89	He	100.028	ppb	1.1	151724.07	100	100.03	79.5	120.4	
Ag	107	89	He	48.830	ppb	1.5	243092.29	50	97.66	79.5	120.4	
Cd	111	89	He	247.621	ppb	1.5	166251.45	250	99.05	79.5	120.4	
Sn	118	159	He	506.666	ppb	0.7	654799.15	500	101.33	79.5	120.4	
Sb	121	159	No Gas	101.963	ppb	1.2	993121.35	100	101.96	79.5	120.4	
Ba	137	159	No Gas	1774.702	ppb	1.1	6166391.17	2000	88.74	79.5	120.4	
W	182	159	No Gas	98.552	ppb	1.0	798094.50	100	98.55	79.5	120.4	
Tl	205	209	No Gas	93.194	ppb	0.6	1489337.07	100	93.19	79.5	120.4	
Pb	208	209	No Gas	97.797	ppb	0.6	2144419.66	100	97.8	79.5	120.4	
Th	232	209	No Gas	99.900	ppb	1.5	2080733.73	100	99.9	79.5	120.4	
U	238	209	No Gas	98.600	ppb	1.2	1959633.94	100	98.6	79.5	120.4	

QC ISTD Table

Laboratory Control Sample (LCS) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2826548.87	0.5	2459183.84	114.94	29.5	120.4	
Sc	45	No Gas	4694061.19	1.8	4376311.73	107.26	29.5	120.4	
Sc	45	H2	603472.38	1.6	563225.15	107.15	29.5	120.4	
Sc	45	He	159448.99	1.2	146730.33	108.67	29.5	120.4	
Ge	72	No Gas	976014.69	1.4	936426.06	104.23	29.5	120.4	
Ge	72	H2	193061.63	1.5	183420.15	105.26	29.5	120.4	
Ge	72	He	105407.12	0.5	97408.84	108.21	29.5	120.4	
Y	89	H2	2876251.52	1.8	2733952.55	105.2	29.5	120.4	
Y	89	He	846843.33	1.2	791301.87	107.02	29.5	120.4	
Tb	159	No Gas	9560409.86	1.4	9359761.39	102.14	29.5	120.4	
Tb	159	He	3830196.78	0.6	3741562.06	102.37	29.5	120.4	
Bi	209	No Gas	4532116.23	1.5	4534931.8	99.94	29.5	120.4	

Sample Report

Sample Name RINSE

File Name 026SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 18:11:05

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.015	ppb	14.1	54.45	100	
11	B	6	No Gas	0.516	ppb	13.1	6879.64	1000	
23	Na	45	He	22.790	ppb	5.6	13935.55	200000	
24	Mg	45	He	5.376	ppb	11.2	924.55	200000	
27	Al	45	He	3.280	ppb	10.9	208.90	200000	
28	Si	45	H2	-2.529	ppb	N/A	8869.31	10000	
39	K	45	He	11.089	ppb	47.4	17402.70	200000	
40	Ca	45	H2	8.587	ppb	7.8	8477.27	200000	
51	V	89	He	0.012	ppb	77.5	141.12	1000	
52	Cr	89	He	0.006	ppb	132.9	457.26	2000	
55	Mn	89	He	0.054	ppb	22.1	93.98	2000	
56	Fe	89	H2	3.172	ppb	2.6	9937.93	100000	
59	Co	89	He	0.034	ppb	23.3	175.58	1000	
60	Ni	89	He	0.026	ppb	108.8	103.34	1000	
63	Cu	89	He	10.176	ppb	3.6	71539.30	2000	
66	Zn	89	He	-0.122	ppb	N/A	321.13	2000	
75	As	89	He	0.004	ppb	2028.8	233.36	1000	
78	Se	89	H2	0.027	ppb	41.3	4.33	1000	
88	Sr	89	He	0.030	ppb	14.8	77.78	2000	
95	Mo	89	He	0.086	ppb	30.9	146.67	1000	
107	Ag	89	He	0.007	ppb	10.8	68.89	100	
111	Cd	89	He	0.017	ppb	46.9	11.85	1000	
118	Sn	159	He	0.091	ppb	25.4	230.01	1000	
121	Sb	159	No Gas	0.025	ppb	24.1	276.98	1000	
137	Ba	159	No Gas	0.089	ppb	10.0	674.11	2000	
182	W	159	No Gas	0.042	ppb	16.6	383.77	1000	
205	Tl	209	No Gas	0.020	ppb	15.9	377.09	1000	
208	Pb	209	No Gas	0.030	ppb	3.1	864.32	2000	
232	Th	209	No Gas	0.017	ppb	20.3	440.50	1000	
238	U	209	No Gas	0.015	ppb	15.9	317.03	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2566453.42	1.9	2459183.84	104.36	29.5	120.4	
Sc	45	No Gas	4698425.55	1.0	4376311.73	107.36	29.5	120.4	
Sc	45	H2	606766.43	0.3	563225.15	107.73	29.5	120.4	
Sc	45	He	159289.91	1.5	146730.33	108.56	29.5	120.4	
Ge	72	No Gas	980526.88	0.5	936426.06	104.71	29.5	120.4	
Ge	72	H2	194321.39	0.3	183420.15	105.94	29.5	120.4	
Ge	72	He	105240.46	1.0	97408.84	108.04	29.5	120.4	
Y	89	H2	2911403.80	0.8	2733952.55	106.49	29.5	120.4	
Y	89	He	852521.03	1.1	791301.87	107.74	29.5	120.4	
Tb	159	No Gas	9714895.55	1.1	9359761.39	103.79	29.5	120.4	
Tb	159	He	3879235.22	1.2	3741562.06	103.68	29.5	120.4	
Bi	209	No Gas	4732143.43	1.1	4534931.8	104.35	29.5	120.4	

Sample Report

Sample Name SO4787-001P

File Name 027SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 18:13:37

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	45.011	ppb	3.5	149059.29	100	
11	B	6	No Gas	453.388	ppb	2.4	990842.03	1000	
23	Na	45	He	16812.579	ppb	0.1	3991168.11	200000	
24	Mg	45	He	9788.520	ppb	0.4	1397000.62	200000	
27	Al	45	He	1956.833	ppb	1.5	103588.56	200000	
28	Si	45	H2	7000.827	ppb	1.5	554276.76	10000	
39	K	45	He	12327.868	ppb	0.8	1395010.54	200000	
40	Ca	45	H2	34407.816	ppb	1.2	25094824.90	200000	
51	V	89	He	508.138	ppb	1.5	907713.23	1000	
52	Cr	89	He	202.165	ppb	0.6	458065.72	2000	
55	Mn	89	He	511.048	ppb	0.2	544069.06	2000	
56	Fe	89	H2	1038.902	ppb	1.5	2538267.27	100000	
59	Co	89	He	509.125	ppb	1.0	1798719.73	1000	
60	Ni	89	He	503.813	ppb	0.4	481257.68	1000	
63	Cu	89	He	211.000	ppb	0.6	714280.26	2000	
66	Zn	89	He	502.210	ppb	1.0	200306.99	2000	
75	As	89	He	107.214	ppb	0.5	34115.62	1000	
78	Se	89	H2	100.474	ppb	1.3	13414.67	1000	
88	Sr	89	He	564.112	ppb	0.4	762341.25	2000	
95	Mo	89	He	105.104	ppb	0.5	156757.85	1000	
107	Ag	89	He	49.726	ppb	0.9	243424.01	100	
111	Cd	89	He	251.807	ppb	0.3	166239.68	1000	
118	Sn	159	He	513.363	ppb	0.2	663186.09	1000	
121	Sb	159	No Gas	98.887	ppb	2.7	986973.83	1000	
137	Ba	159	No Gas	1788.236	ppb	1.7	6365747.66	2000	
182	W	159	No Gas	99.717	ppb	1.9	827342.46	1000	
205	Tl	209	No Gas	93.536	ppb	1.6	1520683.04	1000	
208	Pb	209	No Gas	97.464	ppb	2.1	2174010.21	2000	
232	Th	209	No Gas	101.189	ppb	2.7	2143754.59	1000	
238	U	209	No Gas	100.084	ppb	2.8	2023207.24	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2775208.68	1.3	2459183.84	112.85	29.5	120.4	
Sc	45	No Gas	4738972.66	0.7	4376311.73	108.29	29.5	120.4	
Sc	45	H2	605335.46	1.6	563225.15	107.48	29.5	120.4	
Sc	45	He	157996.85	0.4	146730.33	107.68	29.5	120.4	
Ge	72	No Gas	985348.27	0.9	936426.06	105.22	29.5	120.4	
Ge	72	H2	191645.38	0.4	183420.15	104.48	29.5	120.4	
Ge	72	He	104612.61	0.2	97408.84	107.4	29.5	120.4	
Y	89	H2	2901014.32	0.8	2733952.55	106.11	29.5	120.4	
Y	89	He	832620.20	0.7	791301.87	105.22	29.5	120.4	
Tb	159	No Gas	9797033.60	2.1	9359761.39	104.67	29.5	120.4	
Tb	159	He	3828581.51	0.5	3741562.06	102.33	29.5	120.4	
Bi	209	No Gas	4610778.12	0.7	4534931.8	101.67	29.5	120.4	

Sample Report

Sample Name SO4787-001S

File Name 028SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 18:16:02

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	44.102	ppb	1.5	146267.36	100	
11	B	6	No Gas	447.505	ppb	1.4	979466.25	1000	
23	Na	45	He	16769.071	ppb	0.6	3995405.84	200000	
24	Mg	45	He	9713.989	ppb	0.4	1391420.14	200000	
27	Al	45	He	1958.833	ppb	1.2	104071.16	200000	
28	Si	45	H2	6906.551	ppb	1.3	546429.95	10000	
39	K	45	He	12283.488	ppb	1.0	1395107.74	200000	
40	Ca	45	H2	34157.771	ppb	0.5	24892480.18	200000	
51	V	89	He	499.656	ppb	1.7	901162.32	1000	
52	Cr	89	He	199.053	ppb	0.6	455381.25	2000	
55	Mn	89	He	503.825	ppb	0.6	541554.15	2000	
56	Fe	89	H2	1039.185	ppb	1.0	2525186.84	100000	
59	Co	89	He	499.018	ppb	0.3	1780168.38	1000	
60	Ni	89	He	498.811	ppb	0.6	481095.06	1000	
63	Cu	89	He	206.683	ppb	0.8	707195.53	2000	
66	Zn	89	He	496.043	ppb	0.5	199766.83	2000	
75	As	89	He	106.050	ppb	0.4	34075.55	1000	
78	Se	89	H2	98.928	ppb	0.5	13137.09	1000	
88	Sr	89	He	559.138	ppb	0.5	762931.30	2000	
95	Mo	89	He	104.135	ppb	0.9	156808.93	1000	
107	Ag	89	He	48.716	ppb	0.7	240781.92	100	
111	Cd	89	He	248.492	ppb	0.4	165638.80	1000	
118	Sn	159	He	514.097	ppb	0.2	668645.35	1000	
121	Sb	159	No Gas	98.537	ppb	4.3	975052.45	1000	
137	Ba	159	No Gas	1778.616	ppb	1.9	6278288.33	2000	
182	W	159	No Gas	99.005	ppb	2.2	814517.25	1000	
205	Tl	209	No Gas	92.381	ppb	1.9	1494987.60	1000	
208	Pb	209	No Gas	95.849	ppb	2.6	2127993.74	2000	
232	Th	209	No Gas	101.398	ppb	3.0	2138102.82	1000	
238	U	209	No Gas	100.084	ppb	3.4	2013672.94	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2778674.13	1.1	2459183.84	112.99	29.5	120.4	
Sc	45	No Gas	4734099.45	0.6	4376311.73	108.18	29.5	120.4	
Sc	45	H2	604801.29	1.2	563225.15	107.38	29.5	120.4	
Sc	45	He	158574.83	0.3	146730.33	108.07	29.5	120.4	
Ge	72	No Gas	987557.38	2.2	936426.06	105.46	29.5	120.4	
Ge	72	H2	193518.22	0.9	183420.15	105.51	29.5	120.4	
Ge	72	He	105654.13	0.7	97408.84	108.46	29.5	120.4	
Y	89	H2	2885332.52	0.8	2733952.55	105.54	29.5	120.4	
Y	89	He	840690.66	1.1	791301.87	106.24	29.5	120.4	
Tb	159	No Gas	9713112.36	1.0	9359761.39	103.78	29.5	120.4	
Tb	159	He	3854590.36	0.8	3741562.06	103.02	29.5	120.4	
Bi	209	No Gas	4590164.90	1.9	4534931.8	101.22	29.5	120.4	

Sample Report

Sample Name SO4787-002

File Name 029SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 18:18:28

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.062	ppb	30.3	198.90	100	
11	B	6	No Gas	16.588	ppb	3.2	39127.12	1000	
23	Na	45	He	9497.086	ppb	1.2	2274590.55	200000	
24	Mg	45	He	4792.028	ppb	1.4	688933.93	200000	
27	Al	45	He	4.681	ppb	17.7	283.35	200000	
28	Si	45	H2	5872.615	ppb	1.1	470244.91	10000	
39	K	45	He	2319.573	ppb	0.9	277497.17	200000	
40	Ca	45	H2	33248.225	ppb	0.8	24450688.25	200000	
51	V	89	He	0.339	ppb	9.1	733.38	1000	
52	Cr	89	He	0.133	ppb	16.6	747.89	2000	
55	Mn	89	He	1.464	ppb	0.6	1621.80	2000	
56	Fe	89	H2	8.093	ppb	0.9	21868.21	100000	
59	Co	89	He	0.121	ppb	1.2	486.71	1000	
60	Ni	89	He	0.189	ppb	11.7	261.12	1000	
63	Cu	89	He	8.296	ppb	2.6	64979.80	2000	
66	Zn	89	He	3.367	ppb	4.0	1733.51	2000	
75	As	89	He	4.071	ppb	1.9	1540.59	1000	
78	Se	89	H2	0.176	ppb	10.1	24.17	1000	
88	Sr	89	He	65.762	ppb	0.7	90485.67	2000	
95	Mo	89	He	1.348	ppb	7.1	2061.35	1000	
107	Ag	89	He	0.015	ppb	18.9	107.78	100	
111	Cd	89	He	0.070	ppb	20.4	47.41	1000	
118	Sn	159	He	0.764	ppb	3.1	1105.64	1000	
121	Sb	159	No Gas	0.168	ppb	11.2	1715.37	1000	
137	Ba	159	No Gas	5.947	ppb	3.0	21558.38	2000	
182	W	159	No Gas	0.339	ppb	0.8	2846.83	1000	
205	Tl	209	No Gas	0.072	ppb	28.1	1251.47	1000	
208	Pb	209	No Gas	0.374	ppb	3.8	8771.00	2000	
232	Th	209	No Gas	0.192	ppb	20.4	4262.21	1000	
238	U	209	No Gas	0.297	ppb	8.4	6191.80	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2564476.13	1.1	2459183.84	104.28	29.5	120.4	
Sc	45	No Gas	4772952.78	1.0	4376311.73	109.06	29.5	120.4	
Sc	45	H2	610306.95	1.2	563225.15	108.36	29.5	120.4	
Sc	45	He	159158.40	1.3	146730.33	108.47	29.5	120.4	
Ge	72	No Gas	986000.57	1.5	936426.06	105.29	29.5	120.4	
Ge	72	H2	194091.28	1.3	183420.15	105.82	29.5	120.4	
Ge	72	He	105859.87	0.8	97408.84	108.68	29.5	120.4	
Y	89	H2	2894359.60	1.4	2733952.55	105.87	29.5	120.4	
Y	89	He	847473.04	0.6	791301.87	107.1	29.5	120.4	
Tb	159	No Gas	9805774.99	0.7	9359761.39	104.77	29.5	120.4	
Tb	159	He	3864141.26	0.7	3741562.06	103.28	29.5	120.4	
Bi	209	No Gas	4751135.76	0.4	4534931.8	104.77	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	031_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 18:23:29
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	24.894	ppb	2.6	76257.66	25	99.58	89.8	110.2	
11	B	6	No Gas	25.455	ppb	2.0	56965.17	25	101.82	89.8	110.2	
23	Na	45	He	5152.408	ppb	1.0	1243729.77	5000	103.05	89.8	110.2	
24	Mg	45	He	4979.856	ppb	0.8	719317.91	5000	99.6	89.8	110.2	
27	Al	45	He	507.132	ppb	0.8	27192.21	500	101.43	89.8	110.2	
28	Si	45	H2	504.594	ppb	2.5	48496.33	500	100.92	89.8	110.2	
39	K	45	He	5551.259	ppb	1.4	644606.42	5000	111.03	89.8	110.2	> +/- 10%
40	Ca	45	H2	5147.260	ppb	1.4	3768382.62	5000	102.95	89.8	110.2	
51	V	89	He	25.759	ppb	0.3	47123.05	25	103.04	89.8	110.2	
52	Cr	89	He	26.006	ppb	1.3	60586.61	25	104.02	89.8	110.2	
55	Mn	89	He	25.678	ppb	0.5	27963.15	25	102.71	89.8	110.2	
56	Fe	89	H2	5049.476	ppb	0.8	12380015.62	5000	100.99	89.8	110.2	
59	Co	89	He	25.901	ppb	0.9	93544.86	25	103.6	89.8	110.2	
60	Ni	89	He	26.613	ppb	1.0	26047.19	25	106.45	89.8	110.2	
63	Cu	89	He	26.726	ppb	0.9	125648.76	25	106.9	89.8	110.2	
66	Zn	89	He	25.628	ppb	3.6	10794.57	25	102.51	89.8	110.2	
75	As	89	He	25.151	ppb	1.3	8354.10	25	100.6	89.8	110.2	
78	Se	89	H2	25.462	ppb	1.4	3414.43	25	101.85	89.8	110.2	
88	Sr	89	He	25.274	ppb	2.9	34925.37	25	101.1	89.8	110.2	
95	Mo	89	He	25.579	ppb	1.2	38986.37	25	102.32	89.8	110.2	
107	Ag	89	He	25.287	ppb	1.0	126480.02	25	101.15	89.8	110.2	
111	Cd	89	He	25.007	ppb	1.3	16866.90	25	100.03	89.8	110.2	
118	Sn	159	He	25.748	ppb	1.0	33990.45	25	102.99	89.8	110.2	
121	Sb	159	No Gas	25.235	ppb	1.0	256234.92	25	100.94	89.8	110.2	
137	Ba	159	No Gas	25.639	ppb	2.0	93216.31	25	102.56	89.8	110.2	
182	W	159	No Gas	24.564	ppb	0.8	207361.21	25	98.26	89.8	110.2	
205	Tl	209	No Gas	24.950	ppb	1.8	422738.77	25	99.8	89.8	110.2	
208	Pb	209	No Gas	25.219	ppb	2.2	586329.80	25	100.88	89.8	110.2	
232	Th	209	No Gas	26.309	ppb	2.4	580880.74	25	105.24	89.8	110.2	
238	U	209	No Gas	26.359	ppb	2.4	555245.52	25	105.44	89.8	110.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2566383.35	0.6	2459183.84	104.36	29.5	120.4	
Sc	45	No Gas	4824457.41	2.2	4376311.73	110.24	29.5	120.4	
Sc	45	H2	607308.56	1.1	563225.15	107.83	29.5	120.4	
Sc	45	He	159896.17	0.5	146730.33	108.97	29.5	120.4	
Ge	72	No Gas	1007252.81	1.3	936426.06	107.56	29.5	120.4	
Ge	72	H2	191938.29	2.0	183420.15	104.64	29.5	120.4	
Ge	72	He	106145.94	0.1	97408.84	108.97	29.5	120.4	
Y	89	H2	2913099.40	1.0	2733952.55	106.55	29.5	120.4	
Y	89	He	850684.54	0.9	791301.87	107.5	29.5	120.4	
Tb	159	No Gas	9965753.11	1.6	9359761.39	106.47	29.5	120.4	
Tb	159	He	3900048.73	0.3	3741562.06	104.24	29.5	120.4	
Bi	209	No Gas	4805021.05	1.6	4534931.8	105.96	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	032_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 18:25:58
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.034	ppb	22.4	113.34	0.2	
11	B	6	No Gas	0.739	ppb	21.0	7358.77	4	
23	Na	45	He	15.331	ppb	5.7	12332.47	200	
24	Mg	45	He	2.767	ppb	20.2	557.83	20	
27	Al	45	He	1.482	ppb	17.2	114.45	20	
28	Si	45	H2	3.425	ppb	86.6	9426.97	100	
39	K	45	He	5.054	ppb	79.6	16970.93	200	
40	Ca	45	H2	6.317	ppb	9.6	6881.92	20	
51	V	89	He	0.014	ppb	97.0	144.45	1	
52	Cr	89	He	-0.005	ppb	N/A	434.60	1	
55	Mn	89	He	0.051	ppb	19.3	91.32	0.4	
56	Fe	89	H2	3.048	ppb	20.2	9650.83	20	
59	Co	89	He	0.037	ppb	9.0	186.68	0.2	
60	Ni	89	He	0.017	ppb	152.3	94.45	0.4	
63	Cu	89	He	4.460	ppb	1.5	52971.37	0.6	Fail All Methods□ Failed DoD
66	Zn	89	He	-0.023	ppb	N/A	363.35	2	
75	As	89	He	-0.032	ppb	N/A	222.36	1	
78	Se	89	H2	0.065	ppb	40.2	9.50	1	
88	Sr	89	He	0.022	ppb	67.0	66.67	1	
95	Mo	89	He	0.090	ppb	15.6	153.34	1	
107	Ag	89	He	0.009	ppb	18.6	76.67	0.2	
111	Cd	89	He	0.022	ppb	19.8	15.56	0.2	
118	Sn	159	He	0.132	ppb	12.6	283.35	1	
121	Sb	159	No Gas	0.041	ppb	21.3	447.18	0.2	
137	Ba	159	No Gas	0.129	ppb	12.7	830.96	0.4	
182	W	159	No Gas	0.122	ppb	16.7	1054.56	1	
205	Tl	209	No Gas	0.037	ppb	8.3	664.11	0.2	
208	Pb	209	No Gas	0.037	ppb	13.2	1021.17	0.2	
232	Th	209	No Gas	0.070	ppb	17.8	1605.23	1	
238	U	209	No Gas	0.029	ppb	35.0	607.37	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2577581.69	1.6	2459183.84	104.81	29.5	120.4	
Sc	45	No Gas	4820349.35	0.3	4376311.73	110.15	29.5	120.4	
Sc	45	H2	612686.68	1.5	563225.15	108.78	29.5	120.4	
Sc	45	He	161627.61	0.9	146730.33	110.15	29.5	120.4	
Ge	72	No Gas	996705.02	2.3	936426.06	106.44	29.5	120.4	
Ge	72	H2	193731.90	0.5	183420.15	105.62	29.5	120.4	
Ge	72	He	106498.86	0.8	97408.84	109.33	29.5	120.4	
Y	89	H2	2918013.54	1.5	2733952.55	106.73	29.5	120.4	
Y	89	He	855836.45	0.9	791301.87	108.16	29.5	120.4	
Tb	159	No Gas	9896466.03	0.9	9359761.39	105.73	29.5	120.4	
Tb	159	He	3875799.35	1.0	3741562.06	103.59	29.5	120.4	
Bi	209	No Gas	4773155.17	0.9	4534931.8	105.25	29.5	120.4	

Sample Report

Sample Name SO4839-001

File Name 038SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 18:41:05

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Fail

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.023	ppb	15.8	98.89	100	
11	B	6	No Gas	20.442	ppb	4.4	59016.47	1000	
23	Na	45	He	34202.953	ppb	3.0	10531328.04	200000	
24	Mg	45	He	735.273	ppb	0.7	136471.33	200000	
27	Al	45	He	307.581	ppb	1.6	21185.41	200000	
28	Si	45	H2	747.714	ppb	4.6	84827.36	10000	
39	K	45	He	1185.956	ppb	1.9	193080.55	200000	
40	Ca	45	H2	3052.162	ppb	2.2	2809536.31	200000	
51	V	89	He	1.379	ppb	2.6	3191.59	1000	
52	Cr	89	He	2.351	ppb	4.2	7117.86	2000	
55	Mn	89	He	25.888	ppb	1.9	34140.33	2000	
56	Fe	89	H2	528.086	ppb	0.9	1522825.89	100000	
59	Co	89	He	0.493	ppb	8.5	2215.90	1000	
60	Ni	89	He	40.428	ppb	0.7	47872.95	1000	
63	Cu	89	He	26.653	ppb	2.1	151873.98	2000	
66	Zn	89	He	68.561	ppb	1.2	34223.90	2000	
75	As	89	He	1.492	ppb	6.5	863.46	1000	
78	Se	89	H2	0.150	ppb	7.0	24.50	1000	
88	Sr	89	He	15.718	ppb	1.4	26324.79	2000	
95	Mo	89	He	14.396	ppb	1.1	26583.22	1000	
107	Ag	89	He	0.028	ppb	1.9	206.68	100	
111	Cd	89	He	0.084	ppb	6.7	68.89	1000	
118	Sn	159	He	0.368	ppb	8.9	614.48	1000	
121	Sb	159	No Gas	0.766	ppb	2.4	7513.83	1000	
137	Ba	159	No Gas	9.862	ppb	2.0	34694.13	2000	
182	W	159	No Gas	0.625	ppb	4.5	5106.77	1000	
205	Tl	209	No Gas	0.019	ppb	28.1	330.37	1000	
208	Pb	209	No Gas	0.989	ppb	1.7	20563.00	2000	
232	Th	209	No Gas	0.117	ppb	10.5	2369.59	1000	
238	U	209	No Gas	0.113	ppb	9.8	2125.89	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3231929.57	3.1	2459183.84	131.42	29.5	120.4	6020/DoD□ EPA
Sc	45	No Gas	5741822.30	1.1	4376311.73	131.2	29.5	120.4	6020/DoD□ EPA
Sc	45	H2	763242.68	1.2	563225.15	135.51	29.5	120.4	6020/DoD□ EPA
Sc	45	He	205208.66	1.5	146730.33	139.85	29.5	120.4	6020/DoD□ EPA
Ge	72	No Gas	1147614.03	2.2	936426.06	122.55	29.5	120.4	6020/DoD
Ge	72	H2	242343.67	0.5	183420.15	132.12	29.5	120.4	6020/DoD□ EPA
Ge	72	He	131573.08	0.8	97408.84	135.07	29.5	120.4	6020/DoD□ EPA
Y	89	H2	3421400.16	1.4	2733952.55	125.14	29.5	120.4	6020/DoD
Y	89	He	1030351.94	1.8	791301.87	130.21	29.5	120.4	6020/DoD□ EPA
Tb	159	No Gas	9584002.64	2.6	9359761.39	102.4	29.5	120.4	
Tb	159	He	4025648.06	1.1	3741562.06	107.59	29.5	120.4	
Bi	209	No Gas	4268024.28	0.8	4534931.8	94.11	29.5	120.4	

Sample Report

Sample Name SO4839-002

File Name 039SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 18:43:34

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Fail

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.022	ppb	29.7	90.00	100	
11	B	6	No Gas	12.567	ppb	3.1	36440.10	1000	
23	Na	45	He	317242.055	ppb	1.3	95703298.26	200000	>LDR
24	Mg	45	He	10815.941	ppb	0.8	1965449.46	200000	
27	Al	45	He	216.514	ppb	2.5	14631.61	200000	
28	Si	45	H2	4162.841	ppb	0.7	412000.31	10000	
39	K	45	He	4528.871	ppb	0.2	665433.03	200000	
40	Ca	45	H2	59891.369	ppb	0.7	54006623.08	200000	
51	V	89	He	0.611	ppb	2.2	1415.68	1000	
52	Cr	89	He	1.722	ppb	4.6	5079.34	2000	
55	Mn	89	He	369.922	ppb	1.9	461691.09	2000	
56	Fe	89	H2	2780.450	ppb	2.3	7770338.56	100000	
59	Co	89	He	2.571	ppb	2.6	10709.34	1000	
60	Ni	89	He	15.991	ppb	2.2	17992.13	1000	
63	Cu	89	He	-8.870	ppb	N/A	10266.35	2000	
66	Zn	89	He	14.008	ppb	5.4	6959.77	2000	
75	As	89	He	4.953	ppb	1.6	2101.06	1000	
78	Se	89	H2	0.137	ppb	19.0	21.83	1000	
88	Sr	89	He	655.605	ppb	2.0	1038641.68	2000	
95	Mo	89	He	1.183	ppb	5.8	2084.68	1000	
107	Ag	89	He	0.015	ppb	20.0	123.34	100	
111	Cd	89	He	0.055	ppb	7.8	42.96	1000	
118	Sn	159	He	0.129	ppb	25.4	275.57	1000	
121	Sb	159	No Gas	0.147	ppb	8.3	1374.94	1000	
137	Ba	159	No Gas	42.357	ppb	2.6	138024.82	2000	
182	W	159	No Gas	0.169	ppb	11.1	1308.21	1000	
205	Tl	209	No Gas	0.036	ppb	21.5	530.60	1000	
208	Pb	209	No Gas	0.369	ppb	5.3	7138.76	2000	
232	Th	209	No Gas	0.080	ppb	11.3	1505.11	1000	
238	U	209	No Gas	0.125	ppb	12.7	2155.95	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3009368.72	2.5	2459183.84	122.37	29.5	120.4	6020/DoD
Sc	45	No Gas	5584298.06	2.3	4376311.73	127.6	29.5	120.4	6020/DoD□ EPA
Sc	45	H2	748339.76	1.0	563225.15	132.87	29.5	120.4	6020/DoD□ EPA
Sc	45	He	201172.15	0.7	146730.33	137.1	29.5	120.4	6020/DoD□ EPA
Ge	72	No Gas	1086187.63	2.3	936426.06	115.99	29.5	120.4	
Ge	72	H2	227430.96	0.3	183420.15	123.99	29.5	120.4	6020/DoD
Ge	72	He	126022.45	0.9	97408.84	129.37	29.5	120.4	6020/DoD□ EPA
Y	89	H2	3320707.23	1.5	2733952.55	121.46	29.5	120.4	6020/DoD
Y	89	He	976300.64	2.0	791301.87	123.38	29.5	120.4	6020/DoD
Tb	159	No Gas	8948796.81	2.4	9359761.39	95.61	29.5	120.4	
Tb	159	He	3826216.29	1.4	3741562.06	102.26	29.5	120.4	
Bi	209	No Gas	3929602.67	2.7	4534931.8	86.65	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	043_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 18:53:30
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Fail
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	23.786	ppb	2.6	87631.86	25	95.14	89.8	110.2	
11	B	6	No Gas	24.428	ppb	2.3	66033.77	25	97.71	89.8	110.2	
23	Na	45	He	8079.565	ppb	1.4	2559634.99	5000	161.59	89.8	110.2	> +/- 10%
24	Mg	45	He	5049.989	ppb	0.7	959737.69	5000	101	89.8	110.2	
27	Al	45	He	506.763	ppb	1.2	35750.17	500	101.35	89.8	110.2	
28	Si	45	H2	509.918	ppb	2.2	60522.03	500	101.98	89.8	110.2	
39	K	45	He	5362.252	ppb	1.8	820032.40	5000	107.25	89.8	110.2	
40	Ca	45	H2	5181.505	ppb	0.7	4694052.36	5000	103.63	89.8	110.2	
51	V	89	He	27.276	ppb	0.7	59934.99	25	109.1	89.8	110.2	
52	Cr	89	He	27.442	ppb	1.3	76775.00	25	109.77	89.8	110.2	
55	Mn	89	He	27.048	ppb	0.1	35383.76	25	108.19	89.8	110.2	
56	Fe	89	H2	5439.232	ppb	0.8	15302703.73	5000	108.78	89.8	110.2	
59	Co	89	He	25.965	ppb	1.5	112646.98	25	103.86	89.8	110.2	
60	Ni	89	He	26.550	ppb	1.2	31215.56	25	106.2	89.8	110.2	
63	Cu	89	He	13.023	ppb	1.1	96974.16	25	52.09	89.8	110.2	> +/- 10%
66	Zn	89	He	25.354	ppb	2.1	12833.03	25	101.42	89.8	110.2	
75	As	89	He	25.844	ppb	1.0	10304.62	25	103.38	89.8	110.2	
78	Se	89	H2	25.664	ppb	0.6	3949.05	25	102.66	89.8	110.2	
88	Sr	89	He	25.388	ppb	0.9	42149.88	25	101.55	89.8	110.2	
95	Mo	89	He	23.979	ppb	1.9	43905.83	25	95.92	89.8	110.2	
107	Ag	89	He	23.143	ppb	0.7	139065.81	25	92.57	89.8	110.2	
111	Cd	89	He	22.989	ppb	0.5	18628.45	25	91.96	89.8	110.2	
118	Sn	159	He	28.366	ppb	0.9	37820.59	25	113.46	89.8	110.2	> +/- 10%
121	Sb	159	No Gas	27.485	ppb	1.2	257849.85	25	109.94	89.8	110.2	
137	Ba	159	No Gas	27.219	ppb	2.1	91412.01	25	108.88	89.8	110.2	
182	W	159	No Gas	23.503	ppb	2.2	183333.58	25	94.01	89.8	110.2	
205	Tl	209	No Gas	25.348	ppb	2.9	366633.08	25	101.39	89.8	110.2	
208	Pb	209	No Gas	25.463	ppb	2.9	505386.06	25	101.85	89.8	110.2	
232	Th	209	No Gas	25.811	ppb	3.2	486513.83	25	103.24	89.8	110.2	
238	U	209	No Gas	25.576	ppb	3.1	459966.45	25	102.3	89.8	110.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3086909.74	1.0	2459183.84	125.53	29.5	120.4	6020/DoD□ EPA
Sc	45	No Gas	5804532.87	0.9	4376311.73	132.64	29.5	120.4	6020/DoD□ EPA
Sc	45	H2	751474.21	1.4	563225.15	133.42	29.5	120.4	6020/DoD□ EPA
Sc	45	He	210375.91	0.6	146730.33	143.38	29.5	120.4	6020/DoD□ EPA
Ge	72	No Gas	1123745.40	0.7	936426.06	120	29.5	120.4	
Ge	72	H2	224649.30	0.3	183420.15	122.48	29.5	120.4	6020/DoD
Ge	72	He	131686.57	0.4	97408.84	135.19	29.5	120.4	6020/DoD□ EPA
Y	89	H2	3342859.20	1.1	2733952.55	122.27	29.5	120.4	6020/DoD
Y	89	He	1021950.00	1.0	791301.87	129.15	29.5	120.4	6020/DoD□ EPA
Tb	159	No Gas	9207248.82	0.6	9359761.39	98.37	29.5	120.4	
Tb	159	He	3940349.14	0.1	3741562.06	105.31	29.5	120.4	
Bi	209	No Gas	4102582.23	1.3	4534931.8	90.47	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	044_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 18:55:59
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Fail
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.039	ppb	8.8	157.78	0.2	
11	B	6	No Gas	0.505	ppb	11.7	8344.90	4	
23	Na	45	He	2791.640	ppb	7.7	881238.70	200	Fail All Methods□ Failed DoD
24	Mg	45	He	4.673	ppb	19.9	1075.67	20	
27	Al	45	He	1.106	ppb	8.5	121.12	20	
28	Si	45	H2	-0.867	ppb	N/A	11310.45	100	
39	K	45	He	72.646	ppb	4.1	31779.25	200	
40	Ca	45	H2	8.345	ppb	7.9	10430.86	20	
51	V	89	He	0.019	ppb	64.5	182.23	1	
52	Cr	89	He	0.505	ppb	3.7	1915.12	1	Failed DoD
55	Mn	89	He	0.105	ppb	16.9	177.30	0.4	
56	Fe	89	H2	3.113	ppb	10.6	11203.62	20	
59	Co	89	He	0.024	ppb	24.4	164.46	0.2	
60	Ni	89	He	0.163	ppb	26.9	281.13	0.4	
63	Cu	89	He	-7.547	ppb	N/A	15793.87	0.6	Fail All Methods□ Failed DoD
66	Zn	89	He	0.047	ppb	317.4	463.36	2	
75	As	89	He	0.003	ppb	679.9	276.36	1	
78	Se	89	H2	0.048	ppb	14.9	8.17	1	
88	Sr	89	He	0.078	ppb	21.0	171.12	1	
95	Mo	89	He	0.068	ppb	22.5	142.23	1	
107	Ag	89	He	0.013	ppb	13.4	117.78	0.2	
111	Cd	89	He	0.011	ppb	52.4	9.26	0.2	
118	Sn	159	He	0.092	ppb	7.6	231.12	1	
121	Sb	159	No Gas	0.042	ppb	27.8	437.17	0.2	
137	Ba	159	No Gas	0.080	ppb	35.8	620.71	0.4	
182	W	159	No Gas	0.092	ppb	13.4	760.87	1	
205	Tl	209	No Gas	0.029	ppb	18.7	473.88	0.2	
208	Pb	209	No Gas	0.043	ppb	16.7	1037.85	0.2	
232	Th	209	No Gas	0.050	ppb	14.5	1027.86	1	
238	U	209	No Gas	0.028	ppb	3.4	520.60	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3122297.76	2.0	2459183.84	126.96	29.5	120.4	6020/DoD□ EPA
Sc	45	No Gas	5829223.08	2.3	4376311.73	133.2	29.5	120.4	6020/DoD□ EPA
Sc	45	H2	762587.60	1.0	563225.15	135.4	29.5	120.4	6020/DoD□ EPA
Sc	45	He	207909.35	0.5	146730.33	141.69	29.5	120.4	6020/DoD□ EPA
Ge	72	No Gas	1139875.76	2.0	936426.06	121.73	29.5	120.4	6020/DoD
Ge	72	H2	226406.93	0.5	183420.15	123.44	29.5	120.4	6020/DoD
Ge	72	He	131469.60	0.8	97408.84	134.97	29.5	120.4	6020/DoD□ EPA
Y	89	H2	3330672.09	0.7	2733952.55	121.83	29.5	120.4	6020/DoD
Y	89	He	1011169.51	0.6	791301.87	127.79	29.5	120.4	6020/DoD□ EPA
Tb	159	No Gas	9344341.81	2.7	9359761.39	99.84	29.5	120.4	
Tb	159	He	3886843.28	0.5	3741562.06	103.88	29.5	120.4	
Bi	209	No Gas	4219085.13	1.7	4534931.8	93.04	29.5	120.4	

Prep Blank (PB) Report

Sample Name	PBWOG16IMW2
File Name	047_PB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 19:03:30
Sample Type	PB
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Fail
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	6	No Gas	0.073	ppb	10.1	63.34	0.5	
B	11	6	No Gas	1.471	ppb	6.0	7526.68	10	
Na	23	45	He	10696.616	ppb	1.7	655081.24	500	PB 6020 Fails DoD PB 6020 Fails Non-DoD
Mg	24	45	He	31.057	ppb	15.9	1317.93	50	
Al	27	45	He	20.861	ppb	9.8	323.35	50	
Si	28	45	H2	-3.969	ppb	N/A	10809.45	250	
K	39	45	He	264.501	ppb	4.7	27898.00	500	
Ca	40	45	H2	63.492	ppb	3.7	13782.71	50	PB 6020 Fails DoD
V	51	89	He	0.352	ppb	17.3	284.46	2.5	
Cr	52	89	He	2.679	ppb	5.8	1939.12	2.5	PB 6020 Fails DoD
Mn	55	89	He	0.803	ppb	13.3	241.96	1	
Fe	56	89	H2	23.036	ppb	4.6	14984.96	50	
Co	59	89	He	0.074	ppb	34.6	122.23	0.5	
Ni	60	89	He	1.094	ppb	6.2	335.57	1	PB 6020 Fails DoD
Cu	63	89	He	-24.166	ppb	N/A	25570.77	1.5	PB 6020 Fails DoD PB 6020 Fails Non-DoD
Zn	66	89	He	2.902	ppb	10.4	698.94	5	
As	75	89	He	0.051	ppb	205.5	270.70	2.5	
Se	78	89	H2	0.141	ppb	21.0	5.00	2.5	
Sr	88	89	He	0.226	ppb	61.7	113.34	2.5	
Mo	95	89	He	0.161	ppb	18.4	74.45	2.5	
Ag	107	89	He	0.054	ppb	22.3	100.00	0.5	
Cd	111	89	He	0.038	ppb	40.2	6.30	0.5	
Sn	118	159	He	2.196	ppb	12.8	680.04	2.5	
Sb	121	159	No Gas	0.073	ppb	15.8	166.85	0.5	
Ba	137	159	No Gas	0.291	ppb	25.1	523.93	1	
W	182	159	No Gas	0.062	ppb	66.6	126.81	2.5	
Tl	205	209	No Gas	0.057	ppb	30.7	200.23	0.5	
Pb	208	209	No Gas	0.141	ppb	7.2	700.79	0.5	
Th	232	209	No Gas	0.052	ppb	29.8	256.96	2.5	
U	238	209	No Gas	0.022	ppb	40.2	83.43	0.5	

QC ISTD Table

Prep Blank (PB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3002227.59	0.9	2459183.84	122.08	29.5	120.4	6020/DoD
Sc	45	No Gas	5552746.72	1.0	4376311.73	126.88	29.5	120.4	6020/DoD EPA
Sc	45	H2	728502.77	1.9	563225.15	129.34	29.5	120.4	6020/DoD EPA
Sc	45	He	200883.59	0.7	146730.33	136.91	29.5	120.4	6020/DoD EPA
Ge	72	No Gas	1092312.07	0.4	936426.06	116.65	29.5	120.4	
Ge	72	H2	214820.26	1.4	183420.15	117.12	29.5	120.4	
Ge	72	He	126990.66	0.1	97408.84	130.37	29.5	120.4	6020/DoD EPA
Y	89	H2	3243431.18	1.5	2733952.55	118.64	29.5	120.4	
Y	89	He	980491.19	0.5	791301.87	123.91	29.5	120.4	6020/DoD
Tb	159	No Gas	9002409.80	1.3	9359761.39	96.18	29.5	120.4	
Tb	159	He	3850163.66	0.6	3741562.06	102.9	29.5	120.4	
Bi	209	No Gas	4075249.01	1.1	4534931.8	89.86	29.5	120.4	

Laboratory Control Sample (LCS) Report

Sample Name	LCSWOG16IMW2
File Name	048LCSW.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 19:05:59
Sample Type	LCSW
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Fail
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	6	No Gas	47.414	ppb	4.0	34105.48	50	18.97	79.5	120.4	
B	11	6	No Gas	477.030	ppb	1.8	231830.78	500	19.08	79.5	120.4	
Na	23	45	He	16529.517	ppb	0.9	995173.58	7500	44.08	79.5	120.4	6020□ DoD
Mg	24	45	He	5266.738	ppb	0.4	189170.91	5000	21.07	79.5	120.4	
Al	27	45	He	2043.958	ppb	1.0	27240.00	2000	20.44	79.5	120.4	
Si	28	45	H2	977.953	ppb	3.9	28607.30	1000	19.56	0	200	
K	39	45	He	12183.965	ppb	0.2	362842.70	10000	24.37	79.5	120.4	6020□ DoD
Ca	40	45	H2	2702.811	ppb	0.6	467016.15	2500	21.62	79.5	120.4	
V	51	89	He	544.761	ppb	0.9	227901.03	500	21.79	79.5	120.4	
Cr	52	89	He	218.749	ppb	1.5	116417.97	200	21.88	79.5	120.4	
Mn	55	89	He	552.730	ppb	1.4	137773.35	500	22.11	79.5	120.4	
Fe	56	89	H2	1256.351	ppb	0.8	681292.26	1000	25.13	79.5	120.4	6020□ DoD
Co	59	89	He	543.088	ppb	1.3	449197.69	500	21.72	79.5	120.4	
Ni	60	89	He	538.768	ppb	0.8	120546.92	500	21.55	79.5	120.4	
Cu	63	89	He	181.679	ppb	2.2	180025.60	250	14.53	79.5	120.4	6020□ DoD
Zn	66	89	He	515.532	ppb	2.0	48467.44	500	20.62	79.5	120.4	
As	75	89	He	103.743	ppb	1.2	7941.46	100	20.75	79.5	120.4	
Se	78	89	H2	101.529	ppb	2.1	3001.36	100	20.31	79.5	120.4	
Sr	88	89	He	516.656	ppb	1.0	163472.92	500	20.67	79.5	120.4	
Mo	95	89	He	101.399	ppb	2.4	35411.24	100	20.28	79.5	120.4	
Ag	107	89	He	48.295	ppb	1.4	55369.32	50	19.32	79.5	120.4	
Cd	111	89	He	242.407	ppb	0.9	37464.31	250	19.39	79.5	120.4	
Sn	118	159	He	564.971	ppb	1.1	147635.39	500	22.6	79.5	120.4	
Sb	121	159	No Gas	113.690	ppb	3.2	214778.67	100	22.74	79.5	120.4	
Ba	137	159	No Gas	1957.135	ppb	1.5	1319001.22	2000	19.57	79.5	120.4	
W	182	159	No Gas	98.265	ppb	2.5	154345.63	100	19.65	79.5	120.4	
Tl	205	209	No Gas	102.448	ppb	1.2	303458.56	100	20.49	79.5	120.4	
[Pb]	206	209	No Gas	105.046	ppb	2.0	107324.20	100	21.01	79.5	120.4	
[Pb]	207	209	No Gas	104.440	ppb	1.6	93274.60	100	20.89	79.5	120.4	
Pb	208	209	No Gas	105.150	ppb	2.1	427407.98	100	21.03	79.5	120.4	
Th	232	209	No Gas	106.099	ppb	2.2	409560.32	100	21.22	79.5	120.4	
U	238	209	No Gas	103.878	ppb	2.0	382571.86	100	20.78	79.5	120.4	

QC ISTD Table

Laboratory Control Sample (LCS) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3013350.25	1.2	2459183.84	122.53	29.5	120.4	6020/DoD
Sc	45	No Gas	5580059.24	0.6	4376311.73	127.51	29.5	120.4	6020/DoD EPA
Sc	45	H2	713087.52	1.6	563225.15	126.61	29.5	120.4	6020/DoD EPA
Sc	45	He	198641.32	0.4	146730.33	135.38	29.5	120.4	6020/DoD EPA
Ge	72	No Gas	1091534.97	1.7	936426.06	116.56	29.5	120.4	
Ge	72	H2	211652.87	1.5	183420.15	115.39	29.5	120.4	
Ge	72	He	125840.88	0.7	97408.84	129.19	29.5	120.4	6020/DoD EPA
Y	89	H2	3210850.66	1.3	2733952.55	117.44	29.5	120.4	
Y	89	He	974610.58	1.4	791301.87	123.17	29.5	120.4	6020/DoD
Tb	159	No Gas	9270297.15	0.2	9359761.39	99.04	29.5	120.4	
Tb	159	He	3870142.44	0.8	3741562.06	103.44	29.5	120.4	
Bi	209	No Gas	4199706.02	0.3	4534931.8	92.61	29.5	120.4	

Sample Report

Sample Name SO4465-002

File Name 050SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 19:10:59

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Fail

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.062	ppb	23.3	50.00	100	
11	B	6	No Gas	1058.158	ppb	2.1	454649.14	1000	
23	Na	45	He	1620901.572	ppb	1.3	89704238.58	200000	>LDR
24	Mg	45	He	389670.697	ppb	0.9	12989970.78	200000	
27	Al	45	He	14.440	ppb	15.2	217.79	200000	
28	Si	45	H2	5839.437	ppb	0.8	111620.52	10000	
39	K	45	He	17840.870	ppb	1.2	484886.74	200000	
40	Ca	45	H2	520967.698	ppb	1.2	84821851.52	200000	
51	V	89	He	1.121	ppb	6.0	555.59	1000	
52	Cr	89	He	1.762	ppb	10.3	1325.83	2000	
55	Mn	89	He	1104.442	ppb	1.1	253103.87	2000	
56	Fe	89	H2	17.618	ppb	3.5	11150.14	100000	
59	Co	89	He	1.052	ppb	10.8	855.65	1000	
60	Ni	89	He	11.776	ppb	5.3	2502.54	1000	
63	Cu	89	He	-44.642	ppb	N/A	9224.47	2000	
66	Zn	89	He	8.101	ppb	3.5	1084.53	2000	
75	As	89	He	0.166	ppb	223.3	255.36	1000	
78	Se	89	H2	9.396	ppb	5.7	260.66	1000	
88	Sr	89	He	6566.729	ppb	0.5	1910263.76	2000	
95	Mo	89	He	3.501	ppb	3.8	1140.09	1000	
107	Ag	89	He	0.045	ppb	26.9	81.11	100	
111	Cd	89	He	0.158	ppb	39.0	22.96	1000	
118	Sn	159	He	1.375	ppb	7.0	444.47	1000	
121	Sb	159	No Gas	0.244	ppb	13.1	473.87	1000	
137	Ba	159	No Gas	40.069	ppb	2.0	26265.36	2000	
182	W	159	No Gas	0.110	ppb	52.6	196.89	1000	
205	Tl	209	No Gas	0.109	ppb	30.1	337.05	1000	
208	Pb	209	No Gas	0.155	ppb	5.2	730.83	2000	
232	Th	209	No Gas	0.108	ppb	30.5	450.52	1000	
238	U	209	No Gas	127.328	ppb	2.6	439590.27	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2708238.01	1.8	2459183.84	110.13	29.5	120.4	
Sc	45	No Gas	5219802.38	1.5	4376311.73	119.27	29.5	120.4	
Sc	45	H2	675638.98	0.6	563225.15	119.96	29.5	120.4	
Sc	45	He	184549.92	1.0	146730.33	125.77	29.5	120.4	6020/DoD□ EPA
Ge	72	No Gas	1015655.68	1.9	936426.06	108.46	29.5	120.4	
Ge	72	H2	196265.50	0.8	183420.15	107	29.5	120.4	
Ge	72	He	115882.52	0.6	97408.84	118.97	29.5	120.4	
Y	89	H2	3005530.50	0.1	2733952.55	109.93	29.5	120.4	
Y	89	He	896141.93	1.0	791301.87	113.25	29.5	120.4	
Tb	159	No Gas	8906485.91	1.6	9359761.39	95.16	29.5	120.4	
Tb	159	He	3664929.98	1.6	3741562.06	97.95	29.5	120.4	
Bi	209	No Gas	3937122.82	0.6	4534931.8	86.82	29.5	120.4	

Sample Report

Sample Name SO4465-003

File Name 051SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 19:13:27

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Fail

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.065	ppb	14.2	51.11	100	
11	B	6	No Gas	1030.330	ppb	2.9	437858.17	1000	
23	Na	45	He	1650751.318	ppb	0.1	90756700.17	200000	>LDR
24	Mg	45	He	468005.329	ppb	0.7	15498133.10	200000	
27	Al	45	He	14.930	ppb	35.3	222.23	200000	
28	Si	45	H2	5327.806	ppb	1.8	102577.29	10000	
39	K	45	He	67852.740	ppb	0.5	1779875.14	200000	
40	Ca	45	H2	463682.611	ppb	1.2	75388926.65	200000	
51	V	89	He	1.560	ppb	9.4	720.05	1000	
52	Cr	89	He	1.685	ppb	2.3	1279.83	2000	
55	Mn	89	He	10103.713	ppb	0.3	2301619.16	2000	>LDR
56	Fe	89	H2	275.793	ppb	1.7	141608.45	100000	
59	Co	89	He	4.164	ppb	3.8	3202.83	1000	
60	Ni	89	He	11.932	ppb	6.0	2520.32	1000	
63	Cu	89	He	-47.837	ppb	N/A	6978.67	2000	
66	Zn	89	He	8.471	ppb	16.4	1108.97	2000	
75	As	89	He	1.585	ppb	14.6	349.71	1000	
78	Se	89	H2	2.710	ppb	3.8	75.67	1000	
88	Sr	89	He	7319.664	ppb	0.1	2116569.85	2000	
95	Mo	89	He	2.007	ppb	5.2	656.71	1000	
107	Ag	89	He	0.022	ppb	51.7	56.67	100	
111	Cd	89	He	0.089	ppb	13.0	12.96	1000	
118	Sn	159	He	1.414	ppb	5.1	454.47	1000	
121	Sb	159	No Gas	0.172	ppb	33.3	350.40	1000	
137	Ba	159	No Gas	20.901	ppb	4.8	14103.28	2000	
182	W	159	No Gas	0.069	ppb	79.5	136.82	1000	
205	Tl	209	No Gas	0.065	ppb	43.3	216.91	1000	
208	Pb	209	No Gas	0.145	ppb	21.9	700.79	2000	
232	Th	209	No Gas	0.044	ppb	40.9	220.25	1000	
238	U	209	No Gas	42.505	ppb	4.0	148267.27	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2678103.06	1.7	2459183.84	108.9	29.5	120.4	
Sc	45	No Gas	5220431.39	1.6	4376311.73	119.29	29.5	120.4	
Sc	45	H2	674692.85	0.5	563225.15	119.79	29.5	120.4	
Sc	45	He	183324.35	0.5	146730.33	124.94	29.5	120.4	6020/DoD
Ge	72	No Gas	1011814.82	2.2	936426.06	108.05	29.5	120.4	
Ge	72	H2	195883.28	0.6	183420.15	106.79	29.5	120.4	
Ge	72	He	114725.58	1.4	97408.84	117.78	29.5	120.4	
Y	89	H2	3002816.15	0.8	2733952.55	109.83	29.5	120.4	
Y	89	He	890824.23	0.6	791301.87	112.58	29.5	120.4	
Tb	159	No Gas	9066808.41	1.5	9359761.39	96.87	29.5	120.4	
Tb	159	He	3666679.35	0.7	3741562.06	98	29.5	120.4	
Bi	209	No Gas	3979349.86	1.7	4534931.8	87.75	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	055_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 19:23:21
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Fail
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	25.604	ppb	1.9	81364.48	25	102.42	89.8	110.2	
11	B	6	No Gas	26.097	ppb	1.9	60436.99	25	104.39	89.8	110.2	
23	Na	45	He	5898.641	ppb	0.7	1692882.02	5000	117.97	89.8	110.2	> +/- 10%
24	Mg	45	He	5116.039	ppb	1.4	879315.80	5000	102.32	89.8	110.2	
27	Al	45	He	500.621	ppb	1.0	31942.07	500	100.12	89.8	110.2	
28	Si	45	H2	473.808	ppb	2.7	52896.55	500	94.76	89.8	110.2	
39	K	45	He	5637.001	ppb	1.4	778582.94	5000	112.74	89.8	110.2	> +/- 10%
40	Ca	45	H2	5114.878	ppb	2.5	4297182.33	5000	102.3	89.8	110.2	
51	V	89	He	27.025	ppb	0.9	54533.35	25	108.1	89.8	110.2	
52	Cr	89	He	27.070	ppb	1.4	69552.48	25	108.28	89.8	110.2	
55	Mn	89	He	27.134	ppb	0.6	32596.30	25	108.54	89.8	110.2	
56	Fe	89	H2	5175.951	ppb	2.3	13899278.06	5000	103.52	89.8	110.2	
59	Co	89	He	26.526	ppb	1.8	105681.87	25	106.1	89.8	110.2	
60	Ni	89	He	26.362	ppb	2.1	28462.00	25	105.45	89.8	110.2	
63	Cu	89	He	12.975	ppb	0.2	88883.43	25	51.9	89.8	110.2	> +/- 10%
66	Zn	89	He	25.810	ppb	1.9	11989.98	25	103.24	89.8	110.2	
75	As	89	He	25.757	ppb	1.4	9432.23	25	103.03	89.8	110.2	
78	Se	89	H2	25.374	ppb	2.1	3726.83	25	101.5	89.8	110.2	
88	Sr	89	He	25.226	ppb	1.0	38459.15	25	100.9	89.8	110.2	
95	Mo	89	He	24.710	ppb	1.0	41550.61	25	98.84	89.8	110.2	
107	Ag	89	He	24.280	ppb	0.9	133985.18	25	97.12	89.8	110.2	
111	Cd	89	He	23.961	ppb	1.8	17829.26	25	95.84	89.8	110.2	
118	Sn	159	He	27.204	ppb	1.4	35665.87	25	108.82	89.8	110.2	
121	Sb	159	No Gas	27.738	ppb	0.8	263840.08	25	110.95	89.8	110.2	> +/- 10%
137	Ba	159	No Gas	27.069	ppb	2.0	92167.03	25	108.28	89.8	110.2	
182	W	159	No Gas	24.436	ppb	1.9	193218.05	25	97.74	89.8	110.2	
205	Tl	209	No Gas	25.803	ppb	2.5	388015.63	25	103.21	89.8	110.2	
208	Pb	209	No Gas	25.852	ppb	0.8	533651.01	25	103.41	89.8	110.2	
232	Th	209	No Gas	26.364	ppb	0.7	516849.29	25	105.46	89.8	110.2	
238	U	209	No Gas	26.368	ppb	1.1	493166.75	25	105.47	89.8	110.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2663005.67	2.6	2459183.84	108.29	29.5	120.4	
Sc	45	No Gas	5293616.71	1.7	4376311.73	120.96	29.5	120.4	6020/DoD
Sc	45	H2	697269.57	3.8	563225.15	123.8	29.5	120.4	6020/DoD
Sc	45	He	190271.74	0.9	146730.33	129.67	29.5	120.4	6020/DoD EPA
Ge	72	No Gas	1054584.82	1.7	936426.06	112.62	29.5	120.4	
Ge	72	H2	205473.88	1.6	183420.15	112.02	29.5	120.4	
Ge	72	He	122038.55	0.5	97408.84	125.28	29.5	120.4	6020/DoD
Y	89	H2	3191950.33	2.7	2733952.55	116.75	29.5	120.4	
Y	89	He	938463.73	0.6	791301.87	118.6	29.5	120.4	
Tb	159	No Gas	9336621.74	2.9	9359761.39	99.75	29.5	120.4	
Tb	159	He	3874126.36	1.0	3741562.06	103.54	29.5	120.4	
Bi	209	No Gas	4266089.43	2.8	4534931.8	94.07	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	056_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 19:25:52
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Fail
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.029	ppb	10.9	105.56	0.2	
11	B	6	No Gas	0.827	ppb	10.7	8084.76	4	
23	Na	45	He	708.068	ppb	1.2	211123.26	200	Fail All Methods□ Failed DoD
24	Mg	45	He	17.224	ppb	8.0	3125.02	20	Failed DoD
27	Al	45	He	0.102	ppb	132.0	46.67	20	
28	Si	45	H2	-5.141	ppb	N/A	9824.28	100	
39	K	45	He	35.115	ppb	7.7	23914.19	200	
40	Ca	45	H2	16.954	ppb	3.5	16544.65	20	Failed DoD
51	V	89	He	0.004	ppb	452.3	137.78	1	
52	Cr	89	He	0.036	ppb	29.5	577.91	1	
55	Mn	89	He	0.269	ppb	3.0	360.61	0.4	Failed DoD
56	Fe	89	H2	2.474	ppb	3.5	8872.76	20	
59	Co	89	He	0.013	ppb	39.8	108.90	0.2	
60	Ni	89	He	0.211	ppb	30.5	312.24	0.4	Failed DoD
63	Cu	89	He	-7.274	ppb	N/A	15602.57	0.6	Fail All Methods□ Failed DoD
66	Zn	89	He	-0.082	ppb	N/A	371.13	2	
75	As	89	He	-0.006	ppb	N/A	252.70	1	
78	Se	89	H2	0.033	ppb	28.8	5.50	1	
88	Sr	89	He	0.202	ppb	4.5	346.68	1	
95	Mo	89	He	0.045	ppb	15.2	93.34	1	
107	Ag	89	He	0.010	ppb	32.5	91.11	0.2	
111	Cd	89	He	0.009	ppb	53.5	7.04	0.2	
118	Sn	159	He	0.025	ppb	52.3	143.34	1	
121	Sb	159	No Gas	0.025	ppb	3.3	280.32	0.2	
137	Ba	159	No Gas	-0.003	ppb	N/A	347.06	0.4	
182	W	159	No Gas	0.087	ppb	5.5	744.19	1	
205	Tl	209	No Gas	0.025	ppb	15.2	427.15	0.2	
208	Pb	209	No Gas	0.019	ppb	7.4	557.30	0.2	
232	Th	209	No Gas	0.060	ppb	9.6	1281.50	1	
238	U	209	No Gas	0.020	ppb	18.4	397.12	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2765648.86	2.3	2459183.84	112.46	29.5	120.4	
Sc	45	No Gas	5422587.24	0.8	4376311.73	123.91	29.5	120.4	6020/DoD
Sc	45	H2	687905.29	0.4	563225.15	122.14	29.5	120.4	6020/DoD
Sc	45	He	189369.09	1.1	146730.33	129.06	29.5	120.4	6020/DoD□ EPA
Ge	72	No Gas	1083422.79	1.5	936426.06	115.7	29.5	120.4	
Ge	72	H2	206218.27	0.9	183420.15	112.43	29.5	120.4	
Ge	72	He	121373.89	1.1	97408.84	124.6	29.5	120.4	6020/DoD
Y	89	H2	3139228.54	1.1	2733952.55	114.82	29.5	120.4	
Y	89	He	935873.93	0.9	791301.87	118.27	29.5	120.4	
Tb	159	No Gas	9644163.05	0.7	9359761.39	103.04	29.5	120.4	
Tb	159	He	3886802.51	1.1	3741562.06	103.88	29.5	120.4	
Bi	209	No Gas	4423807.51	0.9	4534931.8	97.55	29.5	120.4	

Sample Report

Sample Name SO4468-001

File Name 062SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 19:40:47

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Fail

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.053	ppb	43.0	42.22	100	
11	B	6	No Gas	6.747	ppb	14.8	8638.44	1000	
23	Na	45	He	3079.770	ppb	0.5	175102.51	200000	
24	Mg	45	He	105.308	ppb	8.0	3580.72	200000	
27	Al	45	He	16.828	ppb	13.4	240.01	200000	
28	Si	45	H2	-22.607	ppb	N/A	9333.49	10000	
39	K	45	He	148.433	ppb	3.9	21948.70	200000	
40	Ca	45	H2	187.684	ppb	7.3	31743.15	200000	
51	V	89	He	0.586	ppb	20.1	352.24	1000	
52	Cr	89	He	1.199	ppb	5.1	1057.85	2000	
55	Mn	89	He	2.057	ppb	3.2	511.92	2000	
56	Fe	89	H2	23.817	ppb	3.0	14390.22	100000	
59	Co	89	He	0.072	ppb	24.5	111.12	1000	
60	Ni	89	He	1.083	ppb	11.7	306.68	1000	
63	Cu	89	He	-1.697	ppb	N/A	39163.59	2000	
66	Zn	89	He	5.001	ppb	11.7	824.50	2000	
75	As	89	He	0.025	ppb	1911.9	247.36	1000	
78	Se	89	H2	0.045	ppb	40.5	2.00	1000	
88	Sr	89	He	1.243	ppb	8.1	402.24	2000	
95	Mo	89	He	0.118	ppb	43.9	54.45	1000	
107	Ag	89	He	0.016	ppb	81.0	51.11	100	
111	Cd	89	He	0.026	ppb	46.7	4.07	1000	
118	Sn	159	He	1.113	ppb	23.4	393.36	1000	
121	Sb	159	No Gas	0.060	ppb	31.1	150.17	1000	
137	Ba	159	No Gas	0.304	ppb	40.7	563.98	2000	
182	W	159	No Gas	0.039	ppb	41.1	96.77	1000	
205	Tl	209	No Gas	0.011	ppb	61.3	73.42	1000	
208	Pb	209	No Gas	0.073	ppb	26.2	463.86	2000	
232	Th	209	No Gas	0.027	ppb	54.5	176.86	1000	
238	U	209	No Gas	0.054	ppb	28.9	213.57	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2592163.01	2.3	2459183.84	105.41	29.5	120.4	
Sc	45	No Gas	5246819.24	1.1	4376311.73	119.89	29.5	120.4	
Sc	45	H2	650030.48	1.3	563225.15	115.41	29.5	120.4	
Sc	45	He	179254.79	0.4	146730.33	122.17	29.5	120.4	6020/DoD
Ge	72	No Gas	1058689.21	1.4	936426.06	113.06	29.5	120.4	
Ge	72	H2	194921.26	1.3	183420.15	106.27	29.5	120.4	
Ge	72	He	115359.23	0.4	97408.84	118.43	29.5	120.4	
Y	89	H2	3028140.12	1.3	2733952.55	110.76	29.5	120.4	
Y	89	He	902373.10	0.4	791301.87	114.04	29.5	120.4	
Tb	159	No Gas	9532003.33	1.0	9359761.39	101.84	29.5	120.4	
Tb	159	He	3794767.65	0.2	3741562.06	101.42	29.5	120.4	
Bi	209	No Gas	4365830.00	1.0	4534931.8	96.27	29.5	120.4	

Sample Report

Sample Name SO4468-002

File Name 063SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 19:43:17

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.055	ppb	14.5	42.22	100	
11	B	6	No Gas	3.757	ppb	3.8	7232.04	1000	
23	Na	45	He	2719.466	ppb	0.6	152227.17	200000	
24	Mg	45	He	100.470	ppb	4.4	3347.32	200000	
27	Al	45	He	18.893	ppb	2.1	258.90	200000	
28	Si	45	H2	-7.848	ppb	N/A	9370.20	10000	
39	K	45	He	122.473	ppb	17.0	20810.85	200000	
40	Ca	45	H2	132.882	ppb	0.4	22657.72	200000	
51	V	89	He	0.587	ppb	10.5	344.46	1000	
52	Cr	89	He	1.429	ppb	5.9	1143.84	2000	
55	Mn	89	He	2.219	ppb	4.8	536.58	2000	
56	Fe	89	H2	46.247	ppb	2.8	25384.71	100000	
59	Co	89	He	0.064	ppb	52.2	102.23	1000	
60	Ni	89	He	2.442	ppb	3.5	574.48	1000	
63	Cu	89	He	12.606	ppb	8.4	47984.41	2000	
66	Zn	89	He	2.260	ppb	3.2	574.48	2000	
75	As	89	He	-0.124	ppb	N/A	231.70	1000	
78	Se	89	H2	0.083	ppb	58.5	3.00	1000	
88	Sr	89	He	1.024	ppb	14.8	330.02	2000	
95	Mo	89	He	0.129	ppb	36.1	56.67	1000	
107	Ag	89	He	0.017	ppb	97.5	51.11	100	
111	Cd	89	He	0.026	ppb	46.7	4.07	1000	
118	Sn	159	He	1.241	ppb	6.2	425.58	1000	
121	Sb	159	No Gas	0.062	ppb	44.3	153.51	1000	
137	Ba	159	No Gas	0.215	ppb	25.7	503.90	2000	
182	W	159	No Gas	0.045	ppb	57.0	106.79	1000	
205	Tl	209	No Gas	0.007	ppb	172.3	60.07	1000	
208	Pb	209	No Gas	0.091	ppb	11.6	543.95	2000	
232	Th	209	No Gas	0.033	ppb	35.8	200.23	1000	
238	U	209	No Gas	0.020	ppb	26.6	83.43	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2524175.02	1.6	2459183.84	102.64	29.5	120.4	
Sc	45	No Gas	5097847.25	1.5	4376311.73	116.49	29.5	120.4	
Sc	45	H2	635598.07	1.8	563225.15	112.85	29.5	120.4	
Sc	45	He	175213.29	0.3	146730.33	119.41	29.5	120.4	
Ge	72	No Gas	1030006.88	1.8	936426.06	109.99	29.5	120.4	
Ge	72	H2	192612.10	1.9	183420.15	105.01	29.5	120.4	
Ge	72	He	112807.46	0.4	97408.84	115.81	29.5	120.4	
Y	89	H2	2976986.41	1.1	2733952.55	108.89	29.5	120.4	
Y	89	He	881737.83	0.5	791301.87	111.43	29.5	120.4	
Tb	159	No Gas	9554393.26	1.5	9359761.39	102.08	29.5	120.4	
Tb	159	He	3792035.99	0.9	3741562.06	101.35	29.5	120.4	
Bi	209	No Gas	4400951.68	0.8	4534931.8	97.05	29.5	120.4	

Prep Blank (PB) Report

Sample Name	PBWOG19IMW1
File Name	065_PB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 19:48:21
Sample Type	PB
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	6	No Gas	0.053	ppb	1.6	40.00	0.5	
B	11	6	No Gas	2.125	ppb	14.7	6379.41	10	
Na	23	45	He	2452.183	ppb	0.6	132869.83	500	PB 6020 Fails DoD PB 6020 Fails Non-DoD
Mg	24	45	He	91.188	ppb	4.7	2936.06	50	PB 6020 Fails DoD
Al	27	45	He	12.294	ppb	32.7	174.45	50	
Si	28	45	H2	-88.463	ppb	N/A	7824.15	250	
K	39	45	He	170.533	ppb	7.2	21156.23	500	
Ca	40	45	H2	126.303	ppb	2.4	21040.72	50	PB 6020 Fails DoD PB 6020 Fails Non-DoD
V	51	89	He	0.732	ppb	9.6	390.02	2.5	
Cr	52	89	He	1.906	ppb	9.9	1340.49	2.5	
Mn	55	89	He	1.543	ppb	10.2	375.27	1	PB 6020 Fails DoD
Fe	56	89	H2	17.972	ppb	4.7	10973.20	50	
Co	59	89	He	0.101	ppb	41.5	126.68	0.5	
Ni	60	89	He	1.014	ppb	10.9	278.90	1	PB 6020 Fails DoD
Cu	63	89	He	47.341	ppb	2.5	69895.40	1.5	PB 6020 Fails DoD PB 6020 Fails Non-DoD
Zn	66	89	He	1.592	ppb	37.4	505.58	5	
As	75	89	He	0.108	ppb	306.8	241.36	2.5	
Se	78	89	H2	0.042	ppb	130.4	1.83	2.5	
Sr	88	89	He	0.980	ppb	14.8	310.02	2.5	
Mo	95	89	He	0.090	ppb	56.0	43.34	2.5	
Ag	107	89	He	0.022	ppb	47.1	54.45	0.5	
Cd	111	89	He	0.046	ppb	35.7	6.67	0.5	
Sn	118	159	He	50.520	ppb	1.9	12831.02	2.5	PB 6020 Fails DoD PB 6020 Fails Non-DoD
Sb	121	159	No Gas	0.076	ppb	51.1	180.20	0.5	
Ba	137	159	No Gas	0.184	ppb	35.5	480.54	1	
W	182	159	No Gas	0.039	ppb	38.0	96.78	2.5	
Tl	205	209	No Gas	0.020	ppb	33.4	103.45	0.5	
Pb	208	209	No Gas	0.095	ppb	16.6	563.97	0.5	
Th	232	209	No Gas	0.031	ppb	44.7	193.55	2.5	
U	238	209	No Gas	0.023	ppb	70.9	96.78	0.5	

QC ISTD Table

Prep Blank (PB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2444252.47	1.3	2459183.84	99.39	29.5	120.4	
Sc	45	No Gas	4905789.57	2.0	4376311.73	112.1	29.5	120.4	
Sc	45	H2	617723.55	0.0	563225.15	109.68	29.5	120.4	
Sc	45	He	168477.05	0.1	146730.33	114.82	29.5	120.4	
Ge	72	No Gas	1012479.97	1.4	936426.06	108.12	29.5	120.4	
Ge	72	H2	185255.99	0.8	183420.15	101	29.5	120.4	
Ge	72	He	109636.88	0.5	97408.84	112.55	29.5	120.4	
Y	89	H2	2911826.96	1.0	2733952.55	106.51	29.5	120.4	
Y	89	He	860856.44	0.8	791301.87	108.79	29.5	120.4	
Tb	159	No Gas	9524968.89	1.4	9359761.39	101.77	29.5	120.4	
Tb	159	He	3733034.42	0.8	3741562.06	99.77	29.5	120.4	
Bi	209	No Gas	4447638.68	0.8	4534931.8	98.08	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	067_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 19:53:25
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	25.299	ppb	3.4	72919.86	25	101.2	89.8	110.2	
11	B	6	No Gas	24.549	ppb	3.7	51887.39	25	98.2	89.8	110.2	
23	Na	45	He	5520.313	ppb	0.8	1392010.99	5000	110.41	89.8	110.2	> +/- 10%
24	Mg	45	He	4983.418	ppb	0.6	752313.23	5000	99.67	89.8	110.2	
27	Al	45	He	494.182	ppb	2.6	27689.78	500	98.84	89.8	110.2	
28	Si	45	H2	484.054	ppb	0.6	47120.04	500	96.81	89.8	110.2	
39	K	45	He	5592.704	ppb	1.5	678599.51	5000	111.85	89.8	110.2	> +/- 10%
40	Ca	45	H2	5085.039	ppb	1.2	3740498.04	5000	101.7	89.8	110.2	
51	V	89	He	26.713	ppb	0.7	49139.05	25	106.85	89.8	110.2	
52	Cr	89	He	26.497	ppb	0.6	62069.99	25	105.99	89.8	110.2	
55	Mn	89	He	26.228	ppb	0.8	28722.01	25	104.91	89.8	110.2	
56	Fe	89	H2	5143.596	ppb	1.4	12499144.54	5000	102.87	89.8	110.2	
59	Co	89	He	26.849	ppb	0.1	97509.68	25	107.4	89.8	110.2	
60	Ni	89	He	27.085	ppb	2.2	26657.33	25	108.34	89.8	110.2	
63	Cu	89	He	18.808	ppb	1.2	100248.25	25	75.23	89.8	110.2	> +/- 10%
66	Zn	89	He	25.547	ppb	0.6	10822.34	25	102.19	89.8	110.2	
75	As	89	He	25.946	ppb	0.8	8658.98	25	103.78	89.8	110.2	
78	Se	89	H2	25.571	ppb	2.1	3398.43	25	102.28	89.8	110.2	
88	Sr	89	He	24.837	ppb	1.3	34519.69	25	99.35	89.8	110.2	
95	Mo	89	He	25.370	ppb	1.0	38887.38	25	101.48	89.8	110.2	
107	Ag	89	He	25.198	ppb	0.1	126747.01	25	100.79	89.8	110.2	
111	Cd	89	He	24.677	ppb	1.0	16738.61	25	98.71	89.8	110.2	
118	Sn	159	He	26.435	ppb	1.6	33260.68	25	105.74	89.8	110.2	
121	Sb	159	No Gas	26.122	ppb	3.1	254708.38	25	104.49	89.8	110.2	
137	Ba	159	No Gas	25.470	ppb	2.8	88935.52	25	101.88	89.8	110.2	
182	W	159	No Gas	24.106	ppb	3.5	195421.23	25	96.42	89.8	110.2	
205	Tl	209	No Gas	24.711	ppb	4.2	392506.46	25	98.84	89.8	110.2	
208	Pb	209	No Gas	24.879	ppb	2.6	542417.47	25	99.52	89.8	110.2	
232	Th	209	No Gas	25.369	ppb	4.1	525197.27	25	101.48	89.8	110.2	
238	U	209	No Gas	25.578	ppb	3.0	505253.34	25	102.31	89.8	110.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2415918.54	2.6	2459183.84	98.24	29.5	120.4	
Sc	45	No Gas	4905837.80	2.1	4376311.73	112.1	29.5	120.4	
Sc	45	H2	610201.68	1.1	563225.15	108.34	29.5	120.4	
Sc	45	He	167113.88	1.2	146730.33	113.89	29.5	120.4	
Ge	72	No Gas	1013840.55	2.8	936426.06	108.27	29.5	120.4	
Ge	72	H2	188012.83	0.4	183420.15	102.5	29.5	120.4	
Ge	72	He	109068.42	0.5	97408.84	111.97	29.5	120.4	
Y	89	H2	2887395.71	0.6	2733952.55	105.61	29.5	120.4	
Y	89	He	855444.82	0.3	791301.87	108.11	29.5	120.4	
Tb	159	No Gas	9573881.73	2.3	9359761.39	102.29	29.5	120.4	
Tb	159	He	3717584.15	0.8	3741562.06	99.36	29.5	120.4	
Bi	209	No Gas	4507099.86	2.6	4534931.8	99.39	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	068_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 19:55:55
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.025	ppb	24.4	80.00	0.2	
11	B	6	No Gas	0.496	ppb	13.8	6471.68	4	
23	Na	45	He	305.516	ppb	2.1	85867.92	200	Fail All Methods□ Failed DoD
24	Mg	45	He	11.892	ppb	8.0	1964.73	20	Failed DoD
27	Al	45	He	-0.120	ppb	N/A	28.89	20	
28	Si	45	H2	-6.887	ppb	N/A	8588.83	100	
39	K	45	He	24.657	ppb	11.7	19961.58	200	
40	Ca	45	H2	9.542	ppb	3.2	9241.11	20	
51	V	89	He	0.022	ppb	25.4	160.01	1	
52	Cr	89	He	0.017	ppb	90.9	489.26	1	
55	Mn	89	He	0.166	ppb	13.7	217.96	0.4	
56	Fe	89	H2	2.387	ppb	12.8	7914.48	20	
59	Co	89	He	0.020	ppb	30.1	124.46	0.2	
60	Ni	89	He	0.163	ppb	13.6	240.01	0.4	
63	Cu	89	He	-2.621	ppb	N/A	29801.61	0.6	Fail All Methods□ Failed DoD
66	Zn	89	He	-0.053	ppb	N/A	353.35	2	
75	As	89	He	0.000	ppb	N/A	234.36	1	
78	Se	89	H2	0.056	ppb	9.9	8.17	1	
88	Sr	89	He	0.145	ppb	11.6	238.90	1	
95	Mo	89	He	0.054	ppb	13.7	98.89	1	
107	Ag	89	He	0.004	ppb	54.0	52.22	0.2	
111	Cd	89	He	0.006	ppb	39.4	4.81	0.2	
118	Sn	159	He	0.032	ppb	62.5	147.78	1	
121	Sb	159	No Gas	0.026	ppb	17.5	286.99	0.2	
137	Ba	159	No Gas	0.010	ppb	212.3	390.45	0.4	
182	W	159	No Gas	0.084	ppb	7.7	720.82	1	
205	Tl	209	No Gas	0.022	ppb	9.9	393.78	0.2	
208	Pb	209	No Gas	0.016	ppb	27.7	510.57	0.2	
232	Th	209	No Gas	0.073	ppb	6.5	1581.88	1	
238	U	209	No Gas	0.021	ppb	17.2	420.48	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2428624.29	1.3	2459183.84	98.76	29.5	120.4	
Sc	45	No Gas	4935232.50	0.8	4376311.73	112.77	29.5	120.4	
Sc	45	H2	611152.20	1.5	563225.15	108.51	29.5	120.4	
Sc	45	He	167920.18	1.0	146730.33	114.44	29.5	120.4	
Ge	72	No Gas	1016212.48	1.8	936426.06	108.52	29.5	120.4	
Ge	72	H2	187603.64	0.7	183420.15	102.28	29.5	120.4	
Ge	72	He	110291.01	0.9	97408.84	113.22	29.5	120.4	
Y	89	H2	2875387.19	0.7	2733952.55	105.17	29.5	120.4	
Y	89	He	861204.47	1.2	791301.87	108.83	29.5	120.4	
Tb	159	No Gas	9601972.64	1.0	9359761.39	102.59	29.5	120.4	
Tb	159	He	3757913.35	0.6	3741562.06	100.44	29.5	120.4	
Bi	209	No Gas	4528426.34	0.4	4534931.8	99.86	29.5	120.4	

Laboratory Control Sample (LCS) Report

Sample Name	LCSWOG19IMW1
File Name	069LCSW.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 19:58:27
Sample Type	LCSW
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	6	No Gas	47.762	ppb	4.1	27738.41	50	19.1	79.5	120.4	
B	11	6	No Gas	468.259	ppb	3.7	183813.85	500	18.73	79.5	120.4	
Na	23	45	He	10330.532	ppb	0.9	522453.14	7500	27.55	79.5	120.4	6020□ DoD
Mg	24	45	He	5126.641	ppb	1.5	153685.98	5000	20.51	79.5	120.4	
Al	27	45	He	1923.016	ppb	1.2	21391.11	2000	19.23	79.5	120.4	
Si	28	45	H2	865.385	ppb	1.7	22522.80	1000	17.31	0	200	
K	39	45	He	11367.398	ppb	1.5	283663.11	10000	22.73	79.5	120.4	
Ca	40	45	H2	2613.602	ppb	0.9	383429.04	2500	20.91	79.5	120.4	
V	51	89	He	512.911	ppb	0.7	185516.47	500	20.52	79.5	120.4	
Cr	52	89	He	209.481	ppb	1.2	96403.61	200	20.95	79.5	120.4	
Mn	55	89	He	512.257	ppb	0.3	110397.72	500	20.49	79.5	120.4	
Fe	56	89	H2	1169.516	ppb	1.3	568120.91	1000	23.39	79.5	120.4	
Co	59	89	He	527.947	ppb	0.6	377536.34	500	21.12	79.5	120.4	
Ni	60	89	He	527.621	ppb	0.3	102064.70	500	21.1	79.5	120.4	
Cu	63	89	He	264.490	ppb	1.0	209429.83	250	21.16	79.5	120.4	
Zn	66	89	He	495.580	ppb	1.1	40296.89	500	19.82	79.5	120.4	
As	75	89	He	102.905	ppb	1.3	6812.08	100	20.58	79.5	120.4	
Se	78	89	H2	98.009	ppb	0.6	2594.96	100	19.6	79.5	120.4	
Sr	88	89	He	490.511	ppb	0.1	134182.58	500	19.62	79.5	120.4	
Mo	95	89	He	101.649	ppb	0.6	30694.19	100	20.33	79.5	120.4	
Ag	107	89	He	49.653	ppb	1.3	49215.53	50	19.86	79.5	120.4	
Cd	111	89	He	245.749	ppb	0.6	32834.58	250	19.66	79.5	120.4	
Sn	118	159	He	561.777	ppb	1.1	139678.70	500	22.47	79.5	120.4	
Sb	121	159	No Gas	104.146	ppb	4.3	202021.43	100	20.83	79.5	120.4	
Ba	137	159	No Gas	1800.451	ppb	3.7	1246040.95	2000	18	79.5	120.4	
W	182	159	No Gas	95.358	ppb	4.2	153802.13	100	19.07	79.5	120.4	
Tl	205	209	No Gas	98.645	ppb	2.7	308215.22	100	19.73	79.5	120.4	
[Pb]	206	209	No Gas	101.564	ppb	4.9	109430.19	100	20.31	79.5	120.4	
[Pb]	207	209	No Gas	101.633	ppb	3.7	95731.53	100	20.33	79.5	120.4	
Pb	208	209	No Gas	101.411	ppb	4.3	434730.17	100	20.28	79.5	120.4	
Th	232	209	No Gas	102.916	ppb	4.9	418941.24	100	20.58	79.5	120.4	
U	238	209	No Gas	102.500	ppb	5.1	398083.61	100	20.5	79.5	120.4	

QC ISTD Table

Laboratory Control Sample (LCS) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2433423.44	1.9	2459183.84	98.95	29.5	120.4	
Sc	45	No Gas	4833503.96	2.4	4376311.73	110.45	29.5	120.4	
Sc	45	H2	605325.06	1.4	563225.15	107.47	29.5	120.4	
Sc	45	He	165799.68	1.0	146730.33	113	29.5	120.4	
Ge	72	No Gas	991261.64	2.6	936426.06	105.86	29.5	120.4	
Ge	72	H2	182693.63	1.0	183420.15	99.6	29.5	120.4	
Ge	72	He	107316.17	0.4	97408.84	110.17	29.5	120.4	
Y	89	H2	2875840.30	1.4	2733952.55	105.19	29.5	120.4	
Y	89	He	842543.56	0.7	791301.87	106.48	29.5	120.4	
Tb	159	No Gas	9524239.23	2.1	9359761.39	101.76	29.5	120.4	
Tb	159	He	3682389.18	0.8	3741562.06	98.42	29.5	120.4	
Bi	209	No Gas	4431506.09	2.0	4534931.8	97.72	29.5	120.4	

Sample Report

Sample Name SO4519-005

File Name 074SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 20:11:03

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.056	ppb	32.5	41.11	100	
11	B	6	No Gas	1.062	ppb	26.3	5888.05	1000	
23	Na	45	He	1037.766	ppb	4.9	59683.06	200000	
24	Mg	45	He	34.646	ppb	8.5	1182.36	200000	
27	Al	45	He	22.750	ppb	17.7	283.35	200000	
28	Si	45	H2	-48.790	ppb	N/A	8452.12	10000	
39	K	45	He	93.511	ppb	42.5	18773.83	200000	
40	Ca	45	H2	40.147	ppb	2.4	8215.98	200000	
51	V	89	He	0.065	ppb	79.7	142.23	1000	
52	Cr	89	He	0.002	ppb	2032.4	443.93	2000	
55	Mn	89	He	0.807	ppb	4.5	210.63	2000	
56	Fe	89	H2	43.929	ppb	7.0	23937.10	100000	
59	Co	89	He	0.054	ppb	44.6	91.12	1000	
60	Ni	89	He	0.611	ppb	14.6	196.68	1000	
63	Cu	89	He	-18.897	ppb	N/A	25627.51	2000	
66	Zn	89	He	1.232	ppb	48.4	472.25	2000	
75	As	89	He	-0.143	ppb	N/A	222.69	1000	
78	Se	89	H2	0.041	ppb	94.5	1.83	1000	
88	Sr	89	He	0.345	ppb	19.2	131.12	2000	
95	Mo	89	He	0.065	ppb	46.0	35.56	1000	
107	Ag	89	He	0.006	ppb	282.4	37.78	100	
111	Cd	89	He	0.022	ppb	34.9	3.33	1000	
118	Sn	159	He	0.220	ppb	41.1	161.12	1000	
121	Sb	159	No Gas	0.048	ppb	11.8	130.15	1000	
137	Ba	159	No Gas	0.171	ppb	59.0	483.89	2000	
182	W	159	No Gas	0.026	ppb	79.8	76.75	1000	
205	Tl	209	No Gas	0.017	ppb	47.3	96.77	1000	
208	Pb	209	No Gas	0.063	ppb	12.2	453.85	2000	
232	Th	209	No Gas	0.023	ppb	69.7	170.19	1000	
238	U	209	No Gas	0.015	ppb	62.5	70.08	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2410741.15	2.4	2459183.84	98.03	29.5	120.4	
Sc	45	No Gas	4906328.34	2.4	4376311.73	112.11	29.5	120.4	
Sc	45	H2	617646.46	1.5	563225.15	109.66	29.5	120.4	
Sc	45	He	163932.48	4.3	146730.33	111.72	29.5	120.4	
Ge	72	No Gas	1024626.66	2.4	936426.06	109.42	29.5	120.4	
Ge	72	H2	188883.78	2.4	183420.15	102.98	29.5	120.4	
Ge	72	He	108132.06	3.6	97408.84	111.01	29.5	120.4	
Y	89	H2	2941966.16	0.7	2733952.55	107.61	29.5	120.4	
Y	89	He	851411.86	3.9	791301.87	107.6	29.5	120.4	
Tb	159	No Gas	9768676.38	3.2	9359761.39	104.37	29.5	120.4	
Tb	159	He	3709950.64	4.0	3741562.06	99.16	29.5	120.4	
Bi	209	No Gas	4694322.85	1.3	4534931.8	103.51	29.5	120.4	

Sample Report

Sample Name SO4519-005A

File Name 075SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 20:13:36

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	7.234	ppb	7.8	4047.37	100	
11	B	6	No Gas	3.968	ppb	14.1	6781.83	1000	
23	Na	45	He	1725.375	ppb	1.2	96200.42	200000	
24	Mg	45	He	5183.802	ppb	1.6	157999.39	200000	
27	Al	45	He	34068.856	ppb	1.1	384712.37	200000	
28	Si	45	H2	15875.637	ppb	2.6	259846.60	10000	
39	K	45	He	5815.576	ppb	1.2	155903.61	200000	
40	Ca	45	H2	4202.271	ppb	1.5	623666.04	200000	
51	V	89	He	102.502	ppb	0.7	40379.92	1000	
52	Cr	89	He	59.196	ppb	0.7	29939.49	2000	
55	Mn	89	He	5019.012	ppb	0.7	1174775.95	2000	
56	Fe	89	H2	58117.904	ppb	1.2	30137754.19	100000	
59	Co	89	He	80.811	ppb	1.5	62830.84	1000	
60	Ni	89	He	55.144	ppb	0.6	11664.17	1000	
63	Cu	89	He	49.366	ppb	3.0	75747.87	2000	
66	Zn	89	He	168.481	ppb	1.4	15146.42	2000	
75	As	89	He	5.232	ppb	2.2	612.75	1000	
78	Se	89	H2	0.556	ppb	45.7	16.50	1000	
88	Sr	89	He	48.801	ppb	0.4	14538.14	2000	
95	Mo	89	He	0.911	ppb	17.8	315.57	1000	
107	Ag	89	He	0.080	ppb	6.8	121.12	100	
111	Cd	89	He	0.628	ppb	17.2	91.48	1000	
118	Sn	159	He	49.334	ppb	0.7	12659.71	1000	
121	Sb	159	No Gas	0.253	ppb	9.0	530.60	1000	
137	Ba	159	No Gas	523.951	ppb	3.5	366965.63	2000	
182	W	159	No Gas	0.130	ppb	26.7	246.95	1000	
205	Tl	209	No Gas	0.594	ppb	6.6	1965.69	1000	
208	Pb	209	No Gas	52.457	ppb	3.1	233422.42	2000	
232	Th	209	No Gas	17.470	ppb	4.3	73849.71	1000	
238	U	209	No Gas	3.437	ppb	4.2	13856.62	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2340303.89	1.5	2459183.84	95.17	29.5	120.4	
Sc	45	No Gas	4924311.64	1.2	4376311.73	112.52	29.5	120.4	
Sc	45	H2	613774.80	1.7	563225.15	108.98	29.5	120.4	
Sc	45	He	168566.77	0.5	146730.33	114.88	29.5	120.4	
Ge	72	No Gas	1010773.21	1.5	936426.06	107.94	29.5	120.4	
Ge	72	H2	181530.81	0.7	183420.15	98.97	29.5	120.4	
Ge	72	He	109315.87	0.5	97408.84	112.22	29.5	120.4	
Y	89	H2	3081259.51	1.2	2733952.55	112.7	29.5	120.4	
Y	89	He	915353.91	0.7	791301.87	115.68	29.5	120.4	
Tb	159	No Gas	9630273.67	1.7	9359761.39	102.89	29.5	120.4	
Tb	159	He	3770906.78	0.8	3741562.06	100.78	29.5	120.4	
Bi	209	No Gas	4597068.11	1.5	4534931.8	101.37	29.5	120.4	

Sample Report

Sample Name RINSE

File Name 078SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 20:21:07

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.014	ppb	14.3	46.67	100	
11	B	6	No Gas	0.754	ppb	7.3	6660.65	1000	
23	Na	45	He	170.098	ppb	3.2	52025.06	200000	
24	Mg	45	He	5.586	ppb	22.6	1013.45	200000	
27	Al	45	He	4.382	ppb	4.7	283.35	200000	
28	Si	45	H2	-3.874	ppb	N/A	8919.42	10000	
39	K	45	He	10.329	ppb	31.0	18348.55	200000	
40	Ca	45	H2	4.791	ppb	9.5	5802.51	200000	
51	V	89	He	0.034	ppb	28.3	184.45	1000	
52	Cr	89	He	0.016	ppb	82.8	491.92	2000	
55	Mn	89	He	0.328	ppb	4.5	400.60	2000	
56	Fe	89	H2	10.569	ppb	2.6	28220.26	100000	
59	Co	89	He	0.026	ppb	21.7	151.12	1000	
60	Ni	89	He	0.130	ppb	20.6	208.90	1000	
63	Cu	89	He	-5.796	ppb	N/A	19473.09	2000	
66	Zn	89	He	-0.008	ppb	N/A	375.58	2000	
75	As	89	He	0.012	ppb	339.8	241.03	1000	
78	Se	89	H2	0.026	ppb	46.8	4.17	1000	
88	Sr	89	He	0.082	ppb	27.1	152.23	2000	
95	Mo	89	He	0.018	ppb	48.0	44.45	1000	
107	Ag	89	He	0.004	ppb	54.7	51.11	100	
111	Cd	89	He	0.006	ppb	109.7	4.44	1000	
118	Sn	159	He	0.051	ppb	44.9	173.34	1000	
121	Sb	159	No Gas	0.010	ppb	30.3	136.82	1000	
137	Ba	159	No Gas	0.238	ppb	16.8	1208.08	2000	
182	W	159	No Gas	0.022	ppb	16.3	213.57	1000	
205	Tl	209	No Gas	0.017	ppb	11.1	323.70	1000	
208	Pb	209	No Gas	0.027	ppb	9.1	770.87	2000	
232	Th	209	No Gas	0.053	ppb	15.7	1194.76	1000	
238	U	209	No Gas	0.016	ppb	1.7	323.70	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2323605.27	1.1	2459183.84	94.49	29.5	120.4	
Sc	45	No Gas	4917958.10	0.7	4376311.73	112.38	29.5	120.4	
Sc	45	H2	617364.96	1.2	563225.15	109.61	29.5	120.4	
Sc	45	He	168745.68	1.0	146730.33	115	29.5	120.4	
Ge	72	No Gas	1017941.33	0.6	936426.06	108.7	29.5	120.4	
Ge	72	H2	187748.54	0.7	183420.15	102.36	29.5	120.4	
Ge	72	He	111470.45	0.6	97408.84	114.44	29.5	120.4	
Y	89	H2	2927891.35	0.7	2733952.55	107.09	29.5	120.4	
Y	89	He	870566.62	0.7	791301.87	110.02	29.5	120.4	
Tb	159	No Gas	9766137.98	0.3	9359761.39	104.34	29.5	120.4	
Tb	159	He	3795156.23	0.5	3741562.06	101.43	29.5	120.4	
Bi	209	No Gas	4597107.47	0.4	4534931.8	101.37	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	079_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 20:23:38
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	26.012	ppb	4.1	71674.71	25	104.05	89.8	110.2	
11	B	6	No Gas	25.709	ppb	4.3	51704.39	25	102.84	89.8	110.2	
23	Na	45	He	5417.262	ppb	1.7	1366341.36	5000	108.35	89.8	110.2	
24	Mg	45	He	4985.148	ppb	1.2	752691.71	5000	99.7	89.8	110.2	
27	Al	45	He	497.665	ppb	0.2	27895.84	500	99.53	89.8	110.2	
28	Si	45	H2	460.838	ppb	3.7	46233.37	500	92.17	89.8	110.2	
39	K	45	He	5601.563	ppb	0.7	679782.94	5000	112.03	89.8	110.2	> +/- 10%
40	Ca	45	H2	4983.039	ppb	3.3	3740031.40	5000	99.66	89.8	110.2	
51	V	89	He	26.813	ppb	1.4	50079.02	25	107.25	89.8	110.2	
52	Cr	89	He	26.700	ppb	0.9	63504.70	25	106.8	89.8	110.2	
55	Mn	89	He	26.041	ppb	0.4	28956.34	25	104.16	89.8	110.2	
56	Fe	89	H2	5082.489	ppb	0.6	12616021.72	5000	101.65	89.8	110.2	
59	Co	89	He	26.411	ppb	1.0	97395.68	25	105.64	89.8	110.2	
60	Ni	89	He	27.095	ppb	0.5	27075.93	25	108.38	89.8	110.2	
63	Cu	89	He	15.994	ppb	0.3	92376.74	25	63.98	89.8	110.2	> +/- 10%
66	Zn	89	He	25.389	ppb	2.6	10922.43	25	101.56	89.8	110.2	
75	As	89	He	25.795	ppb	0.2	8742.71	25	103.18	89.8	110.2	
78	Se	89	H2	25.452	ppb	0.8	3455.10	25	101.81	89.8	110.2	
88	Sr	89	He	24.776	ppb	0.5	34965.33	25	99.1	89.8	110.2	
95	Mo	89	He	25.580	ppb	1.3	39809.91	25	102.32	89.8	110.2	
107	Ag	89	He	25.205	ppb	0.9	128736.02	25	100.82	89.8	110.2	
111	Cd	89	He	24.592	ppb	1.0	16936.99	25	98.37	89.8	110.2	
118	Sn	159	He	26.227	ppb	0.6	33788.75	25	104.91	89.8	110.2	
121	Sb	159	No Gas	25.924	ppb	3.6	256358.37	25	103.7	89.8	110.2	
137	Ba	159	No Gas	25.837	ppb	3.3	91488.78	25	103.35	89.8	110.2	
182	W	159	No Gas	24.472	ppb	3.3	201217.23	25	97.89	89.8	110.2	
205	Tl	209	No Gas	25.044	ppb	3.0	404543.05	25	100.18	89.8	110.2	
208	Pb	209	No Gas	25.255	ppb	3.5	559754.30	25	101.02	89.8	110.2	
232	Th	209	No Gas	26.015	ppb	3.7	547573.62	25	104.06	89.8	110.2	
238	U	209	No Gas	26.017	ppb	2.8	522553.68	25	104.07	89.8	110.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2309738.72	2.2	2459183.84	93.92	29.5	120.4	
Sc	45	No Gas	4914171.76	1.6	4376311.73	112.29	29.5	120.4	
Sc	45	H2	622814.04	2.2	563225.15	110.58	29.5	120.4	
Sc	45	He	167149.45	1.5	146730.33	113.92	29.5	120.4	
Ge	72	No Gas	1017339.86	1.3	936426.06	108.64	29.5	120.4	
Ge	72	H2	189412.66	1.7	183420.15	103.27	29.5	120.4	
Ge	72	He	110999.74	1.5	97408.84	113.95	29.5	120.4	
Y	89	H2	2949210.56	0.9	2733952.55	107.87	29.5	120.4	
Y	89	He	868624.31	0.8	791301.87	109.77	29.5	120.4	
Tb	159	No Gas	9710585.97	2.5	9359761.39	103.75	29.5	120.4	
Tb	159	He	3806434.21	0.7	3741562.06	101.73	29.5	120.4	
Bi	209	No Gas	4581874.47	1.7	4534931.8	101.04	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	080_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 20:26:07
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.071	ppb	5.5	208.90	0.2	
11	B	6	No Gas	0.395	ppb	20.4	6107.06	4	
23	Na	45	He	155.098	ppb	3.0	48328.34	200	Failed DoD
24	Mg	45	He	4.924	ppb	10.6	913.43	20	
27	Al	45	He	1.664	ppb	32.2	130.01	20	
28	Si	45	H2	-9.745	ppb	N/A	8495.33	100	
39	K	45	He	14.758	ppb	40.3	18912.23	200	
40	Ca	45	H2	5.750	ppb	11.0	6546.21	20	
51	V	89	He	0.026	ppb	26.8	171.12	1	
52	Cr	89	He	0.009	ppb	154.4	475.93	1	
55	Mn	89	He	0.128	ppb	20.7	178.63	0.4	
56	Fe	89	H2	8.439	ppb	8.4	23235.18	20	
59	Co	89	He	0.010	ppb	72.8	91.12	0.2	
60	Ni	89	He	0.114	ppb	17.0	194.45	0.4	
63	Cu	89	He	-5.655	ppb	N/A	20018.27	0.6	Fail All Methods□ Failed DoD
66	Zn	89	He	-0.083	ppb	N/A	345.57	2	
75	As	89	He	-0.007	ppb	N/A	235.70	1	
78	Se	89	H2	0.066	ppb	50.6	9.67	1	
88	Sr	89	He	0.031	ppb	21.9	81.11	1	
95	Mo	89	He	0.054	ppb	10.3	101.11	1	
107	Ag	89	He	0.010	ppb	36.3	84.45	0.2	
111	Cd	89	He	0.008	ppb	28.6	6.30	0.2	
118	Sn	159	He	0.076	ppb	79.5	206.73	1	
121	Sb	159	No Gas	0.057	ppb	11.5	604.03	0.2	
137	Ba	159	No Gas	0.060	ppb	54.1	573.99	0.4	
182	W	159	No Gas	0.113	ppb	12.8	971.12	1	
205	Tl	209	No Gas	0.047	ppb	29.3	810.94	0.2	
208	Pb	209	No Gas	0.056	ppb	10.9	1411.61	0.2	
232	Th	209	No Gas	0.096	ppb	15.3	2109.23	1	
238	U	209	No Gas	0.054	ppb	21.7	1104.64	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2362033.17	0.7	2459183.84	96.05	29.5	120.4	
Sc	45	No Gas	4940810.69	3.2	4376311.73	112.9	29.5	120.4	
Sc	45	H2	620530.32	0.9	563225.15	110.17	29.5	120.4	
Sc	45	He	169064.42	0.4	146730.33	115.22	29.5	120.4	
Ge	72	No Gas	1028497.33	4.4	936426.06	109.83	29.5	120.4	
Ge	72	H2	190001.05	1.0	183420.15	103.59	29.5	120.4	
Ge	72	He	110586.68	0.9	97408.84	113.53	29.5	120.4	
Y	89	H2	2961312.14	0.4	2733952.55	108.32	29.5	120.4	
Y	89	He	873808.87	0.3	791301.87	110.43	29.5	120.4	
Tb	159	No Gas	9790127.91	3.2	9359761.39	104.6	29.5	120.4	
Tb	159	He	3837487.55	1.3	3741562.06	102.56	29.5	120.4	
Bi	209	No Gas	4627433.05	2.6	4534931.8	102.04	29.5	120.4	

Prep Blank (PB) Report

Sample Name	PBWOG19IMW2
File Name	086_PB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 20:41:12
Sample Type	PB
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	6	No Gas	0.053	ppb	12.0	36.67	0.5	
B	11	6	No Gas	0.720	ppb	73.6	5402.30	10	
Na	23	45	He	1109.907	ppb	61.5	64189.02	500	PB 6020 Fails DoD PB 6020 Fails Non-DoD
Mg	24	45	He	59.571	ppb	61.1	1947.16	50	PB 6020 Fails DoD
Al	27	45	He	25.905	ppb	74.0	323.36	50	
Si	28	45	H2	-40.025	ppb	N/A	8575.47	250	
K	39	45	He	65.623	ppb	37.2	18477.06	500	
Ca	40	45	H2	74.077	ppb	97.0	13225.21	50	PB 6020 Fails DoD
V	51	89	He	0.763	ppb	18.0	404.47	2.5	
Cr	52	89	He	0.987	ppb	1.4	917.20	2.5	
Mn	55	89	He	1.095	ppb	57.6	278.63	1	PB 6020 Fails DoD
Fe	56	89	H2	33.619	ppb	82.4	18998.43	50	
Co	59	89	He	0.114	ppb	77.7	137.79	0.5	
Ni	60	89	He	0.602	ppb	18.7	198.90	1	
Cu	63	89	He	1.595	ppb	30.9	39839.90	1.5	PB 6020 Fails DoD
Zn	66	89	He	3.030	ppb	27.9	628.93	5	
As	75	89	He	0.131	ppb	123.7	244.70	2.5	
Se	78	89	H2	0.059	ppb	143.8	2.33	2.5	
Sr	88	89	He	0.502	ppb	99.5	177.79	2.5	
Mo	95	89	He	0.078	ppb	96.4	40.00	2.5	
Ag	107	89	He	0.026	ppb	82.3	58.89	0.5	
Cd	111	89	He	0.043	ppb	103.9	6.29	0.5	
Sn	118	159	He	0.566	ppb	29.9	253.35	2.5	
Sb	121	159	No Gas	0.046	ppb	37.6	126.81	0.5	
Ba	137	159	No Gas	0.296	ppb	9.8	573.99	1	
W	182	159	No Gas	0.025	ppb	90.8	76.76	2.5	
Tl	205	209	No Gas	0.013	ppb	60.4	83.43	0.5	
Pb	208	209	No Gas	0.066	ppb	16.0	460.53	0.5	
Th	232	209	No Gas	0.057	ppb	32.7	317.03	2.5	
U	238	209	No Gas	0.018	ppb	36.4	80.09	0.5	

QC ISTD Table

Prep Blank (PB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2260295.53	1.2	2459183.84	91.91	29.5	120.4	
Sc	45	No Gas	4910242.78	0.9	4376311.73	112.2	29.5	120.4	
Sc	45	H2	616494.38	0.5	563225.15	109.46	29.5	120.4	
Sc	45	He	166917.01	1.2	146730.33	113.76	29.5	120.4	
Ge	72	No Gas	1021508.45	1.8	936426.06	109.09	29.5	120.4	
Ge	72	H2	189258.86	1.1	183420.15	103.18	29.5	120.4	
Ge	72	He	110094.98	0.4	97408.84	113.02	29.5	120.4	
Y	89	H2	2964539.72	0.9	2733952.55	108.43	29.5	120.4	
Y	89	He	867301.67	0.2	791301.87	109.6	29.5	120.4	
Tb	159	No Gas	9797374.72	1.7	9359761.39	104.68	29.5	120.4	
Tb	159	He	3797092.13	0.4	3741562.06	101.48	29.5	120.4	
Bi	209	No Gas	4646872.07	0.4	4534931.8	102.47	29.5	120.4	

Laboratory Control Sample (LCS) Report

Sample Name	LCSWOG19IMW2
File Name	087LCSW.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 20:43:45
Sample Type	LCSW
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	6	No Gas	51.760	ppb	3.4	28065.73	50	20.7	79.5	120.4	
B	11	6	No Gas	498.417	ppb	2.8	182317.28	500	19.94	79.5	120.4	
Na	23	45	He	9333.012	ppb	0.7	477076.55	7500	24.89	79.5	120.4	6020□ DoD
Mg	24	45	He	5165.946	ppb	1.3	156242.51	5000	20.66	79.5	120.4	
Al	27	45	He	1944.207	ppb	2.0	21818.50	2000	19.44	79.5	120.4	
Si	28	45	H2	905.739	ppb	5.4	23642.28	1000	18.11	0	200	
K	39	45	He	11585.487	ppb	1.6	291340.15	10000	23.17	79.5	120.4	DoD
Ca	40	45	H2	2599.037	ppb	1.1	389365.79	2500	20.79	79.5	120.4	
V	51	89	He	527.754	ppb	1.1	196207.15	500	21.11	79.5	120.4	
Cr	52	89	He	213.815	ppb	0.9	101139.56	200	21.38	79.5	120.4	
Mn	55	89	He	522.314	ppb	0.7	115706.90	500	20.89	79.5	120.4	
Fe	56	89	H2	1201.796	ppb	0.5	600605.39	1000	24.04	79.5	120.4	DoD
Co	59	89	He	542.782	ppb	1.0	398975.62	500	21.71	79.5	120.4	
Ni	60	89	He	547.892	ppb	0.9	108940.54	500	21.92	79.5	120.4	
Cu	63	89	He	218.588	ppb	1.5	184627.56	250	17.49	79.5	120.4	
Zn	66	89	He	506.646	ppb	1.1	42338.47	500	20.27	79.5	120.4	
As	75	89	He	105.011	ppb	2.4	7139.96	100	21	79.5	120.4	
Se	78	89	H2	100.714	ppb	0.4	2743.48	100	20.14	79.5	120.4	
Sr	88	89	He	505.903	ppb	1.0	142251.05	500	20.24	79.5	120.4	
Mo	95	89	He	104.252	ppb	1.4	32357.04	100	20.85	79.5	120.4	
Ag	107	89	He	51.330	ppb	2.0	52297.29	50	20.53	79.5	120.4	
Cd	111	89	He	254.627	ppb	1.4	34968.74	250	20.37	79.5	120.4	
Sn	118	159	He	531.773	ppb	0.3	136752.51	500	21.27	79.5	120.4	
Sb	121	159	No Gas	108.893	ppb	1.9	216341.05	100	21.78	79.5	120.4	
Ba	137	159	No Gas	1894.735	ppb	2.7	1342801.96	2000	18.95	79.5	120.4	
W	182	159	No Gas	101.094	ppb	2.1	166984.13	100	20.22	79.5	120.4	
Tl	205	209	No Gas	102.292	ppb	2.2	330819.58	100	20.46	79.5	120.4	
[Pb]	206	209	No Gas	105.430	ppb	2.6	117605.43	100	21.09	79.5	120.4	
[Pb]	207	209	No Gas	105.078	ppb	2.5	102458.77	100	21.02	79.5	120.4	
Pb	208	209	No Gas	105.362	ppb	2.5	467587.42	100	21.07	79.5	120.4	
Th	232	209	No Gas	107.748	ppb	2.4	454116.25	100	21.55	79.5	120.4	
U	238	209	No Gas	107.165	ppb	2.5	430919.24	100	21.43	79.5	120.4	

QC ISTD Table

Laboratory Control Sample (LCS) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2271356.09	1.6	2459183.84	92.36	29.5	120.4	
Sc	45	No Gas	4880434.90	1.4	4376311.73	111.52	29.5	120.4	
Sc	45	H2	618167.99	1.3	563225.15	109.76	29.5	120.4	
Sc	45	He	167283.47	1.6	146730.33	114.01	29.5	120.4	
Ge	72	No Gas	1019086.21	1.3	936426.06	108.83	29.5	120.4	
Ge	72	H2	187791.79	1.3	183420.15	102.38	29.5	120.4	
Ge	72	He	109627.43	1.0	97408.84	112.54	29.5	120.4	
Y	89	H2	2958632.20	0.9	2733952.55	108.22	29.5	120.4	
Y	89	He	866114.58	1.4	791301.87	109.45	29.5	120.4	
Tb	159	No Gas	9750577.42	1.4	9359761.39	104.18	29.5	120.4	
Tb	159	He	3808285.36	0.6	3741562.06	101.78	29.5	120.4	
Bi	209	No Gas	4586400.77	1.7	4534931.8	101.13	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	091_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 20:53:49
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	26.777	ppb	2.7	72012.87	25	107.11	89.8	110.2	
11	B	6	No Gas	25.647	ppb	4.1	50345.12	25	102.59	89.8	110.2	
23	Na	45	He	5268.374	ppb	1.4	1320746.92	5000	105.37	89.8	110.2	
24	Mg	45	He	4886.866	ppb	1.0	733226.26	5000	97.74	89.8	110.2	
27	Al	45	He	480.008	ppb	1.4	26735.84	500	96	89.8	110.2	
28	Si	45	H2	450.977	ppb	5.4	44997.84	500	90.2	89.8	110.2	
39	K	45	He	5569.453	ppb	0.9	671736.02	5000	111.39	89.8	110.2	> +/- 10%
40	Ca	45	H2	4993.967	ppb	2.6	3713689.98	5000	99.88	89.8	110.2	
51	V	89	He	26.437	ppb	1.2	48926.98	25	105.75	89.8	110.2	
52	Cr	89	He	26.370	ppb	0.4	62144.94	25	105.48	89.8	110.2	
55	Mn	89	He	25.962	ppb	1.1	28601.77	25	103.85	89.8	110.2	
56	Fe	89	H2	5119.537	ppb	0.1	12655585.03	5000	102.39	89.8	110.2	
59	Co	89	He	26.555	ppb	0.8	97019.44	25	106.22	89.8	110.2	
60	Ni	89	He	27.056	ppb	0.8	26786.39	25	108.22	89.8	110.2	
63	Cu	89	He	15.633	ppb	1.4	90327.13	25	62.53	89.8	110.2	> +/- 10%
66	Zn	89	He	25.905	ppb	1.9	11033.64	25	103.62	89.8	110.2	
75	As	89	He	25.892	ppb	0.8	8693.00	25	103.57	89.8	110.2	
78	Se	89	H2	25.353	ppb	2.7	3427.43	25	101.41	89.8	110.2	
88	Sr	89	He	24.970	ppb	0.7	34913.04	25	99.88	89.8	110.2	
95	Mo	89	He	25.374	ppb	0.7	39125.73	25	101.5	89.8	110.2	
107	Ag	89	He	25.427	ppb	0.8	128664.09	25	101.71	89.8	110.2	
111	Cd	89	He	24.704	ppb	1.1	16856.89	25	98.82	89.8	110.2	
118	Sn	159	He	26.032	ppb	2.3	33506.95	25	104.13	89.8	110.2	
121	Sb	159	No Gas	26.134	ppb	3.3	259222.08	25	104.54	89.8	110.2	
137	Ba	159	No Gas	25.950	ppb	2.5	92174.89	25	103.8	89.8	110.2	
182	W	159	No Gas	24.395	ppb	4.4	201159.41	25	97.58	89.8	110.2	
205	Tl	209	No Gas	25.309	ppb	2.7	407604.29	25	101.24	89.8	110.2	
208	Pb	209	No Gas	25.233	ppb	2.5	557657.27	25	100.93	89.8	110.2	
232	Th	209	No Gas	26.031	ppb	3.0	546338.95	25	104.12	89.8	110.2	
238	U	209	No Gas	26.247	ppb	2.2	525620.67	25	104.99	89.8	110.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2253717.93	1.9	2459183.84	91.64	29.5	120.4	
Sc	45	No Gas	4879561.11	1.7	4376311.73	111.5	29.5	120.4	
Sc	45	H2	616971.32	1.6	563225.15	109.54	29.5	120.4	
Sc	45	He	166100.52	1.4	146730.33	113.2	29.5	120.4	
Ge	72	No Gas	1022713.93	1.6	936426.06	109.21	29.5	120.4	
Ge	72	H2	190321.36	1.0	183420.15	103.76	29.5	120.4	
Ge	72	He	109908.23	0.5	97408.84	112.83	29.5	120.4	
Y	89	H2	2937147.98	0.6	2733952.55	107.43	29.5	120.4	
Y	89	He	860581.07	0.8	791301.87	108.76	29.5	120.4	
Tb	159	No Gas	9739832.15	2.4	9359761.39	104.06	29.5	120.4	
Tb	159	He	3802900.01	0.1	3741562.06	101.64	29.5	120.4	
Bi	209	No Gas	4568022.44	1.4	4534931.8	100.73	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	092_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 20:56:21
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.027	ppb	34.7	77.78	0.2	
11	B	6	No Gas	0.557	ppb	78.6	5936.99	4	
23	Na	45	He	102.643	ppb	3.4	34506.38	200	Failed DoD
24	Mg	45	He	3.272	ppb	13.5	651.17	20	
27	Al	45	He	0.561	ppb	44.8	66.67	20	
28	Si	45	H2	-7.851	ppb	N/A	8652.27	100	
39	K	45	He	10.493	ppb	35.2	18128.29	200	
40	Ca	45	H2	1.704	ppb	6.6	3526.12	20	
51	V	89	He	0.049	ppb	25.5	213.34	1	
52	Cr	89	He	-0.018	ppb	N/A	410.60	1	
55	Mn	89	He	0.069	ppb	8.8	112.65	0.4	
56	Fe	89	H2	3.104	ppb	3.2	9907.85	20	
59	Co	89	He	0.011	ppb	52.0	93.34	0.2	
60	Ni	89	He	0.075	ppb	40.0	154.45	0.4	
63	Cu	89	He	-6.188	ppb	N/A	18163.45	0.6	Fail All Methods Failed DoD
66	Zn	89	He	-0.001	ppb	N/A	378.91	2	
75	As	89	He	-0.007	ppb	N/A	234.70	1	
78	Se	89	H2	0.041	ppb	14.2	6.33	1	
88	Sr	89	He	0.017	ppb	43.0	61.11	1	
95	Mo	89	He	0.042	ppb	32.0	81.12	1	
107	Ag	89	He	0.007	ppb	14.0	67.78	0.2	
111	Cd	89	He	0.007	ppb	47.9	5.18	0.2	
118	Sn	159	He	0.027	ppb	83.6	144.45	1	
121	Sb	159	No Gas	0.027	ppb	18.1	286.99	0.2	
137	Ba	159	No Gas	0.022	ppb	58.4	420.48	0.4	
182	W	159	No Gas	0.095	ppb	8.7	780.90	1	
205	Tl	209	No Gas	0.025	ppb	36.2	420.48	0.2	
208	Pb	209	No Gas	0.019	ppb	30.1	550.62	0.2	
232	Th	209	No Gas	0.065	ppb	5.3	1391.63	1	
238	U	209	No Gas	0.015	ppb	29.9	283.65	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2206687.89	10.0	2459183.84	89.73	29.5	120.4	
Sc	45	No Gas	4656944.75	8.4	4376311.73	106.41	29.5	120.4	
Sc	45	H2	620890.24	1.6	563225.15	110.24	29.5	120.4	
Sc	45	He	166563.29	1.6	146730.33	113.52	29.5	120.4	
Ge	72	No Gas	973801.48	10.5	936426.06	103.99	29.5	120.4	
Ge	72	H2	189534.87	1.5	183420.15	103.33	29.5	120.4	
Ge	72	He	110522.18	0.6	97408.84	113.46	29.5	120.4	
Y	89	H2	2951995.49	1.1	2733952.55	107.98	29.5	120.4	
Y	89	He	870873.24	0.6	791301.87	110.06	29.5	120.4	
Tb	159	No Gas	9320815.00	7.9	9359761.39	99.58	29.5	120.4	
Tb	159	He	3834119.53	0.7	3741562.06	102.47	29.5	120.4	
Bi	209	No Gas	4393878.04	9.0	4534931.8	96.89	29.5	120.4	

Prep Blank (PB) Report

Sample Name	PBWOG29IMW2
File Name	093_PB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 20:58:52
Sample Type	PB
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	6	No Gas	0.070	ppb	13.9	45.56	0.5	
B	11	6	No Gas	1.728	ppb	14.6	5670.18	10	
Na	23	45	He	645.691	ppb	3.9	39959.86	500	PB 6020 Fails DoD
Mg	24	45	He	25.585	ppb	3.6	902.32	50	
Al	27	45	He	9.958	ppb	21.8	142.23	50	
Si	28	45	H2	-33.780	ppb	N/A	8485.34	250	
K	39	45	He	82.297	ppb	15.6	18298.53	500	
Ca	40	45	H2	39.203	ppb	2.5	7881.35	50	
V	51	89	He	1.140	ppb	15.0	526.70	2.5	
Cr	52	89	He	1.727	ppb	2.7	1223.84	2.5	
Mn	55	89	He	0.690	ppb	5.9	182.64	1	
Fe	56	89	H2	26.107	ppb	4.2	14814.32	50	
Co	59	89	He	0.015	ppb	351.9	62.23	0.5	
Ni	60	89	He	0.596	ppb	24.1	191.12	1	
Cu	63	89	He	54.163	ppb	0.5	72487.39	1.5	PB 6020 Fails DoD PB 6020 Fails Non-DoD
Zn	66	89	He	2.432	ppb	15.8	560.03	5	
As	75	89	He	-0.013	ppb	N/A	227.36	2.5	
Se	78	89	H2	0.124	ppb	75.7	4.00	2.5	
Sr	88	89	He	0.103	ppb	67.1	63.34	2.5	
Mo	95	89	He	0.115	ppb	28.1	50.00	2.5	
Ag	107	89	He	0.026	ppb	106.7	57.78	0.5	
Cd	111	89	He	0.019	ppb	49.3	2.96	0.5	
Sn	118	159	He	0.691	ppb	8.8	280.01	2.5	
Sb	121	159	No Gas	0.090	ppb	27.1	210.24	0.5	
Ba	137	159	No Gas	0.581	ppb	12.3	760.88	1	
W	182	159	No Gas	0.075	ppb	25.3	156.84	2.5	
Tl	205	209	No Gas	0.056	ppb	23.4	220.25	0.5	
Pb	208	209	No Gas	0.102	ppb	23.4	610.69	0.5	
Th	232	209	No Gas	0.175	ppb	14.7	800.94	2.5	
U	238	209	No Gas	0.023	ppb	24.1	96.77	0.5	

QC ISTD Table

Prep Blank (PB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2226776.36	3.7	2459183.84	90.55	29.5	120.4	
Sc	45	No Gas	4762667.71	1.2	4376311.73	108.83	29.5	120.4	
Sc	45	H2	602936.55	0.7	563225.15	107.05	29.5	120.4	
Sc	45	He	161819.46	0.1	146730.33	110.28	29.5	120.4	
Ge	72	No Gas	994859.05	1.7	936426.06	106.24	29.5	120.4	
Ge	72	H2	183326.16	0.8	183420.15	99.95	29.5	120.4	
Ge	72	He	106935.32	0.8	97408.84	109.78	29.5	120.4	
Y	89	H2	2882034.46	1.5	2733952.55	105.42	29.5	120.4	
Y	89	He	838445.91	0.5	791301.87	105.96	29.5	120.4	
Tb	159	No Gas	9591566.67	1.2	9359761.39	102.48	29.5	120.4	
Tb	159	He	3724544.04	0.5	3741562.06	99.55	29.5	120.4	
Bi	209	No Gas	4547022.54	2.5	4534931.8	100.27	29.5	120.4	

Laboratory Control Sample (LCS) Report

Sample Name	LCSWOG29IMW2
File Name	094LCSW.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 21:01:22
Sample Type	LCSW
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	6	No Gas	49.727	ppb	2.0	26743.19	50	19.89	79.5	120.4	
B	11	6	No Gas	477.358	ppb	2.6	173412.30	500	19.09	79.5	120.4	
Na	23	45	He	8925.132	ppb	1.4	447663.39	7500	23.8	79.5	120.4	DoD
Mg	24	45	He	5013.127	ppb	0.4	148681.44	5000	20.05	79.5	120.4	
Al	27	45	He	1929.796	ppb	1.2	21235.32	2000	19.3	79.5	120.4	
Si	28	45	H2	904.219	ppb	2.3	23074.42	1000	18.08	0	200	
K	39	45	He	11250.243	ppb	0.4	277915.61	10000	22.5	79.5	120.4	
Ca	40	45	H2	2718.408	ppb	0.7	397786.99	2500	21.75	79.5	120.4	
V	51	89	He	508.680	ppb	0.9	186612.83	500	20.35	79.5	120.4	
Cr	52	89	He	205.031	ppb	1.0	95713.65	200	20.5	79.5	120.4	
Mn	55	89	He	504.591	ppb	0.3	110300.45	500	20.18	79.5	120.4	
Fe	56	89	H2	1161.193	ppb	0.9	567665.48	1000	23.22	79.5	120.4	
Co	59	89	He	522.248	ppb	0.8	378794.16	500	20.89	79.5	120.4	
Ni	60	89	He	521.844	ppb	0.2	102390.49	500	20.87	79.5	120.4	
Cu	63	89	He	212.127	ppb	1.3	177923.47	250	16.97	79.5	120.4	DoD
Zn	66	89	He	531.030	ppb	1.7	43769.51	500	21.24	79.5	120.4	
As	75	89	He	101.657	ppb	1.0	6829.09	100	20.33	79.5	120.4	
Se	78	89	H2	98.577	ppb	1.0	2626.30	100	19.72	79.5	120.4	
Sr	88	89	He	490.075	ppb	1.3	135969.61	500	19.6	79.5	120.4	
Mo	95	89	He	99.238	ppb	1.3	30395.82	100	19.85	79.5	120.4	
Ag	107	89	He	49.441	ppb	0.6	49707.53	50	19.78	79.5	120.4	
Cd	111	89	He	246.189	ppb	0.8	33363.65	250	19.7	79.5	120.4	
Sn	118	159	He	509.340	ppb	0.8	129822.26	500	20.37	79.5	120.4	
Sb	121	159	No Gas	103.856	ppb	0.9	203638.20	100	20.77	79.5	120.4	
Ba	137	159	No Gas	1828.819	ppb	0.3	1279247.97	2000	18.29	79.5	120.4	
W	182	159	No Gas	95.309	ppb	1.0	155390.76	100	19.06	79.5	120.4	
Tl	205	209	No Gas	100.459	ppb	1.0	320455.43	100	20.09	79.5	120.4	
[Pb]	206	209	No Gas	102.045	ppb	1.2	112275.22	100	20.41	79.5	120.4	
[Pb]	207	209	No Gas	103.637	ppb	1.3	99681.22	100	20.73	79.5	120.4	
Pb	208	209	No Gas	102.762	ppb	1.6	449835.68	100	20.55	79.5	120.4	
Th	232	209	No Gas	103.055	ppb	2.3	428452.46	100	20.61	79.5	120.4	
U	238	209	No Gas	102.481	ppb	2.3	406484.15	100	20.5	79.5	120.4	

QC ISTD Table

Laboratory Control Sample (LCS) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2252310.93	0.1	2459183.84	91.59	29.5	120.4	
Sc	45	No Gas	4749666.01	1.6	4376311.73	108.53	29.5	120.4	
Sc	45	H2	603884.05	1.2	563225.15	107.22	29.5	120.4	
Sc	45	He	164020.00	1.6	146730.33	111.78	29.5	120.4	
Ge	72	No Gas	992310.44	0.2	936426.06	105.97	29.5	120.4	
Ge	72	H2	183659.62	2.1	183420.15	100.13	29.5	120.4	
Ge	72	He	108461.53	1.2	97408.84	111.35	29.5	120.4	
Y	89	H2	2893843.43	1.2	2733952.55	105.85	29.5	120.4	
Y	89	He	854592.62	1.1	791301.87	108	29.5	120.4	
Tb	159	No Gas	9621598.40	1.4	9359761.39	102.8	29.5	120.4	
Tb	159	He	3774464.77	0.6	3741562.06	100.88	29.5	120.4	
Bi	209	No Gas	4522616.88	0.8	4534931.8	99.73	29.5	120.4	

Sample Report

Sample Name	RINSE
File Name	098SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 21:11:26
Sample Type	Sample
Total Dilution	1.0000
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.006	ppb	81.4	23.33	100	
11	B	6	No Gas	0.273	ppb	17.8	5643.53	1000	
23	Na	45	He	84.892	ppb	8.5	29021.48	200000	
24	Mg	45	He	3.107	ppb	23.4	604.51	200000	
27	Al	45	He	0.491	ppb	59.9	61.11	200000	
28	Si	45	H2	-9.537	ppb	N/A	8421.84	10000	
39	K	45	He	12.696	ppb	78.6	17741.31	200000	
40	Ca	45	H2	2.508	ppb	5.6	4081.86	200000	
51	V	89	He	0.022	ppb	67.2	157.79	1000	
52	Cr	89	He	-0.008	ppb	N/A	421.93	2000	
55	Mn	89	He	0.043	ppb	8.1	80.65	2000	
56	Fe	89	H2	1.192	ppb	6.6	5153.39	100000	
59	Co	89	He	0.006	ppb	81.9	73.34	1000	
60	Ni	89	He	0.086	ppb	12.8	160.01	1000	
63	Cu	89	He	-6.105	ppb	N/A	17827.51	2000	
66	Zn	89	He	-0.096	ppb	N/A	328.90	2000	
75	As	89	He	-0.004	ppb	N/A	228.36	1000	
78	Se	89	H2	0.001	ppb	265.9	0.83	1000	
88	Sr	89	He	0.037	ppb	30.7	86.67	2000	
95	Mo	89	He	0.012	ppb	67.2	33.33	1000	
107	Ag	89	He	0.007	ppb	38.9	66.67	100	
111	Cd	89	He	0.007	ppb	44.6	5.18	1000	
118	Sn	159	He	0.013	ppb	69.6	123.34	1000	
121	Sb	159	No Gas	0.005	ppb	60.0	83.43	1000	
137	Ba	159	No Gas	0.036	ppb	44.3	490.56	2000	
182	W	159	No Gas	0.007	ppb	25.7	93.44	1000	
205	Tl	209	No Gas	0.004	ppb	36.9	110.13	1000	
208	Pb	209	No Gas	0.006	ppb	33.8	290.33	2000	
232	Th	209	No Gas	0.006	ppb	12.9	196.89	1000	
238	U	209	No Gas	0.003	ppb	20.7	76.75	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2266156.08	1.5	2459183.84	92.15	29.5	120.4	
Sc	45	No Gas	4891421.04	0.4	4376311.73	111.77	29.5	120.4	
Sc	45	H2	614017.40	0.6	563225.15	109.02	29.5	120.4	
Sc	45	He	160982.92	4.9	146730.33	109.71	29.5	120.4	
Ge	72	No Gas	1016054.28	1.4	936426.06	108.5	29.5	120.4	
Ge	72	H2	188768.34	0.4	183420.15	102.92	29.5	120.4	
Ge	72	He	106667.85	4.6	97408.84	109.51	29.5	120.4	
Y	89	H2	2948638.87	0.1	2733952.55	107.85	29.5	120.4	
Y	89	He	843182.45	4.7	791301.87	106.56	29.5	120.4	
Tb	159	No Gas	9808415.13	0.3	9359761.39	104.79	29.5	120.4	
Tb	159	He	3730704.81	4.7	3741562.06	99.71	29.5	120.4	
Bi	209	No Gas	4630747.35	1.1	4534931.8	102.11	29.5	120.4	

Sample Report

Sample Name SO4723-001P

File Name 099SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 21:13:58

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	57.491	ppb	2.3	31234.52	100	
11	B	6	No Gas	555.795	ppb	1.6	203138.75	1000	
23	Na	45	He	13615.265	ppb	1.4	668486.76	200000	
24	Mg	45	He	15066.315	ppb	1.6	440014.24	200000	
27	Al	45	He	2246.865	ppb	1.8	24360.33	200000	
28	Si	45	H2	4220.167	ppb	1.3	73037.47	10000	
39	K	45	He	13467.829	ppb	0.5	324634.70	200000	
40	Ca	45	H2	79409.819	ppb	1.2	11315487.75	200000	
51	V	89	He	586.714	ppb	0.5	211588.64	1000	
52	Cr	89	He	236.663	ppb	1.2	108545.01	2000	
55	Mn	89	He	584.817	ppb	1.2	125662.41	2000	
56	Fe	89	H2	1424.720	ppb	0.8	688453.61	100000	
59	Co	89	He	594.061	ppb	1.0	423609.45	1000	
60	Ni	89	He	592.438	ppb	1.1	114257.84	1000	
63	Cu	89	He	259.585	ppb	1.0	205648.35	2000	
66	Zn	89	He	564.657	ppb	0.6	45732.77	2000	
75	As	89	He	116.598	ppb	1.6	7665.95	1000	
78	Se	89	H2	112.756	ppb	0.8	2971.35	1000	
88	Sr	89	He	1149.314	ppb	0.2	313457.56	2000	
95	Mo	89	He	118.290	ppb	0.4	35615.15	1000	
107	Ag	89	He	56.002	ppb	2.2	55341.55	100	
111	Cd	89	He	282.644	ppb	0.3	37656.29	1000	
118	Sn	159	He	592.311	ppb	0.3	150378.82	1000	
121	Sb	159	No Gas	117.671	ppb	3.1	233040.74	1000	
137	Ba	159	No Gas	2124.547	ppb	2.2	1501201.00	2000	
182	W	159	No Gas	113.245	ppb	3.5	186465.30	1000	
205	Tl	209	No Gas	115.507	ppb	2.6	370145.33	1000	
208	Pb	209	No Gas	115.747	ppb	2.9	508964.95	2000	
232	Th	209	No Gas	120.171	ppb	2.8	501815.68	1000	
238	U	209	No Gas	121.052	ppb	2.7	482315.01	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2275729.42	1.2	2459183.84	92.54	29.5	120.4	
Sc	45	No Gas	4797248.12	1.4	4376311.73	109.62	29.5	120.4	
Sc	45	H2	591210.62	0.1	563225.15	104.97	29.5	120.4	
Sc	45	He	161643.29	1.5	146730.33	110.16	29.5	120.4	
Ge	72	No Gas	999186.34	2.2	936426.06	106.7	29.5	120.4	
Ge	72	H2	182181.83	1.0	183420.15	99.32	29.5	120.4	
Ge	72	He	106797.29	0.8	97408.84	109.64	29.5	120.4	
Y	89	H2	2862293.76	0.2	2733952.55	104.69	29.5	120.4	
Y	89	He	840129.09	0.8	791301.87	106.17	29.5	120.4	
Tb	159	No Gas	9721626.59	1.9	9359761.39	103.87	29.5	120.4	
Tb	159	He	3759988.42	0.8	3741562.06	100.49	29.5	120.4	
Bi	209	No Gas	4544790.93	2.1	4534931.8	100.22	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	103_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 21:24:00
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	26.718	ppb	4.0	71162.27	25	106.87	89.8	110.2	
11	B	6	No Gas	25.445	ppb	4.2	49513.46	25	101.78	89.8	110.2	
23	Na	45	He	5153.113	ppb	0.7	1287979.01	5000	103.06	89.8	110.2	
24	Mg	45	He	4873.285	ppb	0.6	728872.33	5000	97.47	89.8	110.2	
27	Al	45	He	481.367	ppb	1.1	26726.88	500	96.27	89.8	110.2	
28	Si	45	H2	462.761	ppb	1.5	45315.71	500	92.55	89.8	110.2	
39	K	45	He	5520.105	ppb	1.0	663805.31	5000	110.4	89.8	110.2	> +/- 10%
40	Ca	45	H2	5044.393	ppb	1.2	3699548.73	5000	100.89	89.8	110.2	
51	V	89	He	26.300	ppb	1.3	48633.64	25	105.2	89.8	110.2	
52	Cr	89	He	26.420	ppb	0.4	62216.59	25	105.68	89.8	110.2	
55	Mn	89	He	26.002	ppb	0.3	28624.36	25	104.01	89.8	110.2	
56	Fe	89	H2	4985.374	ppb	0.2	12390235.53	5000	99.71	89.8	110.2	
59	Co	89	He	26.611	ppb	1.3	97147.12	25	106.44	89.8	110.2	
60	Ni	89	He	26.764	ppb	1.9	26478.01	25	107.06	89.8	110.2	
63	Cu	89	He	15.576	ppb	2.4	90058.73	25	62.3	89.8	110.2	> +/- 10%
66	Zn	89	He	25.146	ppb	1.5	10715.60	25	100.58	89.8	110.2	
75	As	89	He	25.665	ppb	1.6	8612.27	25	102.66	89.8	110.2	
78	Se	89	H2	24.854	ppb	2.3	3377.09	25	99.42	89.8	110.2	
88	Sr	89	He	24.755	ppb	1.0	34585.52	25	99.02	89.8	110.2	
95	Mo	89	He	25.743	ppb	1.8	39662.73	25	102.97	89.8	110.2	
107	Ag	89	He	25.044	ppb	0.8	126634.21	25	100.18	89.8	110.2	
111	Cd	89	He	24.999	ppb	1.4	17044.55	25	100	89.8	110.2	
118	Sn	159	He	25.888	ppb	1.7	33541.48	25	103.55	89.8	110.2	
121	Sb	159	No Gas	26.296	ppb	3.5	257657.88	25	105.18	89.8	110.2	
137	Ba	159	No Gas	26.077	ppb	3.5	91491.92	25	104.31	89.8	110.2	
182	W	159	No Gas	24.496	ppb	3.7	199566.57	25	97.98	89.8	110.2	
205	Tl	209	No Gas	25.150	ppb	2.6	404497.81	25	100.6	89.8	110.2	
208	Pb	209	No Gas	25.260	ppb	2.0	557514.26	25	101.04	89.8	110.2	
232	Th	209	No Gas	26.068	ppb	3.6	546414.66	25	104.27	89.8	110.2	
238	U	209	No Gas	25.949	ppb	2.2	519021.81	25	103.8	89.8	110.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2232032.81	1.4	2459183.84	90.76	29.5	120.4	
Sc	45	No Gas	4786862.21	2.2	4376311.73	109.38	29.5	120.4	
Sc	45	H2	608449.35	3.1	563225.15	108.03	29.5	120.4	
Sc	45	He	165560.79	0.3	146730.33	112.83	29.5	120.4	
Ge	72	No Gas	1000986.05	2.2	936426.06	106.89	29.5	120.4	
Ge	72	H2	189224.43	3.1	183420.15	103.16	29.5	120.4	
Ge	72	He	108766.19	0.8	97408.84	111.66	29.5	120.4	
Y	89	H2	2952955.82	2.8	2733952.55	108.01	29.5	120.4	
Y	89	He	859950.27	1.0	791301.87	108.68	29.5	120.4	
Tb	159	No Gas	9621528.81	2.5	9359761.39	102.8	29.5	120.4	
Tb	159	He	3827731.44	0.4	3741562.06	102.3	29.5	120.4	
Bi	209	No Gas	4561415.94	1.1	4534931.8	100.58	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	104_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 21:26:32
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.032	ppb	21.0	97.78	0.2	
11	B	6	No Gas	0.427	ppb	4.9	6057.03	4	
23	Na	45	He	75.573	ppb	5.8	27449.95	200	
24	Mg	45	He	2.362	ppb	10.1	508.94	20	
27	Al	45	He	0.276	ppb	115.6	50.00	20	
28	Si	45	H2	-8.413	ppb	N/A	8415.18	100	
39	K	45	He	9.960	ppb	8.7	17876.43	200	
40	Ca	45	H2	3.029	ppb	10.9	4414.20	20	
51	V	89	He	0.011	ppb	76.2	140.01	1	
52	Cr	89	He	0.003	ppb	1025.8	455.26	1	
55	Mn	89	He	0.042	ppb	8.6	81.32	0.4	
56	Fe	89	H2	2.218	ppb	12.6	7640.63	20	
59	Co	89	He	0.013	ppb	21.1	102.23	0.2	
60	Ni	89	He	0.060	ppb	39.1	137.78	0.4	
63	Cu	89	He	-6.434	ppb	N/A	17144.39	0.6	Fail All Methods□ Failed DoD
66	Zn	89	He	0.015	ppb	569.7	381.13	2	
75	As	89	He	0.024	ppb	112.5	242.03	1	
78	Se	89	H2	0.058	ppb	14.1	8.50	1	
88	Sr	89	He	0.042	ppb	77.0	95.56	1	
95	Mo	89	He	0.035	ppb	39.8	70.00	1	
107	Ag	89	He	0.008	ppb	60.9	71.11	0.2	
111	Cd	89	He	0.009	ppb	47.6	6.67	0.2	
118	Sn	159	He	0.028	ppb	105.5	145.56	1	
121	Sb	159	No Gas	0.035	ppb	31.8	380.43	0.2	
137	Ba	159	No Gas	0.056	ppb	32.6	560.64	0.4	
182	W	159	No Gas	0.089	ppb	3.5	767.54	1	
205	Tl	209	No Gas	0.030	ppb	25.5	533.94	0.2	
208	Pb	209	No Gas	0.025	ppb	25.7	717.49	0.2	
232	Th	209	No Gas	0.075	ppb	16.8	1675.33	1	
238	U	209	No Gas	0.023	ppb	32.1	477.22	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2319967.00	1.8	2459183.84	94.34	29.5	120.4	
Sc	45	No Gas	4845335.11	0.5	4376311.73	110.72	29.5	120.4	
Sc	45	H2	607156.56	2.1	563225.15	107.8	29.5	120.4	
Sc	45	He	164803.83	2.1	146730.33	112.32	29.5	120.4	
Ge	72	No Gas	1018562.32	0.7	936426.06	108.77	29.5	120.4	
Ge	72	H2	188628.29	2.0	183420.15	102.84	29.5	120.4	
Ge	72	He	108831.04	1.1	97408.84	111.73	29.5	120.4	
Y	89	H2	2926287.30	1.8	2733952.55	107.04	29.5	120.4	
Y	89	He	860967.26	0.9	791301.87	108.8	29.5	120.4	
Tb	159	No Gas	9764606.04	0.7	9359761.39	104.33	29.5	120.4	
Tb	159	He	3823455.70	0.9	3741562.06	102.19	29.5	120.4	
Bi	209	No Gas	4633043.61	0.9	4534931.8	102.16	29.5	120.4	

Sample Report

Sample Name SO4723-008

File Name 110SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 21:41:37

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.027	ppb	36.4	22.22	100	
11	B	6	No Gas	0.043	ppb	473.2	5015.48	1000	
23	Na	45	He	519.995	ppb	2.5	33626.88	200000	
24	Mg	45	He	21.214	ppb	11.9	768.97	200000	
27	Al	45	He	6.016	ppb	28.2	98.90	200000	
28	Si	45	H2	-100.148	ppb	N/A	7289.98	10000	
39	K	45	He	74.998	ppb	13.6	18003.35	200000	
40	Ca	45	H2	132.592	ppb	1.7	20973.91	200000	
51	V	89	He	0.647	ppb	14.8	346.69	1000	
52	Cr	89	He	0.879	ppb	14.3	831.21	2000	
55	Mn	89	He	0.356	ppb	25.2	109.98	2000	
56	Fe	89	H2	7.177	ppb	9.7	5594.00	100000	
59	Co	89	He	0.044	ppb	111.1	82.23	1000	
60	Ni	89	He	0.776	ppb	9.4	224.45	1000	
63	Cu	89	He	13.542	ppb	3.0	45921.89	2000	
66	Zn	89	He	1.500	ppb	29.3	482.25	2000	
75	As	89	He	0.100	ppb	53.3	233.03	1000	
78	Se	89	H2	0.030	ppb	166.0	1.50	1000	
88	Sr	89	He	0.429	ppb	12.2	151.12	2000	
95	Mo	89	He	0.027	ppb	4.2	23.33	1000	
107	Ag	89	He	0.022	ppb	102.3	53.34	100	
111	Cd	89	He	0.022	ppb	98.9	3.33	1000	
118	Sn	159	He	0.379	ppb	21.8	203.34	1000	
121	Sb	159	No Gas	0.035	ppb	15.6	103.45	1000	
137	Ba	159	No Gas	0.412	ppb	17.6	654.08	2000	
182	W	159	No Gas	0.029	ppb	41.3	83.43	1000	
205	Tl	209	No Gas	0.015	ppb	3.5	90.10	1000	
208	Pb	209	No Gas	0.070	ppb	42.0	473.87	2000	
232	Th	209	No Gas	0.037	ppb	62.1	226.93	1000	
238	U	209	No Gas	0.006	ppb	72.0	30.03	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2196250.73	2.0	2459183.84	89.31	29.5	120.4	
Sc	45	No Gas	4751389.76	0.6	4376311.73	108.57	29.5	120.4	
Sc	45	H2	589603.33	1.3	563225.15	104.68	29.5	120.4	
Sc	45	He	160689.02	0.9	146730.33	109.51	29.5	120.4	
Ge	72	No Gas	996110.24	1.3	936426.06	106.37	29.5	120.4	
Ge	72	H2	181492.96	1.5	183420.15	98.95	29.5	120.4	
Ge	72	He	106061.11	1.4	97408.84	108.88	29.5	120.4	
Y	89	H2	2865792.93	1.3	2733952.55	104.82	29.5	120.4	
Y	89	He	832788.36	1.5	791301.87	105.24	29.5	120.4	
Tb	159	No Gas	9754997.49	1.1	9359761.39	104.22	29.5	120.4	
Tb	159	He	3760972.48	0.9	3741562.06	100.52	29.5	120.4	
Bi	209	No Gas	4610571.24	1.9	4534931.8	101.67	29.5	120.4	

Sample Report

Sample Name SO4724-001

File Name 111SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 21:44:08

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.037	ppb	34.6	26.67	100	
11	B	6	No Gas	0.087	ppb	323.2	4935.46	1000	
23	Na	45	He	18218.213	ppb	1.9	880099.98	200000	
24	Mg	45	He	6598.559	ppb	1.0	190332.02	200000	
27	Al	45	He	48.826	ppb	7.0	555.59	200000	
28	Si	45	H2	2325.923	ppb	0.3	44438.72	10000	
39	K	45	He	1280.214	ppb	3.5	45100.47	200000	
40	Ca	45	H2	83822.183	ppb	0.3	12003109.96	200000	
51	V	89	He	1.812	ppb	5.6	766.72	1000	
52	Cr	89	He	0.823	ppb	17.4	809.21	2000	
55	Mn	89	He	0.892	ppb	15.9	225.30	2000	
56	Fe	89	H2	12.675	ppb	3.4	8268.26	100000	
59	Co	89	He	0.215	ppb	13.1	204.46	1000	
60	Ni	89	He	4.643	ppb	5.6	966.74	1000	
63	Cu	89	He	17.569	ppb	7.7	48703.56	2000	
66	Zn	89	He	33.927	ppb	1.3	3077.13	2000	
75	As	89	He	0.434	ppb	147.4	255.03	1000	
78	Se	89	H2	0.156	ppb	43.3	4.83	1000	
88	Sr	89	He	548.969	ppb	0.5	149042.57	2000	
95	Mo	89	He	0.124	ppb	57.8	52.22	1000	
107	Ag	89	He	0.006	ppb	111.3	37.78	100	
111	Cd	89	He	0.039	ppb	56.9	5.56	1000	
118	Sn	159	He	0.696	ppb	13.6	284.46	1000	
121	Sb	159	No Gas	0.055	ppb	53.8	146.83	1000	
137	Ba	159	No Gas	37.491	ppb	2.7	27342.17	2000	
182	W	159	No Gas	0.041	ppb	89.8	103.45	1000	
205	Tl	209	No Gas	0.016	ppb	87.1	93.44	1000	
208	Pb	209	No Gas	0.723	ppb	5.2	3383.98	2000	
232	Th	209	No Gas	0.016	ppb	7.1	136.82	1000	
238	U	209	No Gas	0.603	ppb	11.2	2439.66	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2155295.72	2.6	2459183.84	87.64	29.5	120.4	
Sc	45	No Gas	4802555.51	0.2	4376311.73	109.74	29.5	120.4	
Sc	45	H2	594140.92	0.6	563225.15	105.49	29.5	120.4	
Sc	45	He	159564.36	1.3	146730.33	108.75	29.5	120.4	
Ge	72	No Gas	1001985.60	1.5	936426.06	107	29.5	120.4	
Ge	72	H2	182039.26	0.5	183420.15	99.25	29.5	120.4	
Ge	72	He	105732.09	0.7	97408.84	108.54	29.5	120.4	
Y	89	H2	2873304.48	1.1	2733952.55	105.1	29.5	120.4	
Y	89	He	836214.95	0.9	791301.87	105.68	29.5	120.4	
Tb	159	No Gas	9899674.57	0.3	9359761.39	105.77	29.5	120.4	
Tb	159	He	3766814.32	0.4	3741562.06	100.67	29.5	120.4	
Bi	209	No Gas	4603144.18	0.9	4534931.8	101.5	29.5	120.4	

Sample Report

Sample Name	RINSE
File Name	114SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 21:51:39
Sample Type	Sample
Total Dilution	1.0000
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.004	ppb	31.5	20.00	100	
11	B	6	No Gas	0.345	ppb	10.0	5756.91	1000	
23	Na	45	He	61.957	ppb	1.3	23776.02	200000	
24	Mg	45	He	2.453	ppb	20.7	515.60	200000	
27	Al	45	He	0.142	ppb	130.8	42.22	200000	
28	Si	45	H2	-6.278	ppb	N/A	8595.53	10000	
39	K	45	He	9.136	ppb	11.2	17544.66	200000	
40	Ca	45	H2	6.013	ppb	6.4	6609.59	200000	
51	V	89	He	0.015	ppb	36.6	144.45	1000	
52	Cr	89	He	-0.014	ppb	N/A	408.60	2000	
55	Mn	89	He	0.018	ppb	25.5	54.66	2000	
56	Fe	89	H2	0.325	ppb	33.0	2966.97	100000	
59	Co	89	He	0.002	ppb	86.8	60.00	1000	
60	Ni	89	He	0.061	ppb	11.6	136.67	1000	
63	Cu	89	He	-6.681	ppb	N/A	16065.34	2000	
66	Zn	89	He	0.008	ppb	299.3	372.24	2000	
75	As	89	He	-0.028	ppb	N/A	221.69	1000	
78	Se	89	H2	0.018	ppb	66.7	3.17	1000	
88	Sr	89	He	0.043	ppb	7.4	94.45	2000	
95	Mo	89	He	0.008	ppb	96.8	27.78	1000	
107	Ag	89	He	0.001	ppb	66.4	36.67	100	
111	Cd	89	He	0.002	ppb	58.4	1.48	1000	
118	Sn	159	He	-0.004	ppb	N/A	103.34	1000	
121	Sb	159	No Gas	0.003	ppb	123.0	70.08	1000	
137	Ba	159	No Gas	0.016	ppb	76.6	423.82	2000	
182	W	159	No Gas	0.020	ppb	18.4	206.90	1000	
205	Tl	209	No Gas	0.005	ppb	20.3	116.80	1000	
208	Pb	209	No Gas	0.003	ppb	83.1	243.61	2000	
232	Th	209	No Gas	0.009	ppb	41.3	260.29	1000	
238	U	209	No Gas	0.002	ppb	31.8	53.39	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2259865.33	2.1	2459183.84	91.89	29.5	120.4	
Sc	45	No Gas	4812367.25	2.4	4376311.73	109.96	29.5	120.4	
Sc	45	H2	608004.20	0.9	563225.15	107.95	29.5	120.4	
Sc	45	He	162608.55	0.3	146730.33	110.82	29.5	120.4	
Ge	72	No Gas	1013984.89	1.4	936426.06	108.28	29.5	120.4	
Ge	72	H2	187229.49	1.5	183420.15	102.08	29.5	120.4	
Ge	72	He	107537.00	0.3	97408.84	110.4	29.5	120.4	
Y	89	H2	2914413.87	0.9	2733952.55	106.6	29.5	120.4	
Y	89	He	847501.50	1.0	791301.87	107.1	29.5	120.4	
Tb	159	No Gas	9899260.62	1.7	9359761.39	105.76	29.5	120.4	
Tb	159	He	3804220.05	0.6	3741562.06	101.67	29.5	120.4	
Bi	209	No Gas	4703574.45	0.9	4534931.8	103.72	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	115_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 21:54:10
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	26.165	ppb	3.9	69855.90	25	104.66	89.8	110.2	
11	B	6	No Gas	24.945	ppb	2.3	48760.93	25	99.78	89.8	110.2	
23	Na	45	He	5222.335	ppb	0.7	1269120.42	5000	104.45	89.8	110.2	
24	Mg	45	He	4908.736	ppb	0.0	713891.10	5000	98.17	89.8	110.2	
27	Al	45	He	480.539	ppb	1.5	25942.08	500	96.11	89.8	110.2	
28	Si	45	H2	457.525	ppb	4.4	44207.37	500	91.5	89.8	110.2	
39	K	45	He	5503.885	ppb	0.6	643605.27	5000	110.08	89.8	110.2	
40	Ca	45	H2	5037.330	ppb	0.8	3637763.52	5000	100.75	89.8	110.2	
51	V	89	He	26.428	ppb	2.3	47535.63	25	105.71	89.8	110.2	
52	Cr	89	He	26.247	ppb	0.3	60128.07	25	104.99	89.8	110.2	
55	Mn	89	He	25.785	ppb	0.9	27610.56	25	103.14	89.8	110.2	
56	Fe	89	H2	5122.972	ppb	0.7	12362758.57	5000	102.46	89.8	110.2	
59	Co	89	He	26.296	ppb	0.7	93388.33	25	105.18	89.8	110.2	
60	Ni	89	He	26.431	ppb	0.7	25437.26	25	105.72	89.8	110.2	
63	Cu	89	He	14.651	ppb	2.7	84625.05	25	58.6	89.8	110.2	> +/- 10%
66	Zn	89	He	25.459	ppb	2.4	10546.55	25	101.84	89.8	110.2	
75	As	89	He	25.963	ppb	1.7	8472.18	25	103.85	89.8	110.2	
78	Se	89	H2	25.614	ppb	2.1	3381.10	25	102.46	89.8	110.2	
88	Sr	89	He	24.898	ppb	0.8	33836.87	25	99.59	89.8	110.2	
95	Mo	89	He	25.472	ppb	0.9	38177.52	25	101.89	89.8	110.2	
107	Ag	89	He	25.531	ppb	0.2	125581.72	25	102.12	89.8	110.2	
111	Cd	89	He	25.065	ppb	0.6	16625.13	25	100.26	89.8	110.2	
118	Sn	159	He	26.072	ppb	1.2	33089.34	25	104.29	89.8	110.2	
121	Sb	159	No Gas	25.394	ppb	2.7	253186.68	25	101.58	89.8	110.2	
137	Ba	159	No Gas	25.296	ppb	3.6	90313.66	25	101.18	89.8	110.2	
182	W	159	No Gas	24.213	ppb	3.5	200707.57	25	96.85	89.8	110.2	
205	Tl	209	No Gas	24.525	ppb	3.1	401651.73	25	98.1	89.8	110.2	
208	Pb	209	No Gas	24.814	ppb	3.0	557658.91	25	99.26	89.8	110.2	
232	Th	209	No Gas	25.552	ppb	4.2	545328.59	25	102.21	89.8	110.2	
238	U	209	No Gas	25.787	ppb	4.0	525095.51	25	103.15	89.8	110.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2237195.45	1.6	2459183.84	90.97	29.5	120.4	
Sc	45	No Gas	4750807.67	0.3	4376311.73	108.56	29.5	120.4	
Sc	45	H2	599014.03	2.0	563225.15	106.35	29.5	120.4	
Sc	45	He	160985.46	0.8	146730.33	109.72	29.5	120.4	
Ge	72	No Gas	1003234.21	0.7	936426.06	107.13	29.5	120.4	
Ge	72	H2	185543.91	2.0	183420.15	101.16	29.5	120.4	
Ge	72	He	106112.93	0.4	97408.84	108.94	29.5	120.4	
Y	89	H2	2867188.39	1.2	2733952.55	104.87	29.5	120.4	
Y	89	He	836496.90	0.6	791301.87	105.71	29.5	120.4	
Tb	159	No Gas	9785265.06	0.3	9359761.39	104.55	29.5	120.4	
Tb	159	He	3749692.72	0.8	3741562.06	100.22	29.5	120.4	
Bi	209	No Gas	4645039.62	1.0	4534931.8	102.43	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	116_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 21:56:41
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.033	ppb	19.4	100.00	0.2	
11	B	6	No Gas	0.228	ppb	32.1	5660.21	4	
23	Na	45	He	65.229	ppb	2.4	24304.23	200	
24	Mg	45	He	2.464	ppb	36.9	511.16	20	
27	Al	45	He	0.028	ppb	575.6	35.56	20	
28	Si	45	H2	-13.237	ppb	N/A	7997.93	100	
39	K	45	He	11.240	ppb	29.7	17589.54	200	
40	Ca	45	H2	3.819	ppb	8.6	4971.06	20	
51	V	89	He	0.004	ppb	332.5	124.45	1	
52	Cr	89	He	-0.014	ppb	N/A	407.27	1	
55	Mn	89	He	0.026	ppb	40.6	62.66	0.4	
56	Fe	89	H2	1.844	ppb	7.6	6635.69	20	
59	Co	89	He	0.006	ppb	28.5	73.34	0.2	
60	Ni	89	He	0.049	ppb	32.9	124.45	0.4	
63	Cu	89	He	-6.823	ppb	N/A	15535.82	0.6	Fail All Methods□ Failed DoD
66	Zn	89	He	-0.049	ppb	N/A	347.80	2	
75	As	89	He	0.044	ppb	110.5	243.70	1	
78	Se	89	H2	0.025	ppb	25.8	4.00	1	
88	Sr	89	He	0.030	ppb	57.1	76.67	1	
95	Mo	89	He	0.044	ppb	15.5	81.11	1	
107	Ag	89	He	0.005	ppb	63.6	54.45	0.2	
111	Cd	89	He	0.008	ppb	43.3	5.56	0.2	
118	Sn	159	He	0.021	ppb	61.0	135.56	1	
121	Sb	159	No Gas	0.030	ppb	5.5	340.39	0.2	
137	Ba	159	No Gas	0.005	ppb	524.1	383.77	0.4	
182	W	159	No Gas	0.076	ppb	13.5	670.76	1	
205	Tl	209	No Gas	0.029	ppb	24.2	513.92	0.2	
208	Pb	209	No Gas	0.020	ppb	32.1	614.03	0.2	
232	Th	209	No Gas	0.071	ppb	6.4	1591.88	1	
238	U	209	No Gas	0.021	ppb	25.6	437.17	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2304475.51	1.3	2459183.84	93.71	29.5	120.4	
Sc	45	No Gas	4790873.46	2.5	4376311.73	109.47	29.5	120.4	
Sc	45	H2	604383.88	2.3	563225.15	107.31	29.5	120.4	
Sc	45	He	160830.75	1.2	146730.33	109.61	29.5	120.4	
Ge	72	No Gas	1007333.44	3.0	936426.06	107.57	29.5	120.4	
Ge	72	H2	186260.45	1.4	183420.15	101.55	29.5	120.4	
Ge	72	He	107051.36	1.0	97408.84	109.9	29.5	120.4	
Y	89	H2	2889158.79	0.8	2733952.55	105.68	29.5	120.4	
Y	89	He	843812.28	0.9	791301.87	106.64	29.5	120.4	
Tb	159	No Gas	9873745.34	2.1	9359761.39	105.49	29.5	120.4	
Tb	159	He	3791279.14	0.8	3741562.06	101.33	29.5	120.4	
Bi	209	No Gas	4685975.60	1.9	4534931.8	103.33	29.5	120.4	

KATAHDIN ANALYTICAL SERVICES, LLC
METALS ANALYSIS RUN INFORMATION SHEET

INSTR. ID: L (Agilent 7800) **ANALYST**: NWA **ANALYSIS DATE**: 09/24/21

METHOD: **ICP-MS**
- ☐ 200.8
- ☑ 6020
- ☑ DOD

REVIEWED
SM 09-28-21
KATAHDIN ANALYTICAL
METALS SECTION

FILE NAME: LOI24A

The pHs of all samples that were tested by direct analysis in this analytical run were checked just prior to analysis and confirmed to be <2. The time of preservation of these samples was checked in the "Measured Turbidity and Preservation of Incoming Samples" logbook to verify that they had been preserved at least 16 hours prior to analysis. These verifications were performed by _____ (initials) on _____ (date).

STANDARDS USED:

Standard Name	Standard ID	Prep Date	Expiration Date	Standard Conc.
Cal. Blk/ICB/CCB	MW20521	09/13/21	09/13/22	0 ug/L
Standard 1	MW20538	09/22/21	12/15/21	Varies by Element
ICV	MW20524	09/15/21	11/10/21	Varies by Element
PQL	MW20523	09/14/21	12/13/21	Varies by Element
LRS1	MW20516	09/13/21	12/13/21	Varies by Element
LRS2	MW20515	09/13/21	12/13/21	Varies by Element
ICSA	MW20525	09/17/21	09/24/21	Varies by Element
ICSAB	MW20530	09/21/21	09/28/21	Varies by Element
CCV	MW20545	09/24/21	12/15/21	Varies by Element
Internal Standard (ISTD)	MW20397	08/04/21	11/4/21	0.4 mg/L (Li,Sc,Ge/Y,Tb,Bi)

Additional Comments and Notes:

Ag ICV MW20544

ICSA failed high for Cu (DOD) - accepted results w/ narration.

SM 09-28-21

Dilutions: Some samples were diluted based on history or due to interfering element concentrations.

Dilution preparations are as follows:

5x, 25x, 50x diln.: 2.0 mL of sample, 5x dilute sample, or 10x dilute sample (pipet M25) + 8.0 mL of MW20521 (pipet M22)

Post Spike: 0.10 mL of MW20514 (pipet M27) into 10 mL final volume of appropriately diluted sample (pipet M22)

INSTRUMENT RUNLOG

Instrument: AGILENT 7800

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
CalBlank	1	LOI24A	09/24/2021	09:07	NWA
CalStd	1	LOI24A	09/24/2021	09:11	NWA
ICV	1	LOI24A	09/24/2021	09:14	NWA
AG ICV	1	LOI24A	09/24/2021	09:16	NWA
ICB	1	LOI24A	09/24/2021	09:19	NWA
FE PQL	1	LOI24A	09/24/2021	09:21	NWA
PQL	1	LOI24A	09/24/2021	09:24	NWA
ICSA	1	LOI24A	09/24/2021	09:27	NWA
ICSAB	1	LOI24A	09/24/2021	09:29	NWA
LRS1	1	LOI24A	09/24/2021	09:32	NWA
LRS2	1	LOI24A	09/24/2021	09:34	NWA
RINSE	1	LOI24A	09/24/2021	09:37	NWA
RINSE	1	LOI24A	09/24/2021	09:40	NWA
CCV	1	LOI24A	09/24/2021	09:42	NWA
CCB	1	LOI24A	09/24/2021	09:45	NWA
PBWOI23IMW2	5	LOI24A	09/24/2021	09:48	NWA
LCSWOI23IMW2	5	LOI24A	09/24/2021	09:50	NWA
SO4723-001R	5	LOI24A	09/24/2021	09:53	NWA
SO4723-001RA	5	LOI24A	09/24/2021	09:55	NWA
SO4723-001RL	25	LOI24A	09/24/2021	09:58	NWA
RINSE	1	LOI24A	09/24/2021	10:01	NWA
SO4723-001RP	5	LOI24A	09/24/2021	10:03	NWA
SO4723-001RS	5	LOI24A	09/24/2021	10:06	NWA
SO4723-002	5	LOI24A	09/24/2021	10:08	NWA
RINSE	1	LOI24A	09/24/2021	10:11	NWA
CCV	1	LOI24A	09/24/2021	10:14	NWA
CCB	1	LOI24A	09/24/2021	10:16	NWA
SO4723-003	5	LOI24A	09/24/2021	10:19	NWA
SO4723-004	5	LOI24A	09/24/2021	10:21	NWA
SO4723-005	5	LOI24A	09/24/2021	10:24	NWA
SO4723-006	5	LOI24A	09/24/2021	10:26	NWA
SO4723-008	5	LOI24A	09/24/2021	10:29	NWA
RINSE	1	LOI24A	09/24/2021	10:32	NWA
SO4724-001R	5	LOI24A	09/24/2021	10:34	NWA
SO4724-002R	5	LOI24A	09/24/2021	10:37	NWA
SO4724-002RA	5	LOI24A	09/24/2021	10:40	NWA
RINSE	1	LOI24A	09/24/2021	10:42	NWA
CCV	1	LOI24A	09/24/2021	10:45	NWA
CCB	1	LOI24A	09/24/2021	10:47	NWA
SO4724-002RL	25	LOI24A	09/24/2021	10:50	NWA
SO4724-002RP	5	LOI24A	09/24/2021	10:53	NWA
SO4724-002RS	5	LOI24A	09/24/2021	10:55	NWA
RINSE	1	LOI24A	09/24/2021	10:58	NWA
SO4724-003R	5	LOI24A	09/24/2021	11:00	NWA

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
SO4724-004R	5	LOI24A	09/24/2021	11:03	NWA
SO4724-005R	5	LOI24A	09/24/2021	11:06	NWA
SO4724-006R	5	LOI24A	09/24/2021	11:08	NWA
RINSE	1	LOI24A	09/24/2021	11:11	NWA
RINSE	1	LOI24A	09/24/2021	11:13	NWA
CCV	1	LOI24A	09/24/2021	11:16	NWA
CCB	1	LOI24A	09/24/2021	11:19	NWA
PBSOI15IMS2	5	LOI24A	09/24/2021	11:21	NWA
LCSOOI15IMS2	5	LOI24A	09/24/2021	11:24	NWA
SO5599-001	5	LOI24A	09/24/2021	11:26	NWA
SO5599-002	5	LOI24A	09/24/2021	11:29	NWA
RINSE	1	LOI24A	09/24/2021	11:32	NWA
RINSE	1	LOI24A	09/24/2021	11:34	NWA
PBWOI23IMW2	5	LOI24A	09/24/2021	11:37	NWA
LCSWOI23IMW2	5	LOI24A	09/24/2021	11:39	NWA
RINSE	1	LOI24A	09/24/2021	11:42	NWA
RINSE	1	LOI24A	09/24/2021	11:45	NWA
CCV	1	LOI24A	09/24/2021	11:47	NWA
CCB	1	LOI24A	09/24/2021	11:50	NWA
CCV	1	LOI24A	09/24/2021	11:53	NWA
CCB	1	LOI24A	09/24/2021	11:55	NWA
FE PQL	1	LOI24A	09/24/2021	11:58	NWA
PQL	1	LOI24A	09/24/2021	12:00	NWA
RINSE	1	LOI24A	09/24/2021	12:03	NWA
RINSE	1	LOI24A	09/24/2021	12:06	NWA

US EPA Tune Check Report

Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq. Date-Time	9/24/2021 08:46:20
Report Comment	---
Instrument Name	G8421A SG18503526

[No Gas]

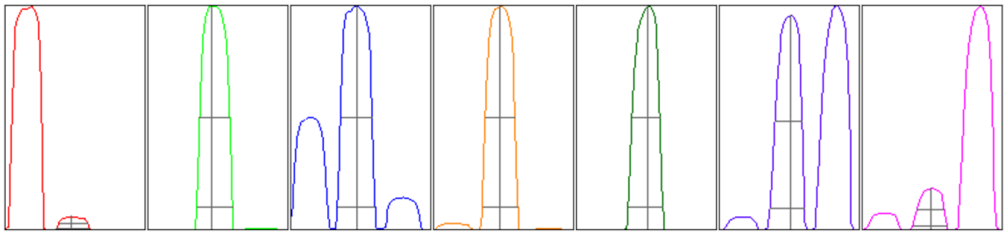
Sensitivity

Mass	Count	CPS	RSD%	RSD% (Required)	RSD% (Flag)
7	7254	72538.63	0.636	5.000	
9	4031	40308.61	0.528	5.000	
24	122531	1225305.16	0.448	5.000	
59	22196	221964.51	0.568	5.000	
115	299568	2995678.81	0.603	5.000	
205	17421	174214.58	0.661	5.000	
208	37899	378986.66	0.511	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	7327	7232	7272	7221	7218
9	4007	4054	4011	4049	4034
24	122426	121771	122625	123309	122521
59	22174	22079	22260	22380	22089
115	298588	298475	301748	301267	297760
205	17337	17337	17374	17611	17449
208	37795	37670	37878	38185	37966

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	11887.06	6.95	6.90 - 7.10	
9	6371.70	8.90	8.90 - 9.10	
24	184745.23	23.95	23.90 - 24.10	
59	35632.93	58.95	58.90 - 59.10	
115	516216.95	115.05	114.90 - 115.10	
205	30274.08	205.05	204.90 - 205.10	
208	65695.10	208.00	207.90 - 208.10	

US EPA Tune Check Report

Mass	W-50%	W-10%	W-10% (Required)	W-10% (Flag)
7	0.62	0.716	0.900	
9	0.65	0.769	0.900	
24	0.68	0.806	0.900	
59	0.64	0.768	0.900	
115	0.61	0.751	0.900	
205	0.59	0.738	0.900	
208	0.59	0.741	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	247
Y Axis	Linear

US EPA Tune Check Report

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	0.99 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.20 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	7.7 V	Deflect	12.8 V
Extract 2	-175.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-85 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.5 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	190 V		

QP Parameters

Mass Gain	122	Axis Gain	0.9988	QP Bias	-2.5 V
Mass Offset	125	Axis Offset	0.03		

Hardware Settings

Torch

Torch H	-0.1 mm	Torch V	0.0 mm

EM

Discriminator	3.3 mV	Analog HV	2768 V	Pulse HV	1404 V

[H2]

Sensitivity

Mass	Count	CPS	RSD%	RSD% (Required)	RSD% (Flag)
59	1399	13992.13	0.943	5.000	
89	171575	1715746.14	2.059	5.000	
205	14270	142697.82	0.476	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
59	1383	1402	1400	1393	1419
89	166501	169677	172195	174896	174605
205	14181	14334	14214	14297	14322

Integration Time [sec] 0.1

US EPA Tune Check Report

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	0.99 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.20 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	7.7 V	Deflect	1.2 V
Extract 2	-175.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-85 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.5 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	122	Axis Gain	0.9990	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	-0.03		

Hardware Settings

Torch

Torch H	-0.1 mm	Torch V	0.0 mm		

EM

Discriminator	3.3 mV	Analog HV	2768 V	Pulse HV	1404 V

[He]

Sensitivity

Mass	Count	CPS	RSD%	RSD% (Required)	RSD% (Flag)
59	4678	46777.01	1.097	5.000	
89	39556	395564.06	0.865	5.000	
205	8417	84170.71	0.575	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
59	4609	4717	4640	4692	4729
89	39202	39303	39529	40069	39680
205	8348	8484	8410	8422	8422

Integration Time [sec] 0.1

US EPA Tune Check Report

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	0.99 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.20 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	7.7 V	Deflect	1.2 V
Extract 2	-175.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-85 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	4.5 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	122	Axis Gain	0.9990	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	-0.03		

Hardware Settings

Torch

Torch H	-0.1 mm	Torch V	0.0 mm		

EM

Discriminator	3.3 mV	Analog HV	2768 V	Pulse HV	1404 V

Calibration Blank Report

Sample Name	CalBlank
File Name	006CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:07:30
Sample Type	CalBlk
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	CPS	RSD
9	Be	6	No Gas	21.11	55.4
11	B	6	No Gas	3484.98	1.4
23	Na	45	He	19184.03	3.2
24	Mg	45	He	277.80	10.0
27	Al	45	He	68.89	12.2
28	Si	45	H2	5583.97	0.9
39	K	45	He	19447.92	3.8
40	Ca	45	H2	4440.86	2.4
51	V	89	He	332.24	11.1
52	Cr	89	He	693.89	5.5
55	Mn	89	He	165.97	22.9
56	Fe	89	H2	11637.85	3.3
59	Co	89	He	88.90	31.2
60	Ni	89	He	547.81	7.5
63	Cu	89	He	1132.31	4.9
66	Zn	89	He	626.70	5.6
75	As	89	He	360.71	3.1
78	Se	89	H2	1.33	57.3
88	Sr	89	He	16.66	69.3
95	Mo	89	He	70.00	19.0
107	Ag	89	He	25.56	39.8
111	Cd	89	He	0.74	173.2
118	Sn	159	He	418.91	13.3
121	Sb	159	No Gas	140.16	32.7
137	Ba	159	No Gas	100.11	26.5
182	W	159	No Gas	46.72	65.5
205	Tl	209	No Gas	510.58	16.8
208	Pb	209	No Gas	1912.21	2.4
232	Th	209	No Gas	317.03	4.8
238	U	209	No Gas	16.68	69.3

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD
Li	6	No Gas	4285305.73	1.7
Sc	45	No Gas	8716701.08	1.0
Sc	45	H2	1073440.43	1.4
Sc	45	He	283880.71	0.9
Ge	72	No Gas	1715165.05	0.9
Ge	72	H2	363056.55	2.3
Ge	72	He	177772.18	0.5
Y	89	H2	5502376.66	1.8
Y	89	He	1468553.09	0.4
Tb	159	No Gas	15204271.44	1.0
Tb	159	He	5847670.12	2.3
Bi	209	No Gas	6985104.03	0.5

Calibration Standard Report

Sample Name	CalStd
File Name	007CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:11:04
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	CPS	RSD
9	Be	6	No Gas	245103.22	1.0
11	B	6	No Gas	161312.15	0.9
23	Na	45	He	3707381.68	1.0
24	Mg	45	He	2222553.68	0.7
27	Al	45	He	81267.91	1.4
28	Si	45	H2	146303.00	1.8
39	K	45	He	1780835.23	1.4
40	Ca	45	H2	13108358.41	1.7
51	V	89	He	146603.70	1.4
52	Cr	89	He	185785.13	0.5
55	Mn	89	He	83164.29	1.5
56	Fe	89	H2	41784569.76	1.4
59	Co	89	He	284248.80	1.8
60	Ni	89	He	77996.65	2.8
63	Cu	89	He	206083.51	0.5
66	Zn	89	He	30185.69	0.9
75	As	89	He	23773.82	1.4
78	Se	89	H2	10202.94	1.5
88	Sr	89	He	99978.79	1.6
95	Mo	89	He	113241.21	0.6
107	Ag	89	He	354921.24	0.8
111	Cd	89	He	46286.38	0.8
118	Sn	159	He	93371.08	0.3
121	Sb	159	No Gas	731592.14	1.2
137	Ba	159	No Gas	269905.77	1.6
182	W	159	No Gas	553562.38	0.9
205	Tl	209	No Gas	1009985.38	0.3
208	Pb	209	No Gas	1504657.55	1.0
232	Th	209	No Gas	1358663.78	1.8
238	U	209	No Gas	1318688.22	1.3

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4280304.27	2.3	4285305.73	99.88	29.5	120.4	
Sc	45	No Gas	8797770.17	1.8	8716701.08	100.93	29.5	120.4	
Sc	45	H2	1085976.65	1.8	1073440.43	101.17	29.5	120.4	
Sc	45	He	284364.67	2.0	283880.71	100.17	29.5	120.4	
Ge	72	No Gas	1723299.36	2.4	1715165.05	100.47	29.5	120.4	
Ge	72	H2	363754.64	2.4	363056.55	100.19	29.5	120.4	
Ge	72	He	177088.74	1.4	177772.18	99.62	29.5	120.4	
Y	89	H2	5476922.98	2.5	5502376.66	99.54	29.5	120.4	
Y	89	He	1472116.61	1.0	1468553.09	100.24	29.5	120.4	
Tb	159	No Gas	15355633.24	2.5	15204271.44	101	29.5	120.4	
Tb	159	He	5868812.20	0.8	5847670.12	100.36	29.5	120.4	
Bi	209	No Gas	6960805.46	2.9	6985104.03	99.65	29.5	120.4	

Initial Calibration Verification (ICV) Report

Sample Name	ICV
File Name	008_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:14:02
Sample Type	ICV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	19.584	ppb	1.0	97411.71	20	97.92	89.6	110.4	
11	B	6	No Gas	20.950	ppb	0.8	70619.98	20	104.75	89.6	110.4	
23	Na	45	He	4056.416	ppb	1.4	1540523.57	4000	101.41	89.6	110.4	
24	Mg	45	He	3965.498	ppb	2.6	896174.85	4000	99.14	89.6	110.4	
27	Al	45	He	404.641	ppb	0.8	33468.99	400	101.16	89.6	110.4	
28	Si	45	H2	501.906	ppb	2.9	75056.86	400	125.48	89.6	110.4	> +/- 10%
39	K	45	He	4333.045	ppb	0.8	795633.14	4000	108.33	89.6	110.4	
40	Ca	45	H2	4057.384	ppb	1.2	5237352.08	4000	101.43	89.6	110.4	
51	V	89	He	19.460	ppb	0.5	57651.44	20	97.3	89.6	110.4	
52	Cr	89	He	19.548	ppb	0.3	73556.17	20	97.74	89.6	110.4	
55	Mn	89	He	20.085	ppb	1.5	33734.82	20	100.43	89.6	110.4	
56	Fe	89	H2	3995.430	ppb	1.4	16676564.52	4000	99.89	89.6	110.4	
59	Co	89	He	20.078	ppb	0.8	114966.64	20	100.39	89.6	110.4	
60	Ni	89	He	20.233	ppb	1.1	32102.10	20	101.16	89.6	110.4	
63	Cu	89	He	20.307	ppb	0.3	84951.03	20	101.54	89.6	110.4	
66	Zn	89	He	20.229	ppb	1.5	12671.69	20	101.14	89.6	110.4	
75	As	89	He	19.512	ppb	0.4	9562.67	20	97.56	89.6	110.4	
78	Se	89	H2	19.900	ppb	2.5	4054.57	20	99.5	89.6	110.4	
88	Sr	89	He	20.170	ppb	1.7	40617.75	20	100.85	89.6	110.4	
95	Mo	89	He	39.141	ppb	0.7	89274.17	40	97.85	89.6	110.4	
107	Ag	89	He	14.126	ppb	0.4	100984.06	20	70.63	89.6	110.4	> +/- 10%
111	Cd	89	He	20.040	ppb	0.8	18679.29	20	100.2	89.6	110.4	
118	Sn	159	He	19.822	ppb	2.9	37437.51	20	99.11	89.6	110.4	
121	Sb	159	No Gas	19.753	ppb	1.2	291472.39	20	98.76	89.6	110.4	
137	Ba	159	No Gas	19.651	ppb	1.2	106971.84	20	98.26	89.6	110.4	
182	W	159	No Gas	17.479	ppb	0.2	195082.58	20	87.4	89.6	110.4	> +/- 10%
205	Tl	209	No Gas	21.957	ppb	1.0	446724.53	20	109.78	89.6	110.4	
208	Pb	209	No Gas	19.950	ppb	0.7	605537.03	20	99.75	89.6	110.4	
232	Th	209	No Gas	22.333	ppb	0.6	610905.90	20	111.66	89.6	110.4	> +/- 10%
238	U	209	No Gas	21.710	ppb	1.7	576163.43	20	108.55	89.6	110.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4340983.33	0.4	4285305.73	101.3	29.5	120.4	
Sc	45	No Gas	8905463.27	1.0	8716701.08	102.17	29.5	120.4	
Sc	45	H2	1068940.06	1.7	1073440.43	99.58	29.5	120.4	
Sc	45	He	289043.80	0.5	283880.71	101.82	29.5	120.4	
Ge	72	No Gas	1758705.31	0.5	1715165.05	102.54	29.5	120.4	
Ge	72	H2	355033.93	2.1	363056.55	97.79	29.5	120.4	
Ge	72	He	178716.15	0.3	177772.18	100.53	29.5	120.4	
Y	89	H2	5467810.17	1.5	5502376.66	99.37	29.5	120.4	
Y	89	He	1482137.74	0.7	1468553.09	100.93	29.5	120.4	
Tb	159	No Gas	15473712.55	0.4	15204271.44	101.77	29.5	120.4	
Tb	159	He	5895031.16	0.3	5847670.12	100.81	29.5	120.4	
Bi	209	No Gas	7002577.07	1.0	6985104.03	100.25	29.5	120.4	

Initial Calibration Verification (ICV) Report

Sample Name	AG ICV
File Name	009_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:16:39
Sample Type	ICV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	19.760	ppb	2.8	100024.22	20	98.8	89.6	110.4	
11	B	6	No Gas	2.660	ppb	1.6	12265.57	20	13.3	89.6	110.4	> +/- 10%
23	Na	45	He	1.018	ppb	135.0	19775.56	4000	0.03	89.6	110.4	> +/- 10%
24	Mg	45	He	1.333	ppb	16.4	580.06	4000	0.03	89.6	110.4	> +/- 10%
27	Al	45	He	21.412	ppb	6.3	1824.63	400	5.35	89.6	110.4	> +/- 10%
28	Si	45	H2	99.396	ppb	4.4	19331.36	400	24.85	89.6	110.4	> +/- 10%
39	K	45	He	1.175	ppb	290.9	19859.93	4000	0.03	89.6	110.4	> +/- 10%
40	Ca	45	H2	1.298	ppb	9.8	6097.09	4000	0.03	89.6	110.4	> +/- 10%
51	V	89	He	19.917	ppb	2.2	58927.71	20	99.58	89.6	110.4	
52	Cr	89	He	20.207	ppb	1.4	75926.35	20	101.04	89.6	110.4	
55	Mn	89	He	20.637	ppb	1.2	34615.36	20	103.18	89.6	110.4	
56	Fe	89	H2	0.485	ppb	17.5	13584.99	4000	0.01	89.6	110.4	> +/- 10%
59	Co	89	He	20.961	ppb	1.1	119887.45	20	104.8	89.6	110.4	
60	Ni	89	He	20.978	ppb	0.2	33225.89	20	104.89	89.6	110.4	
63	Cu	89	He	21.035	ppb	0.8	87854.71	20	105.18	89.6	110.4	
66	Zn	89	He	20.306	ppb	0.9	12702.88	20	101.53	89.6	110.4	
75	As	89	He	20.049	ppb	1.0	9804.87	20	100.24	89.6	110.4	
78	Se	89	H2	19.879	ppb	1.4	4050.07	20	99.4	89.6	110.4	
88	Sr	89	He	0.057	ppb	31.2	132.23	20	0.29	89.6	110.4	> +/- 10%
95	Mo	89	He	0.078	ppb	9.8	247.79	40	0.19	89.6	110.4	> +/- 10%
107	Ag	89	He	20.765	ppb	0.3	148264.14	20	103.83	89.6	110.4	
111	Cd	89	He	20.563	ppb	1.3	19143.66	20	102.81	89.6	110.4	
118	Sn	159	He	0.326	ppb	13.9	1033.42	20	1.63	89.6	110.4	> +/- 10%
121	Sb	159	No Gas	20.404	ppb	2.2	300759.34	20	102.02	89.6	110.4	
137	Ba	159	No Gas	20.272	ppb	0.5	110249.84	20	101.36	89.6	110.4	
182	W	159	No Gas	0.112	ppb	7.1	1298.19	20	0.56	89.6	110.4	> +/- 10%
205	Tl	209	No Gas	22.300	ppb	0.8	461331.41	20	111.5	89.6	110.4	> +/- 10%
208	Pb	209	No Gas	20.140	ppb	0.7	621548.53	20	100.7	89.6	110.4	
232	Th	209	No Gas	0.209	ppb	4.5	6128.40	20	1.04	89.6	110.4	> +/- 10%
238	U	209	No Gas	0.029	ppb	17.6	790.92	20	0.15	89.6	110.4	> +/- 10%

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4418769.40	1.2	4285305.73	103.11	29.5	120.4	
Sc	45	No Gas	8942909.26	0.6	8716701.08	102.6	29.5	120.4	
Sc	45	H2	1069248.71	1.1	1073440.43	99.61	29.5	120.4	
Sc	45	He	286947.37	1.0	283880.71	101.08	29.5	120.4	
Ge	72	No Gas	1763982.70	1.3	1715165.05	102.85	29.5	120.4	
Ge	72	H2	357783.95	1.5	363056.55	98.55	29.5	120.4	
Ge	72	He	178026.95	0.6	177772.18	100.14	29.5	120.4	
Y	89	H2	5467219.79	1.6	5502376.66	99.36	29.5	120.4	
Y	89	He	1480421.18	0.5	1468553.09	100.81	29.5	120.4	
Tb	159	No Gas	15459130.61	0.8	15204271.44	101.68	29.5	120.4	
Tb	159	He	5899801.30	0.8	5847670.12	100.89	29.5	120.4	
Bi	209	No Gas	7120402.18	0.4	6985104.03	101.94	29.5	120.4	

Initial Calibration Blank (ICB) Report

Sample Name	ICB
File Name	010_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:19:13
Sample Type	ICB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.020	ppb	39.4	118.89	0.2	
11	B	6	No Gas	0.132	ppb	20.4	3952.90	4	
23	Na	45	He	-1.917	ppb	N/A	18499.07	200	
24	Mg	45	He	0.029	ppb	702.0	284.47	20	
27	Al	45	He	0.218	ppb	38.1	86.67	20	
28	Si	45	H2	1.104	ppb	191.3	5727.64	100	
39	K	45	He	-1.912	ppb	N/A	19127.61	200	
40	Ca	45	H2	0.459	ppb	32.6	5019.97	20	
51	V	89	He	-0.032	ppb	N/A	240.01	1	
52	Cr	89	He	0.068	ppb	22.5	950.92	1	
55	Mn	89	He	0.002	ppb	640.4	169.97	0.4	
56	Fe	89	H2	0.659	ppb	26.0	14346.68	20	
59	Co	89	He	0.009	ppb	113.1	142.24	0.2	
60	Ni	89	He	0.012	ppb	205.4	570.03	0.4	
63	Cu	89	He	0.035	ppb	39.5	1281.22	0.6	
66	Zn	89	He	-0.029	ppb	N/A	613.37	2	
75	As	89	He	0.029	ppb	48.1	376.38	1	
78	Se	89	H2	0.022	ppb	36.4	5.83	1	
88	Sr	89	He	0.005	ppb	89.1	26.67	1	
95	Mo	89	He	0.001	ppb	803.6	73.33	1	
107	Ag	89	He	0.006	ppb	12.5	68.89	0.2	
111	Cd	89	He	0.006	ppb	33.3	5.93	0.2	
118	Sn	159	He	0.033	ppb	29.9	475.58	1	
121	Sb	159	No Gas	0.024	ppb	18.0	490.56	0.2	
137	Ba	159	No Gas	0.008	ppb	51.4	146.83	0.4	
182	W	159	No Gas	0.007	ppb	41.5	130.14	1	
205	Tl	209	No Gas	0.015	ppb	54.2	807.60	0.2	
208	Pb	209	No Gas	0.014	ppb	71.0	2336.04	0.2	
232	Th	209	No Gas	0.022	ppb	11.4	921.07	1	
238	U	209	No Gas	0.002	ppb	26.6	73.42	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4338010.98	1.4	4285305.73	101.23	29.5	120.4	
Sc	45	No Gas	8822453.60	1.5	8716701.08	101.21	29.5	120.4	
Sc	45	H2	1070764.61	2.2	1073440.43	99.75	29.5	120.4	
Sc	45	He	284158.81	0.5	283880.71	100.1	29.5	120.4	
Ge	72	No Gas	1745190.34	1.8	1715165.05	101.75	29.5	120.4	
Ge	72	H2	364136.11	2.0	363056.55	100.3	29.5	120.4	
Ge	72	He	176494.19	1.5	177772.18	99.28	29.5	120.4	
Y	89	H2	5483991.45	2.3	5502376.66	99.67	29.5	120.4	
Y	89	He	1477293.01	0.5	1468553.09	100.6	29.5	120.4	
Tb	159	No Gas	15375501.02	1.7	15204271.44	101.13	29.5	120.4	
Tb	159	He	5791172.76	2.0	5847670.12	99.03	29.5	120.4	
Bi	209	No Gas	6989942.14	0.9	6985104.03	100.07	29.5	120.4	

Low Level Initial Calibration Verification (LLICV) Report

Sample Name	FE PQL
File Name	011LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:21:53
Sample Type	LLICV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High
9	Be	6	No Gas	0.004	ppb	28.1	41.11	0.2	2	79.5	120.4
11	B	6	No Gas	2.133	ppb	5.4	10460.81	4	53.32	79.5	120.4
23	Na	45	He	-2.716	ppb	N/A	18121.35	200	-1.36	79.5	120.4
24	Mg	45	He	-0.086	ppb	N/A	257.80	20	-0.43	79.5	120.4
27	Al	45	He	0.897	ppb	32.6	141.12	20	4.49	79.5	120.4
28	Si	45	H2	88.600	ppb	5.9	17891.11	100	88.6	79.5	120.4
39	K	45	He	-2.544	ppb	N/A	18927.37	200	-1.27	79.5	120.4
40	Ca	45	H2	1.612	ppb	5.1	6523.96	20	8.06	79.5	120.4
51	V	89	He	-0.008	ppb	N/A	310.02	1	-0.8	79.5	120.4
52	Cr	89	He	0.082	ppb	124.3	1003.17	1	8.2	79.5	120.4
55	Mn	89	He	-0.044	ppb	N/A	93.32	0.4	-11	79.5	120.4
56	Fe	89	H2	22.754	ppb	2.1	104702.29	20	113.77	79.5	120.4
59	Co	89	He	0.007	ppb	30.4	126.67	0.2	3.5	79.5	120.4
60	Ni	89	He	-0.058	ppb	N/A	461.14	0.4	-14.5	79.5	120.4
63	Cu	89	He	0.025	ppb	62.0	1243.44	0.6	4.17	79.5	120.4
66	Zn	89	He	-0.014	ppb	N/A	622.26	2	-0.7	79.5	120.4
75	As	89	He	-0.016	ppb	N/A	355.38	1	-1.6	79.5	120.4
78	Se	89	H2	0.011	ppb	24.8	3.50	1	1.1	79.5	120.4
88	Sr	89	He	0.001	ppb	514.2	18.89	1	0.1	79.5	120.4
95	Mo	89	He	0.006	ppb	145.4	83.34	1	0.6	79.5	120.4
107	Ag	89	He	0.003	ppb	49.7	48.89	0.2	1.5	79.5	120.4
111	Cd	89	He	0.002	ppb	75.7	2.22	0.2	1	79.5	120.4
118	Sn	159	He	0.002	ppb	1587.6	422.24	1	0.2	79.5	120.4
121	Sb	159	No Gas	0.006	ppb	47.1	226.92	0.2	3	79.5	120.4
137	Ba	159	No Gas	-0.005	ppb	N/A	73.41	0.4	-1.25	79.5	120.4
182	W	159	No Gas	0.003	ppb	30.2	80.09	1	0.3	79.5	120.4
205	Tl	209	No Gas	-0.007	ppb	N/A	370.42	0.2	-3.5	79.5	120.4
208	Pb	209	No Gas	-0.036	ppb	N/A	824.27	0.2	-18	79.5	120.4
232	Th	209	No Gas	0.009	ppb	28.9	580.66	0.2	4.5	79.5	120.4
238	U	209	No Gas	0.000	ppb	238.2	23.36	0.2	0	79.5	120.4

QC Flag
Failed DoD □ Failed 6020/EPA
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Low Level Initial Calibration Verification (LLICV) Report

QC Flag
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QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4383873.41	1.0	4285305.73	102.3	29.5	120.4	
Sc	45	No Gas	8910428.34	0.6	8716701.08	102.22	29.5	120.4	
Sc	45	H2	1072616.63	2.6	1073440.43	99.92	29.5	120.4	
Sc	45	He	282834.90	0.0	283880.71	99.63	29.5	120.4	
Ge	72	No Gas	1752540.18	0.8	1715165.05	102.18	29.5	120.4	
Ge	72	H2	354717.08	2.5	363056.55	97.7	29.5	120.4	
Ge	72	He	176071.80	1.1	177772.18	99.04	29.5	120.4	
Y	89	H2	5377571.34	1.6	5502376.66	97.73	29.5	120.4	
Y	89	He	1478465.15	0.5	1468553.09	100.67	29.5	120.4	
Tb	159	No Gas	15346283.10	0.0	15204271.44	100.93	29.5	120.4	
Tb	159	He	5845838.39	1.7	5847670.12	99.97	29.5	120.4	
Bi	209	No Gas	7071327.01	1.3	6985104.03	101.23	29.5	120.4	

Low Level Initial Calibration Verification (LLICV) Report

Sample Name	PQL
File Name	012LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:24:27
Sample Type	LLICV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High	QC Flag
9	Be	6	No Gas	0.198	ppb	4.2	1004.51	0.2	99	79.5	120.4	
11	B	6	No Gas	3.972	ppb	3.0	16256.31	4	99.3	79.5	120.4	
23	Na	45	He	219.245	ppb	0.5	99773.66	200	109.62	79.5	120.4	
24	Mg	45	He	19.597	ppb	6.1	4618.83	20	97.99	79.5	120.4	
27	Al	45	He	19.684	ppb	11.6	1661.27	20	98.42	79.5	120.4	
28	Si	45	H2	101.934	ppb	3.6	19672.49	100	101.93	79.5	120.4	
39	K	45	He	214.449	ppb	2.0	57066.09	200	107.22	79.5	120.4	
40	Ca	45	H2	20.998	ppb	1.2	31496.86	20	104.99	79.5	120.4	
51	V	89	He	0.988	ppb	3.8	3217.16	1	98.8	79.5	120.4	
52	Cr	89	He	1.032	ppb	4.3	4504.62	1	103.2	79.5	120.4	
55	Mn	89	He	0.404	ppb	5.9	834.54	0.4	101	79.5	120.4	
56	Fe	89	H2	23.537	ppb	4.3	108358.97	20	117.68	79.5	120.4	
59	Co	89	He	0.213	ppb	6.3	1295.72	0.2	106.5	79.5	120.4	
60	Ni	89	He	0.430	ppb	3.8	1212.32	0.4	107.5	79.5	120.4	
63	Cu	89	He	0.675	ppb	6.4	3890.68	0.6	112.5	79.5	120.4	
66	Zn	89	He	2.035	ppb	9.2	1826.85	2	101.75	79.5	120.4	
75	As	89	He	0.954	ppb	6.0	806.78	1	95.4	79.5	120.4	
78	Se	89	H2	0.977	ppb	8.1	197.82	1	97.7	79.5	120.4	
88	Sr	89	He	1.003	ppb	3.5	2018.00	1	100.3	79.5	120.4	
95	Mo	89	He	1.016	ppb	4.1	2365.84	1	101.6	79.5	120.4	
107	Ag	89	He	0.232	ppb	11.1	1670.17	0.2	116	79.5	120.4	
111	Cd	89	He	0.198	ppb	6.7	183.71	0.2	99	79.5	120.4	
118	Sn	159	He	1.030	ppb	3.5	2342.51	1	103	79.5	120.4	
121	Sb	159	No Gas	0.205	ppb	2.0	3103.81	0.2	102.5	79.5	120.4	
137	Ba	159	No Gas	0.428	ppb	5.1	2382.86	0.4	107	79.5	120.4	
182	W	159	No Gas	1.020	ppb	7.0	11197.37	1	102	79.5	120.4	
205	Tl	209	No Gas	0.223	ppb	6.1	5036.65	0.2	111.5	79.5	120.4	
208	Pb	209	No Gas	0.196	ppb	3.3	7843.08	0.2	98	79.5	120.4	
232	Th	209	No Gas	0.197	ppb	9.7	5692.49	0.2	98.5	79.5	120.4	
238	U	209	No Gas	0.223	ppb	0.5	5921.40	0.2	111.5	79.5	120.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4343946.81	1.6	4285305.73	101.37	29.5	120.4	
Sc	45	No Gas	8741794.82	2.1	8716701.08	100.29	29.5	120.4	
Sc	45	H2	1068749.18	2.2	1073440.43	99.56	29.5	120.4	
Sc	45	He	283452.62	0.8	283880.71	99.85	29.5	120.4	
Ge	72	No Gas	1717784.81	1.6	1715165.05	100.15	29.5	120.4	
Ge	72	H2	353373.43	2.0	363056.55	97.33	29.5	120.4	
Ge	72	He	175474.27	0.9	177772.18	98.71	29.5	120.4	
Y	89	H2	5402776.39	3.1	5502376.66	98.19	29.5	120.4	
Y	89	He	1469120.62	1.5	1468553.09	100.04	29.5	120.4	
Tb	159	No Gas	15173236.30	2.0	15204271.44	99.8	29.5	120.4	
Tb	159	He	5886278.18	0.4	5847670.12	100.66	29.5	120.4	
Bi	209	No Gas	6997131.83	1.2	6985104.03	100.17	29.5	120.4	

Interference Check Solution A (ICS-A) Report

Sample Name	ICSA
File Name	013ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:27:08
Sample Type	ICSA
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Low	%High	QC Flag
Be	9	6	No Gas	0.005	ppb	85.8	45.56	-0.1	100	100	
B	11	6	No Gas	0.313	ppb	9.6	4256.33	-2	100	100	
Na	23	45	He	100008.551	ppb	0.8	35672035.78	100000	80	120	
Mg	24	45	He	96860.830	ppb	0.5	20806425.52	100000	80	120	
Al	27	45	He	99043.801	ppb	1.0	7773047.03	100000	80	120	
Si	28	45	H2	2.847	ppb	46.4	5787.69	-50	100	100	
K	39	45	He	97618.233	ppb	1.4	16637170.39	100000	80	120	
Ca	40	45	H2	100493.456	ppb	0.9	125978322.57	100000	80	120	
V	51	89	He	-0.028	ppb	N/A	240.01	-0.5	100	100	
Cr	52	89	He	2.022	ppb	0.2	7847.45	1.8	100	100	
Mn	55	89	He	0.483	ppb	6.1	929.20	0.55211	100	100	DoD
Fe	56	89	H2	99011.399	ppb	2.3	391615101.31	100000	80	120	
Co	59	89	He	0.077	ppb	16.9	504.50	0.04	100	100	
Ni	60	89	He	0.118	ppb	8.5	702.27	0.02	100	100	
Cu	63	89	He	0.523	ppb	6.6	3146.02	0.184875	100	100	
Zn	66	89	He	0.669	ppb	21.9	981.19	-0.72	100	100	
As	75	89	He	0.035	ppb	86.5	362.71	-0.5	100	100	
Se	78	89	H2	0.230	ppb	13.4	45.67	-0.5	100	100	
Sr	88	89	He	1.063	ppb	1.0	2055.79	0.41	100	100	
Mo	95	89	He	1969.425	ppb	0.7	4276282.02	2000	80	120	
Ag	107	89	He	0.285	ppb	2.1	1962.44	0.2	100	100	
Cd	111	89	He	0.395	ppb	5.6	351.49	0.2743	100	100	
Sn	118	159	He	0.044	ppb	102.4	473.36	-0.5	100	100	
Sb	121	159	No Gas	0.055	ppb	6.0	914.39	-0.1	100	100	
Ba	137	159	No Gas	0.294	ppb	8.9	1621.92	0.1	100	100	
W	182	159	No Gas	0.130	ppb	5.4	1435.04	-0.3	100	100	
Tl	205	209	No Gas	-0.005	ppb	N/A	363.75	-0.1	100	100	
Pb	208	209	No Gas	0.069	ppb	13.0	3640.96	-0.1	100	100	
Th	232	209	No Gas	0.058	ppb	17.1	1725.38	-0.1	100	100	
U	238	209	No Gas	0.003	ppb	9.9	76.75	-0.1	100	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4077422.75	1.1	4285305.73	95.15	29.5	120.4	
Sc	45	No Gas	8451252.41	0.9	8716701.08	96.95	29.5	120.4	
Sc	45	H2	1038890.27	0.7	1073440.43	96.78	29.5	120.4	
Sc	45	He	274809.86	0.8	283880.71	96.8	29.5	120.4	
Ge	72	No Gas	1654779.75	1.7	1715165.05	96.48	29.5	120.4	
Ge	72	H2	334825.09	1.0	363056.55	92.22	29.5	120.4	
Ge	72	He	169059.12	1.1	177772.18	95.1	29.5	120.4	
Y	89	H2	5185675.03	1.5	5502376.66	94.24	29.5	120.4	
Y	89	He	1412149.29	1.5	1468553.09	96.16	29.5	120.4	
Tb	159	No Gas	14774452.70	1.1	15204271.44	97.17	29.5	120.4	
Tb	159	He	5528919.85	0.8	5847670.12	94.55	29.5	120.4	
Bi	209	No Gas	6364553.96	1.5	6985104.03	91.12	29.5	120.4	

Interference Check Solution AB (ICS-AB) Report

Sample Name	ICSAB
File Name	014ICSB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:29:43
Sample Type	ICSB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Low	%High	QC Flag
9	Be	6	No Gas	19.411	ppb	2.4	91489.05	20	79.5	120.4	
11	B	6	No Gas	19.834	ppb	1.1	63539.41	20	79.5	120.4	
23	Na	45	He	99036.231	ppb	0.7	36548452.58	100000	79.5	120.4	
24	Mg	45	He	95835.276	ppb	0.7	21300002.88	100000	79.5	120.4	
27	Al	45	He	97815.857	ppb	0.8	7942795.86	100000	79.5	120.4	
28	Si	45	H2	514.176	ppb	1.8	74792.23	500	79.5	120.4	
39	K	45	He	97492.032	ppb	0.7	17191997.38	100000	79.5	120.4	
40	Ca	45	H2	102966.953	ppb	0.4	129441991.41	100000	79.5	120.4	
51	V	89	He	20.063	ppb	1.8	58193.46	20	79.5	120.4	
52	Cr	89	He	21.349	ppb	1.2	78610.56	20	79.5	120.4	
55	Mn	89	He	19.968	ppb	0.4	32846.86	20	79.5	120.4	
56	Fe	89	H2	99897.639	ppb	1.7	404312955.38	100000	79.5	120.4	
59	Co	89	He	19.491	ppb	2.2	109291.07	20	79.5	120.4	
60	Ni	89	He	19.112	ppb	2.1	29723.42	20	79.5	120.4	
63	Cu	89	He	19.528	ppb	1.1	80046.50	20	79.5	120.4	
66	Zn	89	He	20.145	ppb	1.3	12361.49	20	79.5	120.4	
75	As	89	He	19.919	ppb	0.4	9552.99	20	79.5	120.4	
78	Se	89	H2	20.272	ppb	1.6	4008.57	20	79.5	120.4	
88	Sr	89	He	20.637	ppb	1.3	40701.18	20	79.5	120.4	
95	Mo	89	He	1980.920	ppb	1.2	4421013.23	2000	79.5	120.4	
107	Ag	89	He	18.322	ppb	1.4	128257.75	20	79.5	120.4	
111	Cd	89	He	19.157	ppb	0.4	17486.62	20	79.5	120.4	
118	Sn	159	He	20.148	ppb	1.8	35918.88	20	79.5	120.4	
121	Sb	159	No Gas	19.800	ppb	0.3	277697.99	20	79.5	120.4	
137	Ba	159	No Gas	20.210	ppb	0.1	104567.17	20	79.5	120.4	
182	W	159	No Gas	19.679	ppb	1.2	208746.76	20	79.5	120.4	
205	Tl	209	No Gas	21.528	ppb	1.4	397188.48	20	79.5	120.4	
208	Pb	209	No Gas	19.988	ppb	1.4	550107.73	20	79.5	120.4	
232	Th	209	No Gas	22.770	ppb	2.2	564720.59	20	79.5	120.4	
238	U	209	No Gas	22.305	ppb	1.0	536864.32	20	79.5	120.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4114821.60	2.3	4285305.73	96.02	29.5	120.4	
Sc	45	No Gas	8699072.00	2.0	8716701.08	99.8	29.5	120.4	
Sc	45	H2	1041784.49	1.2	1073440.43	97.05	29.5	120.4	
Sc	45	He	284345.64	0.8	283880.71	100.16	29.5	120.4	
Ge	72	No Gas	1700382.37	1.6	1715165.05	99.14	29.5	120.4	
Ge	72	H2	342480.20	1.1	363056.55	94.33	29.5	120.4	
Ge	72	He	174956.54	1.2	177772.18	98.42	29.5	120.4	
Y	89	H2	5306039.39	1.7	5502376.66	96.43	29.5	120.4	
Y	89	He	1451552.83	1.2	1468553.09	98.84	29.5	120.4	
Tb	159	No Gas	14707610.20	0.8	15204271.44	96.73	29.5	120.4	
Tb	159	He	5566132.14	1.1	5847670.12	95.19	29.5	120.4	
Bi	209	No Gas	6351000.41	2.2	6985104.03	90.92	29.5	120.4	

Linear Range Sample (LRS) Report

Sample Name	LRS1
File Name	015_LRS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:32:25
Sample Type	LRS
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High	QC Flag
9	Be	6	No Gas	96.706	ppb	2.8	474060.07	100	96.71	89.5	110.4	
11	B	6	No Gas	483.762	ppb	2.2	1530545.57	500	96.75	89.5	110.4	
51	V	89	He	1009.344	ppb	1.4	2783446.94	1000	100.93	89.5	110.4	
52	Cr	89	He	1875.197	ppb	1.8	6543517.91	2000	93.76	89.5	110.4	
55	Mn	89	He	1887.192	ppb	0.9	2952968.95	2000	94.36	89.5	110.4	
59	Co	89	He	1022.686	ppb	1.0	5478355.89	1000	102.27	89.5	110.4	
60	Ni	89	He	1028.596	ppb	1.2	1502105.08	1000	102.86	89.5	110.4	
63	Cu	89	He	2009.959	ppb	1.1	7767365.65	2000	100.5	89.5	110.4	
66	Zn	89	He	1978.182	ppb	1.2	1102862.96	2000	98.91	89.5	110.4	
75	As	89	He	978.418	ppb	1.1	432183.74	1000	97.84	89.5	110.4	
78	Se	89	H2	962.276	ppb	2.4	190873.60	1000	96.23	89.5	110.4	
88	Sr	89	He	1947.218	ppb	0.3	3669728.49	2000	97.36	89.5	110.4	
95	Mo	89	He	1023.877	ppb	1.3	2184597.96	1000	102.39	89.5	110.4	
107	Ag	89	He	99.996	ppb	1.2	669107.43	100	100	89.5	110.4	
111	Cd	89	He	1028.607	ppb	0.8	897581.27	1000	102.86	89.5	110.4	
118	Sn	159	He	1020.068	ppb	1.1	1812510.65	1000	102.01	89.5	110.4	
121	Sb	159	No Gas	925.774	ppb	3.2	13559697.34	1000	92.58	89.5	110.4	
137	Ba	159	No Gas	1770.381	ppb	2.2	9563218.19	2000	88.52	89.5	110.4	> +/- 10%
182	W	159	No Gas	932.990	ppb	1.1	10341816.14	1000	93.3	89.5	110.4	
205	Tl	209	No Gas	1003.476	ppb	1.2	20844610.33	1000	100.35	89.5	110.4	
208	Pb	209	No Gas	1823.270	ppb	2.5	56378684.92	2000	91.16	89.5	110.4	
232	Th	209	No Gas	1005.848	ppb	1.8	28106537.21	1000	100.58	89.5	110.4	
238	U	209	No Gas	972.380	ppb	1.7	26381213.20	1000	97.24	89.5	110.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4280624.01	2.4	4285305.73	99.89	29.5	120.4	
Sc	45	No Gas	8838785.87	0.8	8716701.08	101.4	29.5	120.4	
Ge	72	No Gas	1749601.70	1.2	1715165.05	102.01	29.5	120.4	
Tb	159	No Gas	15373726.58	2.3	15204271.44	101.11	29.5	120.4	
Bi	209	No Gas	7158080.59	1.4	6985104.03	102.48	29.5	120.4	
Sc	45	H2	1014674.47	0.9	1073440.43	94.53	29.5	120.4	
Ge	72	H2	332575.34	2.3	363056.55	91.6	29.5	120.4	
Y	89	H2	5325264.98	1.9	5502376.66	96.78	29.5	120.4	
Sc	45	He	262823.03	0.6	283880.71	92.58	29.5	120.4	
Ge	72	He	166599.74	0.5	177772.18	93.72	29.5	120.4	
Y	89	He	1387740.69	1.4	1468553.09	94.5	29.5	120.4	
Tb	159	He	5608331.93	0.8	5847670.12	95.91	29.5	120.4	

Sample Report

Sample Name LRS2

File Name 016SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 09:34:46

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.145	ppb	45.5	674.49	100	
11	B	6	No Gas	11.296	ppb	6.6	36033.63	1000	
23	Na	45	He	194204.459	ppb	1.1	74020175.90	200000	
24	Mg	45	He	188551.619	ppb	1.0	43291942.69	200000	
27	Al	45	He	197263.591	ppb	1.2	16547329.61	200000	
28	Si	45	H2	9464.131	ppb	2.2	1312354.51	10000	
39	K	45	He	196449.472	ppb	1.3	35766449.44	200000	
40	Ca	45	H2	202534.271	ppb	2.3	260571211.67	200000	>LDR
51	V	89	He	0.215	ppb	8.5	971.19	1000	
52	Cr	89	He	1.431	ppb	16.9	6060.98	2000	
55	Mn	89	He	1.569	ppb	1.4	2799.11	2000	
56	Fe	89	H2	97602.280	ppb	0.5	402129929.10	100000	
59	Co	89	He	1.490	ppb	1.2	8643.39	1000	
60	Ni	89	He	1.440	ppb	2.4	2808.18	1000	
63	Cu	89	He	1.658	ppb	2.7	8012.59	2000	
66	Zn	89	He	7.630	ppb	3.5	5192.28	2000	
75	As	89	He	0.364	ppb	12.6	537.40	1000	
78	Se	89	H2	0.700	ppb	9.7	142.16	1000	
88	Sr	89	He	3.082	ppb	1.7	6240.53	2000	
95	Mo	89	He	1.348	ppb	3.2	3152.72	1000	
107	Ag	89	He	0.061	ppb	8.4	464.47	100	
111	Cd	89	He	0.203	ppb	0.6	190.38	1000	
118	Sn	159	He	1.166	ppb	6.5	2445.88	1000	
121	Sb	159	No Gas	1.305	ppb	34.7	18610.71	1000	
137	Ba	159	No Gas	2.500	ppb	38.3	13169.66	2000	
182	W	159	No Gas	2.399	ppb	21.4	25673.25	1000	
205	Tl	209	No Gas	0.875	ppb	53.1	16349.30	1000	
208	Pb	209	No Gas	2.712	ppb	37.2	74936.11	2000	
232	Th	209	No Gas	3.118	ppb	30.4	76290.15	1000	
238	U	209	No Gas	1.562	ppb	47.8	37028.00	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3942763.67	2.9	4285305.73	92.01	29.5	120.4	
Sc	45	No Gas	8523695.37	1.7	8716701.08	97.79	29.5	120.4	
Sc	45	H2	1066196.04	1.7	1073440.43	99.33	29.5	120.4	
Sc	45	He	293732.26	0.9	283880.71	103.47	29.5	120.4	
Ge	72	No Gas	1652337.54	2.3	1715165.05	96.34	29.5	120.4	
Ge	72	H2	340319.40	3.3	363056.55	93.74	29.5	120.4	
Ge	72	He	179131.57	1.1	177772.18	100.76	29.5	120.4	
Y	89	H2	5400743.52	2.4	5502376.66	98.15	29.5	120.4	
Y	89	He	1487188.99	1.0	1468553.09	101.27	29.5	120.4	
Tb	159	No Gas	14754835.47	3.3	15204271.44	97.04	29.5	120.4	
Tb	159	He	5545874.78	1.1	5847670.12	94.84	29.5	120.4	
Bi	209	No Gas	6233720.64	1.9	6985104.03	89.24	29.5	120.4	

Sample Report

Sample Name RINSE

File Name 017SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 09:37:31

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.010	ppb	54.1	73.34	100	
11	B	6	No Gas	1.124	ppb	2.9	7376.58	1000	
23	Na	45	He	126.746	ppb	63.3	69010.39	200000	
24	Mg	45	He	76.389	ppb	93.6	18119.72	200000	
27	Al	45	He	76.075	ppb	90.7	6557.52	200000	
28	Si	45	H2	3.787	ppb	40.0	6291.76	10000	
39	K	45	He	95.693	ppb	79.1	37976.42	200000	
40	Ca	45	H2	36.578	ppb	16.2	53297.68	200000	
51	V	89	He	0.174	ppb	83.9	866.79	1000	
52	Cr	89	He	0.274	ppb	108.8	1762.21	2000	
55	Mn	89	He	0.231	ppb	127.5	566.65	2000	
56	Fe	89	H2	25.885	ppb	14.6	123057.80	100000	
59	Co	89	He	0.126	ppb	109.3	826.96	1000	
60	Ni	89	He	0.105	ppb	137.5	734.51	1000	
63	Cu	89	He	0.661	ppb	44.1	3967.76	2000	
66	Zn	89	He	0.392	ppb	81.4	887.84	2000	
75	As	89	He	0.142	ppb	136.2	441.72	1000	
78	Se	89	H2	0.085	ppb	15.4	19.33	1000	
88	Sr	89	He	0.236	ppb	106.2	502.34	2000	
95	Mo	89	He	0.786	ppb	91.1	1903.44	1000	
107	Ag	89	He	0.014	ppb	89.9	131.12	100	
111	Cd	89	He	0.116	ppb	98.9	111.12	1000	
118	Sn	159	He	0.331	ppb	47.9	1036.78	1000	
121	Sb	159	No Gas	0.054	ppb	38.5	921.09	1000	
137	Ba	159	No Gas	0.044	ppb	147.1	333.74	2000	
182	W	159	No Gas	0.163	ppb	13.7	1818.83	1000	
205	Tl	209	No Gas	0.042	ppb	90.3	1341.66	1000	
208	Pb	209	No Gas	0.070	ppb	78.9	3964.91	2000	
232	Th	209	No Gas	0.108	ppb	25.6	3217.52	1000	
238	U	209	No Gas	0.031	ppb	103.8	824.41	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4491265.64	2.9	4285305.73	104.81	29.5	120.4	
Sc	45	No Gas	9281836.40	0.3	8716701.08	106.48	29.5	120.4	
Sc	45	H2	1104963.83	0.9	1073440.43	102.94	29.5	120.4	
Sc	45	He	296278.78	1.7	283880.71	104.37	29.5	120.4	
Ge	72	No Gas	1821478.97	1.8	1715165.05	106.2	29.5	120.4	
Ge	72	H2	366069.77	1.4	363056.55	100.83	29.5	120.4	
Ge	72	He	186722.81	1.1	177772.18	105.03	29.5	120.4	
Y	89	H2	5635376.43	1.3	5502376.66	102.42	29.5	120.4	
Y	89	He	1520721.68	0.9	1468553.09	103.55	29.5	120.4	
Tb	159	No Gas	15097859.50	0.3	15204271.44	99.3	29.5	120.4	
Tb	159	He	5887571.71	1.8	5847670.12	100.68	29.5	120.4	
Bi	209	No Gas	6865481.65	1.2	6985104.03	98.29	29.5	120.4	

Sample Report

Sample Name RINSE

File Name 018SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 09:40:08

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.008	ppb	42.3	62.22	100	
11	B	6	No Gas	0.611	ppb	7.0	5623.52	1000	
23	Na	45	He	80.529	ppb	62.6	50348.16	200000	
24	Mg	45	He	59.410	ppb	81.9	13907.84	200000	
27	Al	45	He	55.478	ppb	85.8	4721.17	200000	
28	Si	45	H2	0.447	ppb	415.1	5711.16	10000	
39	K	45	He	69.849	ppb	79.9	32693.05	200000	
40	Ca	45	H2	10.954	ppb	29.6	18829.39	200000	
51	V	89	He	0.148	ppb	58.5	785.65	1000	
52	Cr	89	He	0.218	ppb	68.9	1543.45	2000	
55	Mn	89	He	0.206	ppb	74.7	520.63	2000	
56	Fe	89	H2	8.759	ppb	31.5	49033.62	100000	
59	Co	89	He	0.115	ppb	66.5	762.49	1000	
60	Ni	89	He	0.084	ppb	106.6	697.84	1000	
63	Cu	89	He	0.445	ppb	30.3	3036.29	2000	
66	Zn	89	He	0.356	ppb	52.2	861.18	2000	
75	As	89	He	0.131	ppb	57.6	434.06	1000	
78	Se	89	H2	0.047	ppb	21.8	11.17	1000	
88	Sr	89	He	0.200	ppb	74.8	426.76	2000	
95	Mo	89	He	0.436	ppb	52.0	1084.71	1000	
107	Ag	89	He	0.013	ppb	53.0	124.45	100	
111	Cd	89	He	0.122	ppb	79.6	116.30	1000	
118	Sn	159	He	0.209	ppb	48.1	797.85	1000	
121	Sb	159	No Gas	0.048	ppb	37.9	850.98	1000	
137	Ba	159	No Gas	0.069	ppb	68.9	477.21	2000	
182	W	159	No Gas	0.096	ppb	20.3	1121.31	1000	
205	Tl	209	No Gas	0.037	ppb	67.1	1278.20	1000	
208	Pb	209	No Gas	0.072	ppb	55.3	4118.29	2000	
232	Th	209	No Gas	0.086	ppb	27.0	2690.01	1000	
238	U	209	No Gas	0.035	ppb	56.6	957.81	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4448587.86	1.4	4285305.73	103.81	29.5	120.4	
Sc	45	No Gas	9221266.67	0.3	8716701.08	105.79	29.5	120.4	
Sc	45	H2	1085128.62	1.9	1073440.43	101.09	29.5	120.4	
Sc	45	He	291991.07	1.2	283880.71	102.86	29.5	120.4	
Ge	72	No Gas	1805952.58	0.5	1715165.05	105.29	29.5	120.4	
Ge	72	H2	354548.39	1.7	363056.55	97.66	29.5	120.4	
Ge	72	He	182263.69	0.8	177772.18	102.53	29.5	120.4	
Y	89	H2	5577493.03	1.6	5502376.66	101.37	29.5	120.4	
Y	89	He	1512530.92	1.4	1468553.09	102.99	29.5	120.4	
Tb	159	No Gas	15553455.05	1.1	15204271.44	102.3	29.5	120.4	
Tb	159	He	5802923.25	2.6	5847670.12	99.23	29.5	120.4	
Bi	209	No Gas	7036320.92	1.5	6985104.03	100.73	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	019_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:42:48
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	24.753	ppb	3.3	124524.49	25	99.01	89.8	110.2	
11	B	6	No Gas	24.600	ppb	2.2	83264.74	25	98.4	89.8	110.2	
23	Na	45	He	5365.052	ppb	0.8	2022852.94	5000	107.3	89.8	110.2	
24	Mg	45	He	5225.760	ppb	1.2	1176087.74	5000	104.52	89.8	110.2	
27	Al	45	He	504.755	ppb	1.9	41562.50	500	100.95	89.8	110.2	
28	Si	45	H2	482.270	ppb	1.6	72644.41	500	96.45	89.8	110.2	
39	K	45	He	5192.776	ppb	1.0	945665.98	5000	103.86	89.8	110.2	
40	Ca	45	H2	5152.061	ppb	1.5	6678705.94	5000	103.04	89.8	110.2	
51	V	89	He	26.014	ppb	1.3	77243.32	25	104.06	89.8	110.2	
52	Cr	89	He	26.074	ppb	1.2	98247.84	25	104.3	89.8	110.2	
55	Mn	89	He	25.560	ppb	0.7	43044.22	25	102.24	89.8	110.2	
56	Fe	89	H2	5095.152	ppb	1.8	21527796.83	5000	101.9	89.8	110.2	
59	Co	89	He	26.180	ppb	0.3	150448.60	25	104.72	89.8	110.2	
60	Ni	89	He	26.069	ppb	0.9	41357.56	25	104.28	89.8	110.2	
63	Cu	89	He	26.350	ppb	0.5	110305.68	25	105.4	89.8	110.2	
66	Zn	89	He	25.425	ppb	2.0	15822.85	25	101.7	89.8	110.2	
75	As	89	He	26.100	ppb	1.2	12715.20	25	104.4	89.8	110.2	
78	Se	89	H2	25.068	ppb	1.3	5171.72	25	100.27	89.8	110.2	
88	Sr	89	He	25.039	ppb	0.8	50607.50	25	100.16	89.8	110.2	
95	Mo	89	He	25.414	ppb	1.7	58201.49	25	101.66	89.8	110.2	
107	Ag	89	He	25.670	ppb	1.3	184167.39	25	102.68	89.8	110.2	
111	Cd	89	He	25.766	ppb	1.3	24104.90	25	103.06	89.8	110.2	
118	Sn	159	He	25.870	ppb	0.4	47916.23	25	103.48	89.8	110.2	
121	Sb	159	No Gas	26.021	ppb	3.0	383096.65	25	104.08	89.8	110.2	
137	Ba	159	No Gas	25.788	ppb	1.6	140079.70	25	103.15	89.8	110.2	
182	W	159	No Gas	25.005	ppb	1.8	278559.74	25	100.02	89.8	110.2	
205	Tl	209	No Gas	27.645	ppb	2.3	565566.76	25	110.58	89.8	110.2	> +/- 10%
208	Pb	209	No Gas	25.766	ppb	1.9	785955.01	25	103.06	89.8	110.2	
232	Th	209	No Gas	27.377	ppb	2.9	753002.67	25	109.51	89.8	110.2	
238	U	209	No Gas	27.278	ppb	2.5	728135.87	25	109.11	89.8	110.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4392320.66	1.7	4285305.73	102.5	29.5	120.4	
Sc	45	No Gas	9113985.85	1.6	8716701.08	104.56	29.5	120.4	
Sc	45	H2	1073559.09	0.4	1073440.43	100.01	29.5	120.4	
Sc	45	He	287852.46	0.5	283880.71	101.4	29.5	120.4	
Ge	72	No Gas	1797492.22	2.7	1715165.05	104.8	29.5	120.4	
Ge	72	H2	350381.29	1.1	363056.55	96.51	29.5	120.4	
Ge	72	He	180219.88	0.5	177772.18	101.38	29.5	120.4	
Y	89	H2	5536142.61	1.4	5502376.66	100.61	29.5	120.4	
Y	89	He	1487743.59	1.1	1468553.09	101.31	29.5	120.4	
Tb	159	No Gas	15447415.33	2.4	15204271.44	101.6	29.5	120.4	
Tb	159	He	5796404.50	0.5	5847670.12	99.12	29.5	120.4	
Bi	209	No Gas	7044245.20	1.9	6985104.03	100.85	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	020_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:45:21
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.028	ppb	59.0	163.34	0.2	
11	B	6	No Gas	0.510	ppb	7.0	5215.57	4	
23	Na	45	He	8.639	ppb	63.1	22657.71	200	
24	Mg	45	He	4.917	ppb	69.6	1384.84	20	
27	Al	45	He	2.756	ppb	112.3	295.59	20	
28	Si	45	H2	1.048	ppb	102.6	5787.71	100	
39	K	45	He	9.126	ppb	67.8	21321.60	200	
40	Ca	45	H2	2.224	ppb	16.1	7391.09	20	
51	V	89	He	0.007	ppb	154.6	357.80	1	
52	Cr	89	He	0.024	ppb	72.7	795.22	1	
55	Mn	89	He	0.002	ppb	957.0	171.97	0.4	
56	Fe	89	H2	3.109	ppb	7.0	24980.09	20	
59	Co	89	He	0.013	ppb	93.1	166.68	0.2	
60	Ni	89	He	-0.015	ppb	N/A	532.25	0.4	
63	Cu	89	He	0.169	ppb	16.9	1851.31	0.6	
66	Zn	89	He	-0.047	ppb	N/A	607.81	2	
75	As	89	He	0.062	ppb	15.1	395.38	1	
78	Se	89	H2	0.042	ppb	25.2	10.00	1	
88	Sr	89	He	0.021	ppb	103.7	60.01	1	
95	Mo	89	He	0.121	ppb	32.9	346.69	1	
107	Ag	89	He	0.012	ppb	47.7	112.23	0.2	
111	Cd	89	He	0.017	ppb	94.6	16.66	0.2	
118	Sn	159	He	0.096	ppb	8.6	598.93	1	
121	Sb	159	No Gas	0.032	ppb	1.4	630.72	0.2	
137	Ba	159	No Gas	0.024	ppb	40.5	236.95	0.4	
182	W	159	No Gas	0.085	ppb	16.1	1017.85	1	
205	Tl	209	No Gas	0.019	ppb	44.7	897.71	0.2	
208	Pb	209	No Gas	0.027	ppb	36.9	2756.54	0.2	
232	Th	209	No Gas	0.174	ppb	5.5	5110.15	1	
238	U	209	No Gas	0.029	ppb	20.8	780.90	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4383400.80	1.7	4285305.73	102.29	29.5	120.4	
Sc	45	No Gas	9156053.44	1.8	8716701.08	105.04	29.5	120.4	
Sc	45	H2	1084399.63	1.5	1073440.43	101.02	29.5	120.4	
Sc	45	He	287553.27	1.2	283880.71	101.29	29.5	120.4	
Ge	72	No Gas	1801794.43	3.0	1715165.05	105.05	29.5	120.4	
Ge	72	H2	356702.36	1.7	363056.55	98.25	29.5	120.4	
Ge	72	He	182455.94	1.1	177772.18	102.63	29.5	120.4	
Y	89	H2	5569062.56	1.3	5502376.66	101.21	29.5	120.4	
Y	89	He	1490687.77	1.9	1468553.09	101.51	29.5	120.4	
Tb	159	No Gas	15767626.85	0.8	15204271.44	103.71	29.5	120.4	
Tb	159	He	5867429.29	1.6	5847670.12	100.34	29.5	120.4	
Bi	209	No Gas	7063651.63	0.3	6985104.03	101.12	29.5	120.4	

Prep Blank (PB) Report

Sample Name	PBWOI23IMW2
File Name	021_PB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:48:00
Sample Type	PB
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	6	No Gas	0.036	ppb	53.9	56.67	0.5	
B	11	6	No Gas	1.630	ppb	5.0	4563.10	10	
Na	23	45	He	73.692	ppb	2.2	24598.25	500	
Mg	24	45	He	13.255	ppb	23.2	864.53	50	
Al	27	45	He	11.188	ppb	9.4	250.01	50	
Si	28	45	H2	9.740	ppb	26.9	5670.93	250	
K	39	45	He	9.310	ppb	216.7	19753.19	500	
Ca	40	45	H2	30.109	ppb	2.1	11857.61	50	
V	51	89	He	0.907	ppb	6.5	870.06	2.5	
Cr	52	89	He	0.517	ppb	91.6	1084.16	2.5	
Mn	55	89	He	0.352	ppb	13.6	285.29	1	
Fe	56	89	H2	22.569	ppb	5.4	29975.76	50	
Co	59	89	He	0.046	ppb	25.6	142.24	0.5	
Ni	60	89	He	0.073	ppb	185.1	575.59	1	
Cu	63	89	He	2.489	ppb	9.2	3196.04	1.5	PB 6020 Fails DoD
Zn	66	89	He	3.742	ppb	16.0	1077.86	5	
As	75	89	He	0.154	ppb	56.5	378.72	2.5	
Se	78	89	H2	0.157	ppb	30.3	7.67	2.5	
Sr	88	89	He	0.044	ppb	88.7	34.45	2.5	
Mo	95	89	He	0.305	ppb	6.7	210.01	2.5	
Ag	107	89	He	0.022	ppb	66.9	57.78	0.5	
Cd	111	89	He	0.020	ppb	1.6	4.44	0.5	
Sn	118	159	He	0.792	ppb	29.4	693.42	2.5	
Sb	121	159	No Gas	0.046	ppb	39.7	280.32	0.5	
Ba	137	159	No Gas	0.062	ppb	83.7	170.19	1	
W	182	159	No Gas	0.218	ppb	12.9	537.28	2.5	
Tl	205	209	No Gas	0.005	ppb	43.4	537.28	0.5	
Pb	208	209	No Gas	0.080	ppb	14.0	2419.48	0.5	
Th	232	209	No Gas	0.452	ppb	6.7	2810.15	2.5	
U	238	209	No Gas	0.020	ppb	11.0	123.47	0.5	

QC ISTD Table

Prep Blank (PB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4329323.13	1.2	4285305.73	101.03	29.5	120.4	
Sc	45	No Gas	8986719.32	0.4	8716701.08	103.1	29.5	120.4	
Sc	45	H2	1039790.42	2.4	1073440.43	96.87	29.5	120.4	
Sc	45	He	283667.29	1.0	283880.71	99.92	29.5	120.4	
Ge	72	No Gas	1775740.99	1.2	1715165.05	103.53	29.5	120.4	
Ge	72	H2	336856.56	2.7	363056.55	92.78	29.5	120.4	
Ge	72	He	174746.81	0.4	177772.18	98.3	29.5	120.4	
Y	89	H2	5394219.55	2.2	5502376.66	98.03	29.5	120.4	
Y	89	He	1482344.89	1.3	1468553.09	100.94	29.5	120.4	
Tb	159	No Gas	15571115.88	0.9	15204271.44	102.41	29.5	120.4	
Tb	159	He	5683587.14	1.5	5847670.12	97.19	29.5	120.4	
Bi	209	No Gas	7053125.48	0.8	6985104.03	100.97	29.5	120.4	

Laboratory Control Sample (LCS) Report

Sample Name	LCSWOI23IMW2
File Name	022LCSW.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:50:34
Sample Type	LCSW
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	6	No Gas	49.410	ppb	1.8	49026.00	50	19.76	79.5	120.4	
B	11	6	No Gas	484.940	ppb	1.2	313231.32	500	19.4	79.5	120.4	
Na	23	45	He	8545.785	ppb	3.9	648531.21	7500	22.79	79.5	120.4	
Mg	24	45	He	5191.601	ppb	1.5	230620.89	5000	20.77	79.5	120.4	
Al	27	45	He	2007.862	ppb	4.4	32608.02	2000	20.08	79.5	120.4	
Si	28	45	H2	967.924	ppb	3.5	31647.04	1000	19.36	0	200	
K	39	45	He	11330.291	ppb	1.6	417843.12	10000	22.66	79.5	120.4	
Ca	40	45	H2	2560.263	ppb	0.4	650301.20	2500	20.48	79.5	120.4	
V	51	89	He	515.596	ppb	2.1	299319.97	500	20.62	79.5	120.4	
Cr	52	89	He	207.311	ppb	1.8	152819.68	200	20.73	79.5	120.4	
Mn	55	89	He	517.547	ppb	0.6	170470.37	500	20.7	79.5	120.4	
Fe	56	89	H2	1075.596	ppb	2.0	900065.12	1000	21.51	79.5	120.4	
Co	59	89	He	536.508	ppb	2.0	604483.93	500	21.46	79.5	120.4	
Ni	60	89	He	537.445	ppb	2.1	165543.04	500	21.5	79.5	120.4	
Cu	63	89	He	270.534	ppb	0.8	220966.41	250	21.64	79.5	120.4	
Zn	66	89	He	517.563	ppb	0.9	61276.55	500	20.7	79.5	120.4	
As	75	89	He	104.670	ppb	1.6	10074.41	100	20.93	79.5	120.4	
Se	78	89	H2	101.001	ppb	2.8	4076.25	100	20.2	79.5	120.4	
Sr	88	89	He	512.468	ppb	1.3	203112.71	500	20.5	79.5	120.4	
Mo	95	89	He	101.925	ppb	1.9	45803.32	100	20.39	79.5	120.4	
Ag	107	89	He	53.155	ppb	2.2	74821.69	50	21.26	79.5	120.4	
Cd	111	89	He	257.042	ppb	1.3	47172.99	250	20.56	79.5	120.4	
Sn	118	159	He	515.600	ppb	1.0	190988.68	500	20.62	79.5	120.4	
Sb	121	159	No Gas	102.911	ppb	3.0	307339.82	100	20.58	79.5	120.4	
Ba	137	159	No Gas	1889.986	ppb	2.8	2080563.17	2000	18.9	79.5	120.4	
W	182	159	No Gas	103.031	ppb	1.9	232767.10	100	20.61	79.5	120.4	
Tl	205	209	No Gas	113.315	ppb	2.6	461322.98	100	22.66	79.5	120.4	
[Pb]	206	209	No Gas	105.656	ppb	2.9	161115.91	100	21.13	79.5	120.4	
[Pb]	207	209	No Gas	105.889	ppb	2.5	140841.03	100	21.18	79.5	120.4	
Pb	208	209	No Gas	105.838	ppb	2.8	642643.51	100	21.17	79.5	120.4	
Th	232	209	No Gas	112.017	ppb	1.8	613174.64	100	22.4	79.5	120.4	
U	238	209	No Gas	112.806	ppb	2.7	599107.78	100	22.56	79.5	120.4	

QC ISTD Table

Laboratory Control Sample (LCS) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4329299.20	1.3	4285305.73	101.03	29.5	120.4	
Sc	45	No Gas	8866534.66	2.0	8716701.08	101.72	29.5	120.4	
Sc	45	H2	1045524.69	1.4	1073440.43	97.4	29.5	120.4	
Sc	45	He	283858.99	1.4	283880.71	99.99	29.5	120.4	
Ge	72	No Gas	1755976.44	1.7	1715165.05	102.38	29.5	120.4	
Ge	72	H2	338349.78	2.4	363056.55	93.19	29.5	120.4	
Ge	72	He	176989.45	0.6	177772.18	99.56	29.5	120.4	
Y	89	H2	5416010.98	1.9	5502376.66	98.43	29.5	120.4	
Y	89	He	1459162.81	0.5	1468553.09	99.36	29.5	120.4	
Tb	159	No Gas	15663624.77	1.5	15204271.44	103.02	29.5	120.4	
Tb	159	He	5834081.65	0.5	5847670.12	99.77	29.5	120.4	
Bi	209	No Gas	7007848.28	1.7	6985104.03	100.33	29.5	120.4	

Sample Report

Sample Name SO4723-001R

File Name 023SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 09:53:14

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.094	ppb	16.8	111.12	100	
11	B	6	No Gas	11.839	ppb	5.8	10781.05	1000	
23	Na	45	He	3320.393	ppb	0.6	256553.47	200000	
24	Mg	45	He	8625.110	ppb	0.9	372585.77	200000	
27	Al	45	He	98.669	ppb	5.4	1623.49	200000	
28	Si	45	H2	2807.007	ppb	1.5	79596.57	10000	
39	K	45	He	654.186	ppb	1.2	41294.02	200000	
40	Ca	45	H2	67443.718	ppb	1.6	16630987.81	200000	
51	V	89	He	0.537	ppb	21.0	630.04	1000	
52	Cr	89	He	0.742	ppb	18.2	1212.51	2000	
55	Mn	89	He	2.305	ppb	5.4	907.20	2000	
56	Fe	89	H2	91.586	ppb	1.8	85992.93	100000	
59	Co	89	He	0.170	ppb	25.9	275.58	1000	
60	Ni	89	He	0.455	ppb	35.4	672.26	1000	
63	Cu	89	He	3.288	ppb	4.9	3730.63	2000	
66	Zn	89	He	4.771	ppb	6.2	1161.20	2000	
75	As	89	He	0.368	ppb	14.7	385.72	1000	
78	Se	89	H2	0.214	ppb	23.1	9.83	1000	
88	Sr	89	He	518.682	ppb	1.3	202021.71	2000	
95	Mo	89	He	0.404	ppb	22.3	246.68	1000	
107	Ag	89	He	0.020	ppb	14.9	52.22	100	
111	Cd	89	He	0.053	ppb	40.2	10.37	1000	
118	Sn	159	He	0.775	ppb	27.4	697.82	1000	
121	Sb	159	No Gas	0.253	ppb	5.9	904.37	1000	
137	Ba	159	No Gas	39.400	ppb	1.1	43697.72	2000	
182	W	159	No Gas	0.329	ppb	12.2	794.24	1000	
205	Tl	209	No Gas	0.102	ppb	16.4	947.76	1000	
208	Pb	209	No Gas	0.224	ppb	19.2	3353.93	2000	
232	Th	209	No Gas	1.664	ppb	5.4	9641.20	1000	
238	U	209	No Gas	0.315	ppb	32.3	1722.08	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4210619.79	1.9	4285305.73	98.26	29.5	120.4	
Sc	45	No Gas	8737509.50	0.4	8716701.08	100.24	29.5	120.4	
Sc	45	H2	1021680.43	2.0	1073440.43	95.18	29.5	120.4	
Sc	45	He	276144.00	0.8	283880.71	97.27	29.5	120.4	
Ge	72	No Gas	1743541.34	1.5	1715165.05	101.65	29.5	120.4	
Ge	72	H2	329083.49	1.6	363056.55	90.64	29.5	120.4	
Ge	72	He	174133.51	0.3	177772.18	97.95	29.5	120.4	
Y	89	H2	5345062.32	1.6	5502376.66	97.14	29.5	120.4	
Y	89	He	1433893.56	0.4	1468553.09	97.64	29.5	120.4	
Tb	159	No Gas	15739178.65	0.9	15204271.44	103.52	29.5	120.4	
Tb	159	He	5779390.47	0.3	5847670.12	98.83	29.5	120.4	
Bi	209	No Gas	7167707.25	2.0	6985104.03	102.61	29.5	120.4	

Sample Report

Sample Name SO4723-001RA

File Name 024SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 09:55:47

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	9.734	ppb	3.5	9383.39	100	
11	B	6	No Gas	204.706	ppb	1.7	130219.73	1000	
23	Na	45	He	13991.672	ppb	1.1	1020394.82	200000	
24	Mg	45	He	9415.210	ppb	0.8	406421.38	200000	
27	Al	45	He	1070.073	ppb	0.9	16932.83	200000	
28	Si	45	H2	7556.018	ppb	1.2	205415.94	10000	
39	K	45	He	11822.650	ppb	0.9	423118.75	200000	
40	Ca	45	H2	67393.915	ppb	1.9	16630837.95	200000	
51	V	89	He	52.148	ppb	1.3	30242.26	1000	
52	Cr	89	He	53.974	ppb	4.1	39870.15	2000	
55	Mn	89	He	21.753	ppb	2.3	7243.23	2000	
56	Fe	89	H2	1124.284	ppb	2.0	917490.90	100000	
59	Co	89	He	10.560	ppb	0.6	11854.74	1000	
60	Ni	89	He	20.440	ppb	1.9	6745.21	1000	
63	Cu	89	He	35.290	ppb	1.2	29480.81	2000	
66	Zn	89	He	102.021	ppb	2.2	12441.53	2000	
75	As	89	He	51.470	ppb	1.0	5080.49	1000	
78	Se	89	H2	49.631	ppb	1.0	1955.88	1000	
88	Sr	89	He	560.876	ppb	1.2	219901.79	2000	
95	Mo	89	He	51.239	ppb	1.6	22809.77	1000	
107	Ag	89	He	8.412	ppb	0.9	11735.46	100	
111	Cd	89	He	10.139	ppb	3.3	1841.63	1000	
118	Sn	159	He	51.801	ppb	1.5	19248.82	1000	
121	Sb	159	No Gas	10.131	ppb	2.9	30498.90	1000	
137	Ba	159	No Gas	57.695	ppb	1.0	63864.65	2000	
182	W	159	No Gas	51.642	ppb	2.4	117120.58	1000	
205	Tl	209	No Gas	10.829	ppb	1.8	45623.05	1000	
208	Pb	209	No Gas	10.316	ppb	2.9	65920.76	2000	
232	Th	209	No Gas	12.031	ppb	2.9	67729.33	1000	
238	U	209	No Gas	11.182	ppb	0.9	60843.09	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4199180.70	1.1	4285305.73	97.99	29.5	120.4	
Sc	45	No Gas	8716093.91	0.8	8716701.08	99.99	29.5	120.4	
Sc	45	H2	1022436.50	1.4	1073440.43	95.25	29.5	120.4	
Sc	45	He	275956.16	0.9	283880.71	97.21	29.5	120.4	
Ge	72	No Gas	1755628.56	0.8	1715165.05	102.36	29.5	120.4	
Ge	72	H2	328551.65	1.0	363056.55	90.5	29.5	120.4	
Ge	72	He	175289.75	0.8	177772.18	98.6	29.5	120.4	
Y	89	H2	5284717.81	2.2	5502376.66	96.04	29.5	120.4	
Y	89	He	1443315.26	0.8	1468553.09	98.28	29.5	120.4	
Tb	159	No Gas	15723138.65	1.9	15204271.44	103.41	29.5	120.4	
Tb	159	He	5740632.21	1.3	5847670.12	98.17	29.5	120.4	
Bi	209	No Gas	7175838.45	0.8	6985104.03	102.73	29.5	120.4	

Sample Report

Sample Name SO4723-001RL

File Name 025SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 09:58:25

Sample Type Sample

Total Dilution 25.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.195	ppb	37.2	58.89	100	
11	B	6	No Gas	18.684	ppb	0.6	5820.28	1000	
23	Na	45	He	3168.376	ppb	2.3	65156.21	200000	
24	Mg	45	He	8646.183	ppb	2.0	76195.44	200000	
27	Al	45	He	92.755	ppb	18.8	365.57	200000	
28	Si	45	H2	2932.339	ppb	3.9	21329.75	10000	
39	K	45	He	625.556	ppb	10.2	23590.41	200000	
40	Ca	45	H2	67642.672	ppb	1.6	3419994.95	200000	
51	V	89	He	1.228	ppb	34.9	476.70	1000	
52	Cr	89	He	1.173	ppb	41.6	869.21	2000	
55	Mn	89	He	2.544	ppb	19.5	335.28	2000	
56	Fe	89	H2	105.499	ppb	3.4	28995.64	100000	
59	Co	89	He	0.264	ppb	73.2	148.90	1000	
60	Ni	89	He	0.376	ppb	313.2	572.26	1000	
63	Cu	89	He	5.196	ppb	12.3	1986.89	2000	
66	Zn	89	He	5.154	ppb	38.1	750.05	2000	
75	As	89	He	0.864	ppb	107.8	377.71	1000	
78	Se	89	H2	0.453	ppb	58.8	5.00	1000	
88	Sr	89	He	513.211	ppb	1.4	41056.77	2000	
95	Mo	89	He	1.065	ppb	22.7	166.68	1000	
107	Ag	89	He	0.105	ppb	35.3	55.56	100	
111	Cd	89	He	0.090	ppb	39.0	4.07	1000	
118	Sn	159	He	1.756	ppb	41.4	548.92	1000	
121	Sb	159	No Gas	0.359	ppb	25.9	360.41	1000	
137	Ba	159	No Gas	38.484	ppb	2.2	8609.03	2000	
182	W	159	No Gas	0.734	ppb	42.4	380.43	1000	
205	Tl	209	No Gas	-0.161	ppb	N/A	393.78	1000	
208	Pb	209	No Gas	0.240	ppb	58.3	2282.67	2000	
232	Th	209	No Gas	0.917	ppb	4.8	1364.94	1000	
238	U	209	No Gas	0.367	ppb	21.3	420.48	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4264723.48	2.9	4285305.73	99.52	29.5	120.4	
Sc	45	No Gas	8933492.55	1.4	8716701.08	102.49	29.5	120.4	
Sc	45	H2	1046263.14	2.0	1073440.43	97.47	29.5	120.4	
Sc	45	He	280862.40	0.4	283880.71	98.94	29.5	120.4	
Ge	72	No Gas	1788794.64	1.5	1715165.05	104.29	29.5	120.4	
Ge	72	H2	340785.96	1.2	363056.55	93.87	29.5	120.4	
Ge	72	He	178071.62	0.3	177772.18	100.17	29.5	120.4	
Y	89	H2	5435607.19	0.8	5502376.66	98.79	29.5	120.4	
Y	89	He	1472145.48	0.4	1468553.09	100.24	29.5	120.4	
Tb	159	No Gas	15723263.38	1.8	15204271.44	103.41	29.5	120.4	
Tb	159	He	5844038.52	0.2	5847670.12	99.94	29.5	120.4	
Bi	209	No Gas	7238799.90	2.1	6985104.03	103.63	29.5	120.4	

Sample Report

Sample Name	RINSE
File Name	026SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 10:01:00
Sample Type	Sample
Total Dilution	1.0000
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.001	ppb	574.0	23.33	100	
11	B	6	No Gas	0.220	ppb	17.0	4137.41	1000	
23	Na	45	He	-2.941	ppb	N/A	17925.36	200000	
24	Mg	45	He	6.332	ppb	135.5	1669.45	200000	
27	Al	45	He	1.874	ppb	121.3	218.90	200000	
28	Si	45	H2	0.554	ppb	454.2	5547.41	10000	
39	K	45	He	4.432	ppb	160.9	20016.85	200000	
40	Ca	45	H2	1.780	ppb	18.6	6603.99	200000	
51	V	89	He	0.084	ppb	113.8	584.48	1000	
52	Cr	89	He	0.039	ppb	159.0	847.22	2000	
55	Mn	89	He	0.046	ppb	237.7	243.96	2000	
56	Fe	89	H2	0.403	ppb	16.2	13127.57	100000	
59	Co	89	He	0.077	ppb	145.3	529.00	1000	
60	Ni	89	He	0.027	ppb	487.1	595.59	1000	
63	Cu	89	He	0.134	ppb	51.1	1694.62	2000	
66	Zn	89	He	-0.156	ppb	N/A	540.03	2000	
75	As	89	He	0.063	ppb	88.0	393.72	1000	
78	Se	89	H2	0.008	ppb	77.4	3.00	1000	
88	Sr	89	He	0.201	ppb	161.9	423.41	2000	
95	Mo	89	He	0.068	ppb	107.1	226.69	1000	
107	Ag	89	He	0.015	ppb	169.2	135.56	100	
111	Cd	89	He	0.042	ppb	169.2	40.37	1000	
118	Sn	159	He	0.134	ppb	156.2	670.37	1000	
121	Sb	159	No Gas	0.002	ppb	74.0	180.20	1000	
137	Ba	159	No Gas	-0.003	ppb	N/A	90.10	2000	
182	W	159	No Gas	0.009	ppb	30.0	153.51	1000	
205	Tl	209	No Gas	-0.014	ppb	N/A	243.61	1000	
208	Pb	209	No Gas	-0.005	ppb	N/A	1805.41	2000	
232	Th	209	No Gas	0.006	ppb	32.0	503.91	1000	
238	U	209	No Gas	0.002	ppb	45.6	63.40	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4239535.48	0.8	4285305.73	98.93	29.5	120.4	
Sc	45	No Gas	8902248.08	1.1	8716701.08	102.13	29.5	120.4	
Sc	45	H2	1051534.40	1.9	1073440.43	97.96	29.5	120.4	
Sc	45	He	280940.89	0.4	283880.71	98.96	29.5	120.4	
Ge	72	No Gas	1769283.31	1.5	1715165.05	103.16	29.5	120.4	
Ge	72	H2	344977.01	1.7	363056.55	95.02	29.5	120.4	
Ge	72	He	177949.55	0.6	177772.18	100.1	29.5	120.4	
Y	89	H2	5419404.42	1.1	5502376.66	98.49	29.5	120.4	
Y	89	He	1482440.90	0.4	1468553.09	100.95	29.5	120.4	
Tb	159	No Gas	15809406.71	0.9	15204271.44	103.98	29.5	120.4	
Tb	159	He	5874126.93	0.8	5847670.12	100.45	29.5	120.4	
Bi	209	No Gas	7219275.01	0.8	6985104.03	103.35	29.5	120.4	

Sample Report

Sample Name SO4723-001RP

File Name 027SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:03:39

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	48.753	ppb	1.8	47799.89	100	
11	B	6	No Gas	484.485	ppb	0.8	309234.71	1000	
23	Na	45	He	11328.421	ppb	1.0	821628.91	200000	
24	Mg	45	He	13840.339	ppb	1.3	591491.44	200000	
27	Al	45	He	2093.214	ppb	1.8	32736.13	200000	
28	Si	45	H2	3747.564	ppb	2.2	104599.19	10000	
39	K	45	He	11950.167	ppb	0.8	423306.56	200000	
40	Ca	45	H2	68972.248	ppb	1.8	17027241.69	200000	
51	V	89	He	515.532	ppb	1.3	292980.57	1000	
52	Cr	89	He	206.640	ppb	0.4	149130.16	2000	
55	Mn	89	He	510.474	ppb	0.2	164607.00	2000	
56	Fe	89	H2	1145.418	ppb	2.8	932712.99	100000	
59	Co	89	He	525.067	ppb	0.5	579176.42	1000	
60	Ni	89	He	526.860	ppb	0.5	158887.80	1000	
63	Cu	89	He	265.884	ppb	1.2	212606.68	2000	
66	Zn	89	He	510.824	ppb	0.5	59215.50	2000	
75	As	89	He	103.103	ppb	0.7	9719.79	1000	
78	Se	89	H2	100.161	ppb	3.1	3937.05	1000	
88	Sr	89	He	1012.316	ppb	0.8	392771.52	2000	
95	Mo	89	He	104.569	ppb	1.7	45999.41	1000	
107	Ag	89	He	53.049	ppb	1.0	73102.87	100	
111	Cd	89	He	255.419	ppb	1.6	45884.24	1000	
118	Sn	159	He	515.368	ppb	0.2	186771.67	1000	
121	Sb	159	No Gas	100.640	ppb	1.3	300998.07	1000	
137	Ba	159	No Gas	1865.832	ppb	1.4	2056897.19	2000	
182	W	159	No Gas	101.804	ppb	1.6	230292.95	1000	
205	Tl	209	No Gas	111.387	ppb	2.5	461565.13	1000	
208	Pb	209	No Gas	102.932	ppb	2.8	636200.59	2000	
232	Th	209	No Gas	107.020	ppb	1.8	596354.48	1000	
238	U	209	No Gas	110.190	ppb	1.7	595774.62	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4277721.22	0.9	4285305.73	99.82	29.5	120.4	
Sc	45	No Gas	8731792.00	1.3	8716701.08	100.17	29.5	120.4	
Sc	45	H2	1022845.76	1.4	1073440.43	95.29	29.5	120.4	
Sc	45	He	273280.45	1.3	283880.71	96.27	29.5	120.4	
Ge	72	No Gas	1737892.86	1.7	1715165.05	101.33	29.5	120.4	
Ge	72	H2	328867.55	2.3	363056.55	90.58	29.5	120.4	
Ge	72	He	173423.93	0.6	177772.18	97.55	29.5	120.4	
Y	89	H2	5275214.20	2.1	5502376.66	95.87	29.5	120.4	
Y	89	He	1428493.73	1.2	1468553.09	97.27	29.5	120.4	
Tb	159	No Gas	15682211.71	0.4	15204271.44	103.14	29.5	120.4	
Tb	159	He	5707776.30	0.7	5847670.12	97.61	29.5	120.4	
Bi	209	No Gas	7133267.97	2.2	6985104.03	102.12	29.5	120.4	

Sample Report

Sample Name SO4723-001RS

File Name 028SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:06:12

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	51.064	ppb	3.3	49822.17	100	
11	B	6	No Gas	508.168	ppb	1.8	322656.44	1000	
23	Na	45	He	11401.500	ppb	1.2	838251.91	200000	
24	Mg	45	He	13887.743	ppb	0.7	601745.64	200000	
27	Al	45	He	2110.313	ppb	1.0	33460.10	200000	
28	Si	45	H2	3802.842	ppb	3.1	107821.70	10000	
39	K	45	He	12155.018	ppb	0.2	436200.38	200000	
40	Ca	45	H2	69564.907	ppb	2.0	17461900.44	200000	
51	V	89	He	529.828	ppb	0.2	300642.44	1000	
52	Cr	89	He	211.774	ppb	1.0	152578.19	2000	
55	Mn	89	He	527.437	ppb	0.6	169801.26	2000	
56	Fe	89	H2	1165.448	ppb	0.7	964539.07	100000	
59	Co	89	He	545.307	ppb	0.6	600552.34	1000	
60	Ni	89	He	539.603	ppb	0.1	162462.16	1000	
63	Cu	89	He	272.298	ppb	0.3	217379.70	2000	
66	Zn	89	He	532.800	ppb	0.5	61638.04	2000	
75	As	89	He	107.165	ppb	0.8	10073.41	1000	
78	Se	89	H2	103.109	ppb	0.7	4119.59	1000	
88	Sr	89	He	1034.826	ppb	1.2	400881.07	2000	
95	Mo	89	He	106.862	ppb	1.0	46935.89	1000	
107	Ag	89	He	54.782	ppb	1.1	75371.95	100	
111	Cd	89	He	263.078	ppb	0.6	47189.34	1000	
118	Sn	159	He	527.269	ppb	0.4	192945.78	1000	
121	Sb	159	No Gas	104.518	ppb	1.9	317207.53	1000	
137	Ba	159	No Gas	1916.785	ppb	1.8	2144207.65	2000	
182	W	159	No Gas	104.920	ppb	3.5	240792.22	1000	
205	Tl	209	No Gas	113.807	ppb	2.9	476402.89	1000	
208	Pb	209	No Gas	105.968	ppb	2.7	661665.64	2000	
232	Th	209	No Gas	115.028	ppb	3.3	647354.10	1000	
238	U	209	No Gas	114.872	ppb	4.1	627220.44	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4258388.71	1.7	4285305.73	99.37	29.5	120.4	
Sc	45	No Gas	8767938.99	2.2	8716701.08	100.59	29.5	120.4	
Sc	45	H2	1040170.92	2.7	1073440.43	96.9	29.5	120.4	
Sc	45	He	277060.23	0.9	283880.71	97.6	29.5	120.4	
Ge	72	No Gas	1761757.33	2.4	1715165.05	102.72	29.5	120.4	
Ge	72	H2	330705.47	2.2	363056.55	91.09	29.5	120.4	
Ge	72	He	175354.98	0.7	177772.18	98.64	29.5	120.4	
Y	89	H2	5360326.91	1.8	5502376.66	97.42	29.5	120.4	
Y	89	He	1426200.22	0.4	1468553.09	97.12	29.5	120.4	
Tb	159	No Gas	15914480.32	1.4	15204271.44	104.67	29.5	120.4	
Tb	159	He	5763548.73	0.7	5847670.12	98.56	29.5	120.4	
Bi	209	No Gas	7206983.45	2.2	6985104.03	103.18	29.5	120.4	

Sample Report

Sample Name SO4723-002

File Name 029SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:08:49

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.068	ppb	26.8	86.67	100	
11	B	6	No Gas	16.468	ppb	3.1	13711.37	1000	
23	Na	45	He	8806.865	ppb	0.6	656119.59	200000	
24	Mg	45	He	8680.169	ppb	1.3	378686.17	200000	
27	Al	45	He	12.981	ppb	0.3	274.46	200000	
28	Si	45	H2	2761.823	ppb	2.0	79774.07	10000	
39	K	45	He	1425.910	ppb	1.1	68373.51	200000	
40	Ca	45	H2	81952.274	ppb	1.9	20563307.75	200000	
51	V	89	He	0.760	ppb	13.6	766.72	1000	
52	Cr	89	He	1.731	ppb	6.3	1947.17	2000	
55	Mn	89	He	1.996	ppb	10.4	816.54	2000	
56	Fe	89	H2	18.998	ppb	5.3	26892.84	100000	
59	Co	89	He	0.291	ppb	42.5	413.38	1000	
60	Ni	89	He	0.187	ppb	110.7	597.81	1000	
63	Cu	89	He	3.493	ppb	6.8	3940.71	2000	
66	Zn	89	He	2.286	ppb	33.8	884.50	2000	
75	As	89	He	0.397	ppb	37.9	392.72	1000	
78	Se	89	H2	0.209	ppb	14.1	9.67	1000	
88	Sr	89	He	604.407	ppb	0.8	238075.60	2000	
95	Mo	89	He	0.290	ppb	32.9	198.90	1000	
107	Ag	89	He	0.036	ppb	31.9	75.56	100	
111	Cd	89	He	0.134	ppb	49.4	25.18	1000	
118	Sn	159	He	0.946	ppb	14.8	760.05	1000	
121	Sb	159	No Gas	0.156	ppb	21.5	610.70	1000	
137	Ba	159	No Gas	64.631	ppb	1.8	71344.66	2000	
182	W	159	No Gas	0.238	ppb	24.4	587.34	1000	
205	Tl	209	No Gas	0.031	ppb	136.0	657.42	1000	
208	Pb	209	No Gas	0.063	ppb	17.6	2369.43	2000	
232	Th	209	No Gas	2.067	ppb	3.8	11972.65	1000	
238	U	209	No Gas	0.261	ppb	13.3	1441.71	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4227266.18	1.9	4285305.73	98.65	29.5	120.4	
Sc	45	No Gas	8724565.92	0.6	8716701.08	100.09	29.5	120.4	
Sc	45	H2	1039811.36	2.5	1073440.43	96.87	29.5	120.4	
Sc	45	He	278903.15	1.2	283880.71	98.25	29.5	120.4	
Ge	72	No Gas	1753342.14	1.0	1715165.05	102.23	29.5	120.4	
Ge	72	H2	338406.13	1.3	363056.55	93.21	29.5	120.4	
Ge	72	He	175184.94	0.9	177772.18	98.54	29.5	120.4	
Y	89	H2	5364405.78	1.0	5502376.66	97.49	29.5	120.4	
Y	89	He	1450163.87	1.7	1468553.09	98.75	29.5	120.4	
Tb	159	No Gas	15682791.29	1.2	15204271.44	103.15	29.5	120.4	
Tb	159	He	5773628.59	1.4	5847670.12	98.73	29.5	120.4	
Bi	209	No Gas	7210486.07	1.8	6985104.03	103.23	29.5	120.4	

Sample Report

Sample Name RINSE

File Name 030SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:11:23

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.001	ppb	157.6	24.44	100	
11	B	6	No Gas	0.411	ppb	8.4	4794.29	1000	
23	Na	45	He	-10.153	ppb	N/A	15231.73	200000	
24	Mg	45	He	0.789	ppb	40.2	446.71	200000	
27	Al	45	He	0.456	ppb	91.8	104.45	200000	
28	Si	45	H2	-1.472	ppb	N/A	5250.30	10000	
39	K	45	He	-0.731	ppb	N/A	19045.82	200000	
40	Ca	45	H2	4.956	ppb	21.0	10597.80	200000	
51	V	89	He	0.000	ppb	3331.9	333.35	1000	
52	Cr	89	He	0.024	ppb	82.3	781.24	2000	
55	Mn	89	He	-0.007	ppb	N/A	155.31	2000	
56	Fe	89	H2	0.389	ppb	8.5	13120.89	100000	
59	Co	89	He	0.008	ppb	71.2	133.34	1000	
60	Ni	89	He	-0.020	ppb	N/A	516.70	1000	
63	Cu	89	He	0.142	ppb	14.0	1712.39	2000	
66	Zn	89	He	-0.144	ppb	N/A	542.25	2000	
75	As	89	He	0.022	ppb	203.2	371.05	1000	
78	Se	89	H2	0.008	ppb	51.3	3.00	1000	
88	Sr	89	He	0.033	ppb	49.9	83.34	2000	
95	Mo	89	He	0.015	ppb	23.9	104.45	1000	
107	Ag	89	He	0.001	ppb	97.3	32.22	100	
111	Cd	89	He	0.004	ppb	108.8	4.45	1000	
118	Sn	159	He	0.037	ppb	20.1	490.03	1000	
121	Sb	159	No Gas	0.005	ppb	50.8	226.93	1000	
137	Ba	159	No Gas	0.025	ppb	34.0	246.94	2000	
182	W	159	No Gas	0.008	ppb	48.2	140.15	1000	
205	Tl	209	No Gas	-0.010	ppb	N/A	317.03	1000	
208	Pb	209	No Gas	-0.004	ppb	N/A	1875.49	2000	
232	Th	209	No Gas	0.036	ppb	11.6	1358.26	1000	
238	U	209	No Gas	0.002	ppb	61.5	80.09	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4292475.03	3.3	4285305.73	100.17	29.5	120.4	
Sc	45	No Gas	8884217.55	1.5	8716701.08	101.92	29.5	120.4	
Sc	45	H2	1047549.57	0.6	1073440.43	97.59	29.5	120.4	
Sc	45	He	279955.57	1.2	283880.71	98.62	29.5	120.4	
Ge	72	No Gas	1767669.25	2.5	1715165.05	103.06	29.5	120.4	
Ge	72	H2	345843.44	0.7	363056.55	95.26	29.5	120.4	
Ge	72	He	177836.03	1.4	177772.18	100.04	29.5	120.4	
Y	89	H2	5439976.09	1.1	5502376.66	98.87	29.5	120.4	
Y	89	He	1469669.67	1.5	1468553.09	100.08	29.5	120.4	
Tb	159	No Gas	15870934.07	1.7	15204271.44	104.38	29.5	120.4	
Tb	159	He	5878402.06	1.0	5847670.12	100.53	29.5	120.4	
Bi	209	No Gas	7335318.24	2.4	6985104.03	105.01	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	031_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 10:14:03
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	25.442	ppb	2.4	123111.40	25	101.77	89.8	110.2	
11	B	6	No Gas	25.086	ppb	3.0	81585.05	25	100.34	89.8	110.2	
23	Na	45	He	5360.084	ppb	0.4	1957741.98	5000	107.2	89.8	110.2	
24	Mg	45	He	5256.884	ppb	1.4	1145878.04	5000	105.14	89.8	110.2	
27	Al	45	He	499.689	ppb	1.8	39854.36	500	99.94	89.8	110.2	
28	Si	45	H2	484.320	ppb	1.7	70575.51	500	96.86	89.8	110.2	
39	K	45	He	5166.726	ppb	0.3	911514.53	5000	103.33	89.8	110.2	
40	Ca	45	H2	5169.273	ppb	2.0	6484752.82	5000	103.39	89.8	110.2	
51	V	89	He	25.720	ppb	1.7	74326.95	25	102.88	89.8	110.2	
52	Cr	89	He	25.597	ppb	0.5	93884.42	25	102.39	89.8	110.2	
55	Mn	89	He	25.526	ppb	2.2	41833.62	25	102.1	89.8	110.2	
56	Fe	89	H2	5046.414	ppb	2.9	20948460.01	5000	100.93	89.8	110.2	
59	Co	89	He	26.155	ppb	1.4	146273.54	25	104.62	89.8	110.2	
60	Ni	89	He	26.077	ppb	1.9	40262.29	25	104.31	89.8	110.2	
63	Cu	89	He	26.537	ppb	1.3	108105.53	25	106.15	89.8	110.2	
66	Zn	89	He	25.798	ppb	1.8	15617.00	25	103.19	89.8	110.2	
75	As	89	He	25.586	ppb	0.4	12139.29	25	102.34	89.8	110.2	
78	Se	89	H2	25.069	ppb	2.5	5081.20	25	100.28	89.8	110.2	
88	Sr	89	He	25.141	ppb	0.8	49452.35	25	100.56	89.8	110.2	
95	Mo	89	He	25.745	ppb	1.7	57382.61	25	102.98	89.8	110.2	
107	Ag	89	He	26.412	ppb	1.0	184429.36	25	105.65	89.8	110.2	
111	Cd	89	He	25.876	ppb	1.7	23560.23	25	103.5	89.8	110.2	
118	Sn	159	He	25.431	ppb	1.5	47046.47	25	101.72	89.8	110.2	
121	Sb	159	No Gas	24.964	ppb	0.2	378433.60	25	99.86	89.8	110.2	
137	Ba	159	No Gas	25.123	ppb	0.7	140482.55	25	100.49	89.8	110.2	
182	W	159	No Gas	24.896	ppb	3.0	285470.36	25	99.58	89.8	110.2	
205	Tl	209	No Gas	27.040	ppb	1.2	571591.07	25	108.16	89.8	110.2	
208	Pb	209	No Gas	25.340	ppb	1.1	798725.81	25	101.36	89.8	110.2	
232	Th	209	No Gas	27.189	ppb	1.4	772786.13	25	108.76	89.8	110.2	
238	U	209	No Gas	27.480	ppb	1.9	757923.38	25	109.92	89.8	110.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4224939.95	2.3	4285305.73	98.59	29.5	120.4	
Sc	45	No Gas	8800471.83	1.2	8716701.08	100.96	29.5	120.4	
Sc	45	H2	1038978.92	1.6	1073440.43	96.79	29.5	120.4	
Sc	45	He	278838.78	1.3	283880.71	98.22	29.5	120.4	
Ge	72	No Gas	1748054.60	2.5	1715165.05	101.92	29.5	120.4	
Ge	72	H2	339438.30	2.2	363056.55	93.49	29.5	120.4	
Ge	72	He	175814.75	0.6	177772.18	98.9	29.5	120.4	
Y	89	H2	5439639.92	1.6	5502376.66	98.86	29.5	120.4	
Y	89	He	1447922.01	0.6	1468553.09	98.6	29.5	120.4	
Tb	159	No Gas	15897849.62	0.1	15204271.44	104.56	29.5	120.4	
Tb	159	He	5788997.69	0.9	5847670.12	99	29.5	120.4	
Bi	209	No Gas	7277377.59	1.1	6985104.03	104.18	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	032_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 10:16:36
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.025	ppb	28.6	144.45	0.2	
11	B	6	No Gas	0.392	ppb	3.9	4764.28	4	
23	Na	45	He	-7.720	ppb	N/A	16247.33	200	
24	Mg	45	He	1.749	ppb	9.0	662.28	20	
27	Al	45	He	0.432	ppb	49.1	103.34	20	
28	Si	45	H2	0.185	ppb	940.3	5457.35	100	
39	K	45	He	1.046	ppb	180.9	19511.20	200	
40	Ca	45	H2	2.369	ppb	37.0	7288.82	20	
51	V	89	He	-0.031	ppb	N/A	240.01	1	
52	Cr	89	He	0.035	ppb	124.9	815.34	1	
55	Mn	89	He	-0.005	ppb	N/A	155.98	0.4	
56	Fe	89	H2	2.744	ppb	26.8	22921.84	20	
59	Co	89	He	0.018	ppb	3.2	186.68	0.2	
60	Ni	89	He	0.021	ppb	183.7	574.48	0.4	
63	Cu	89	He	0.117	ppb	7.5	1596.82	0.6	
66	Zn	89	He	-0.047	ppb	N/A	593.37	2	
75	As	89	He	0.053	ppb	49.3	381.72	1	
78	Se	89	H2	0.023	ppb	42.2	6.00	1	
88	Sr	89	He	0.006	ppb	119.1	27.78	1	
95	Mo	89	He	0.069	ppb	8.5	223.34	1	
107	Ag	89	He	0.009	ppb	59.3	90.01	0.2	
111	Cd	89	He	0.009	ppb	62.6	9.26	0.2	
118	Sn	159	He	0.066	ppb	3.9	542.25	1	
121	Sb	159	No Gas	0.031	ppb	16.1	624.05	0.2	
137	Ba	159	No Gas	0.026	ppb	12.3	253.62	0.4	
182	W	159	No Gas	0.069	ppb	14.8	844.31	1	
205	Tl	209	No Gas	0.013	ppb	87.4	807.60	0.2	
208	Pb	209	No Gas	0.017	ppb	66.9	2516.27	0.2	
232	Th	209	No Gas	0.226	ppb	4.7	6762.84	1	
238	U	209	No Gas	0.028	ppb	26.8	800.93	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4320726.25	2.9	4285305.73	100.83	29.5	120.4	
Sc	45	No Gas	8765463.80	1.7	8716701.08	100.56	29.5	120.4	
Sc	45	H2	1043664.04	1.7	1073440.43	97.23	29.5	120.4	
Sc	45	He	282233.38	1.6	283880.71	99.42	29.5	120.4	
Ge	72	No Gas	1727323.62	1.9	1715165.05	100.71	29.5	120.4	
Ge	72	H2	346413.07	1.1	363056.55	95.42	29.5	120.4	
Ge	72	He	177317.53	0.9	177772.18	99.74	29.5	120.4	
Y	89	H2	5455275.24	1.8	5502376.66	99.14	29.5	120.4	
Y	89	He	1454438.17	1.7	1468553.09	99.04	29.5	120.4	
Tb	159	No Gas	15974398.24	1.5	15204271.44	105.07	29.5	120.4	
Tb	159	He	5865698.25	1.3	5847670.12	100.31	29.5	120.4	
Bi	209	No Gas	7278034.03	0.9	6985104.03	104.19	29.5	120.4	

Sample Report

Sample Name SO4723-003

File Name 033SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:19:16

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.020	ppb	33.6	40.00	100	
11	B	6	No Gas	9.747	ppb	1.4	9551.25	1000	
23	Na	45	He	8120.649	ppb	0.6	601947.81	200000	
24	Mg	45	He	7375.307	ppb	0.7	319441.37	200000	
27	Al	45	He	17.608	ppb	5.2	345.57	200000	
28	Si	45	H2	3100.186	ppb	2.1	87481.41	10000	
39	K	45	He	923.294	ppb	1.1	50626.18	200000	
40	Ca	45	H2	75001.387	ppb	1.2	18524681.95	200000	
51	V	89	He	0.378	ppb	4.2	538.92	1000	
52	Cr	89	He	0.800	ppb	40.8	1254.88	2000	
55	Mn	89	He	0.839	ppb	11.8	432.60	2000	
56	Fe	89	H2	34.182	ppb	2.4	38883.82	100000	
59	Co	89	He	0.076	ppb	61.1	171.12	1000	
60	Ni	89	He	0.248	ppb	13.4	608.92	1000	
63	Cu	89	He	3.818	ppb	3.9	4148.55	2000	
66	Zn	89	He	1.208	ppb	12.2	750.05	2000	
75	As	89	He	0.163	ppb	320.6	366.38	1000	
78	Se	89	H2	0.136	ppb	35.5	6.67	1000	
88	Sr	89	He	521.074	ppb	0.3	202715.29	2000	
95	Mo	89	He	0.178	ppb	25.6	146.67	1000	
107	Ag	89	He	0.010	ppb	69.2	38.89	100	
111	Cd	89	He	0.023	ppb	64.1	4.81	1000	
118	Sn	159	He	0.497	ppb	16.0	598.92	1000	
121	Sb	159	No Gas	0.046	ppb	24.7	280.31	1000	
137	Ba	159	No Gas	36.915	ppb	2.2	40764.90	2000	
182	W	159	No Gas	0.118	ppb	14.6	313.69	1000	
205	Tl	209	No Gas	-0.036	ppb	N/A	380.43	1000	
208	Pb	209	No Gas	0.013	ppb	121.1	2065.72	2000	
232	Th	209	No Gas	0.689	ppb	11.7	4232.14	1000	
238	U	209	No Gas	0.214	ppb	7.8	1191.40	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4242324.47	0.7	4285305.73	99	29.5	120.4	
Sc	45	No Gas	8694763.21	0.7	8716701.08	99.75	29.5	120.4	
Sc	45	H2	1023285.38	1.6	1073440.43	95.33	29.5	120.4	
Sc	45	He	276826.55	0.4	283880.71	97.52	29.5	120.4	
Ge	72	No Gas	1739947.91	1.0	1715165.05	101.44	29.5	120.4	
Ge	72	H2	326798.65	1.8	363056.55	90.01	29.5	120.4	
Ge	72	He	175202.21	0.7	177772.18	98.55	29.5	120.4	
Y	89	H2	5305007.89	1.0	5502376.66	96.41	29.5	120.4	
Y	89	He	1432192.96	1.3	1468553.09	97.52	29.5	120.4	
Tb	159	No Gas	15671762.82	1.4	15204271.44	103.07	29.5	120.4	
Tb	159	He	5803106.93	0.9	5847670.12	99.24	29.5	120.4	
Bi	209	No Gas	7253198.98	1.3	6985104.03	103.84	29.5	120.4	

Sample Report

Sample Name SO4723-004

File Name 034SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:21:48

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.035	ppb	84.8	55.56	100	
11	B	6	No Gas	12.115	ppb	1.0	11193.59	1000	
23	Na	45	He	11335.919	ppb	0.1	830526.15	200000	
24	Mg	45	He	8616.915	ppb	0.6	372114.46	200000	
27	Al	45	He	37.345	ppb	6.4	655.59	200000	
28	Si	45	H2	2897.621	ppb	1.1	83570.68	10000	
39	K	45	He	1676.095	ppb	0.5	76231.03	200000	
40	Ca	45	H2	94179.217	ppb	1.0	23669973.54	200000	
51	V	89	He	0.465	ppb	3.3	594.48	1000	
52	Cr	89	He	0.681	ppb	16.5	1179.84	2000	
55	Mn	89	He	1.526	ppb	3.5	661.23	2000	
56	Fe	89	H2	46.560	ppb	3.9	50139.42	100000	
59	Co	89	He	0.075	ppb	43.2	171.13	1000	
60	Ni	89	He	0.082	ppb	38.2	564.48	1000	
63	Cu	89	He	3.566	ppb	2.9	3988.48	2000	
66	Zn	89	He	1.079	ppb	31.9	742.27	2000	
75	As	89	He	0.476	ppb	78.7	398.72	1000	
78	Se	89	H2	0.120	ppb	35.0	6.17	1000	
88	Sr	89	He	675.219	ppb	0.6	265247.42	2000	
95	Mo	89	He	0.120	ppb	20.8	122.23	1000	
107	Ag	89	He	0.014	ppb	7.0	44.45	100	
111	Cd	89	He	0.012	ppb	57.8	2.96	1000	
118	Sn	159	He	0.343	ppb	5.3	543.37	1000	
121	Sb	159	No Gas	0.073	ppb	32.4	367.08	1000	
137	Ba	159	No Gas	62.216	ppb	0.4	69693.98	2000	
182	W	159	No Gas	0.091	ppb	10.8	256.96	1000	
205	Tl	209	No Gas	-0.025	ppb	N/A	417.15	1000	
208	Pb	209	No Gas	0.080	ppb	43.3	2459.51	2000	
232	Th	209	No Gas	0.326	ppb	5.8	2149.27	1000	
238	U	209	No Gas	0.206	ppb	12.3	1134.67	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4303692.92	0.9	4285305.73	100.43	29.5	120.4	
Sc	45	No Gas	8814889.27	1.4	8716701.08	101.13	29.5	120.4	
Sc	45	H2	1041333.37	1.4	1073440.43	97.01	29.5	120.4	
Sc	45	He	276048.35	0.7	283880.71	97.24	29.5	120.4	
Ge	72	No Gas	1768541.06	2.3	1715165.05	103.11	29.5	120.4	
Ge	72	H2	335393.21	0.9	363056.55	92.38	29.5	120.4	
Ge	72	He	174639.37	0.3	177772.18	98.24	29.5	120.4	
Y	89	H2	5440760.62	1.9	5502376.66	98.88	29.5	120.4	
Y	89	He	1446298.16	1.4	1468553.09	98.48	29.5	120.4	
Tb	159	No Gas	15911546.57	1.4	15204271.44	104.65	29.5	120.4	
Tb	159	He	5815536.03	0.2	5847670.12	99.45	29.5	120.4	
Bi	209	No Gas	7169555.40	0.8	6985104.03	102.64	29.5	120.4	

Sample Report

Sample Name SO4723-005

File Name 035SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:24:24

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.008	ppb	63.3	28.89	100	
11	B	6	No Gas	14.894	ppb	4.2	12946.24	1000	
23	Na	45	He	8427.481	ppb	1.1	621161.71	200000	
24	Mg	45	He	10686.123	ppb	1.1	460618.45	200000	
27	Al	45	He	18.125	ppb	16.2	352.24	200000	
28	Si	45	H2	3718.305	ppb	1.1	106554.50	10000	
39	K	45	He	730.072	ppb	0.6	43802.03	200000	
40	Ca	45	H2	105161.534	ppb	0.9	26644229.61	200000	
51	V	89	He	0.445	ppb	19.1	578.92	1000	
52	Cr	89	He	0.361	ppb	30.8	939.87	2000	
55	Mn	89	He	622.046	ppb	1.2	201666.91	2000	
56	Fe	89	H2	1070.051	ppb	2.6	892553.95	100000	
59	Co	89	He	1.384	ppb	3.8	1622.43	1000	
60	Ni	89	He	0.649	ppb	45.2	731.16	1000	
63	Cu	89	He	6.257	ppb	2.0	6112.68	2000	
66	Zn	89	He	6.476	ppb	3.6	1360.12	2000	
75	As	89	He	0.856	ppb	32.8	431.05	1000	
78	Se	89	H2	0.063	ppb	50.4	3.83	1000	
88	Sr	89	He	730.790	ppb	1.3	285176.07	2000	
95	Mo	89	He	0.152	ppb	18.4	135.56	1000	
107	Ag	89	He	0.009	ppb	15.8	37.78	100	
111	Cd	89	He	0.838	ppb	7.2	152.22	1000	
118	Sn	159	He	0.412	ppb	22.5	564.48	1000	
121	Sb	159	No Gas	0.049	ppb	29.8	290.33	1000	
137	Ba	159	No Gas	74.143	ppb	2.0	81600.34	2000	
182	W	159	No Gas	0.053	ppb	41.3	166.86	1000	
205	Tl	209	No Gas	-0.079	ppb	N/A	196.89	1000	
208	Pb	209	No Gas	-0.003	ppb	N/A	1975.62	2000	
232	Th	209	No Gas	0.220	ppb	3.4	1578.53	1000	
238	U	209	No Gas	0.204	ppb	16.9	1144.68	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4300526.63	0.8	4285305.73	100.36	29.5	120.4	
Sc	45	No Gas	8760472.87	0.9	8716701.08	100.5	29.5	120.4	
Sc	45	H2	1049622.85	1.0	1073440.43	97.78	29.5	120.4	
Sc	45	He	275582.51	0.5	283880.71	97.08	29.5	120.4	
Ge	72	No Gas	1748430.09	0.5	1715165.05	101.94	29.5	120.4	
Ge	72	H2	331916.02	0.7	363056.55	91.42	29.5	120.4	
Ge	72	He	173189.76	0.1	177772.18	97.42	29.5	120.4	
Y	89	H2	5398286.69	1.6	5502376.66	98.11	29.5	120.4	
Y	89	He	1436589.74	1.3	1468553.09	97.82	29.5	120.4	
Tb	159	No Gas	15638651.43	0.9	15204271.44	102.86	29.5	120.4	
Tb	159	He	5771343.39	0.5	5847670.12	98.69	29.5	120.4	
Bi	209	No Gas	7280432.16	0.3	6985104.03	104.23	29.5	120.4	

Sample Report

Sample Name SO4723-006

File Name 036SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:26:57

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	-0.001	ppb	N/A	20.00	100	
11	B	6	No Gas	10.539	ppb	3.2	10242.91	1000	
23	Na	45	He	9408.285	ppb	2.8	683950.37	200000	
24	Mg	45	He	9376.778	ppb	1.6	399841.48	200000	
27	Al	45	He	12.369	ppb	18.3	258.90	200000	
28	Si	45	H2	2824.744	ppb	1.5	80965.97	10000	
39	K	45	He	1573.634	ppb	1.1	71817.09	200000	
40	Ca	45	H2	86318.742	ppb	0.6	21524172.32	200000	
51	V	89	He	0.576	ppb	12.8	652.26	1000	
52	Cr	89	He	1.384	ppb	5.1	1675.80	2000	
55	Mn	89	He	0.352	ppb	4.7	275.95	2000	
56	Fe	89	H2	10.804	ppb	10.4	20298.63	100000	
59	Co	89	He	0.053	ppb	75.4	144.46	1000	
60	Ni	89	He	-0.008	ppb	N/A	532.25	1000	
63	Cu	89	He	3.835	ppb	3.7	4168.55	2000	
66	Zn	89	He	0.716	ppb	31.6	694.49	2000	
75	As	89	He	0.294	ppb	70.3	379.05	1000	
78	Se	89	H2	0.125	ppb	23.7	6.33	1000	
88	Sr	89	He	644.820	ppb	1.9	251219.10	2000	
95	Mo	89	He	0.144	ppb	27.6	132.23	1000	
107	Ag	89	He	0.011	ppb	51.0	40.00	100	
111	Cd	89	He	0.014	ppb	39.3	3.33	1000	
118	Sn	159	He	0.326	ppb	41.3	534.49	1000	
121	Sb	159	No Gas	0.032	ppb	36.1	243.61	1000	
137	Ba	159	No Gas	54.997	ppb	1.9	61511.17	2000	
182	W	159	No Gas	0.037	ppb	36.9	133.48	1000	
205	Tl	209	No Gas	-0.074	ppb	N/A	220.25	1000	
208	Pb	209	No Gas	-0.056	ppb	N/A	1645.22	2000	
232	Th	209	No Gas	0.128	ppb	15.5	1061.24	1000	
238	U	209	No Gas	0.186	ppb	6.5	1051.22	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4325880.52	1.6	4285305.73	100.95	29.5	120.4	
Sc	45	No Gas	8772022.23	0.9	8716701.08	100.63	29.5	120.4	
Sc	45	H2	1033104.26	1.5	1073440.43	96.24	29.5	120.4	
Sc	45	He	272619.46	1.5	283880.71	96.03	29.5	120.4	
Ge	72	No Gas	1757909.21	1.7	1715165.05	102.49	29.5	120.4	
Ge	72	H2	330935.07	1.5	363056.55	91.15	29.5	120.4	
Ge	72	He	173305.20	2.5	177772.18	97.49	29.5	120.4	
Y	89	H2	5394014.08	1.2	5502376.66	98.03	29.5	120.4	
Y	89	He	1434715.17	2.8	1468553.09	97.7	29.5	120.4	
Tb	159	No Gas	15886396.29	1.5	15204271.44	104.49	29.5	120.4	
Tb	159	He	5791308.59	2.0	5847670.12	99.04	29.5	120.4	
Bi	209	No Gas	7329430.95	3.0	6985104.03	104.93	29.5	120.4	

Sample Report

Sample Name SO4723-008

File Name 037SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:29:36

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.005	ppb	228.5	25.55	100	
11	B	6	No Gas	0.355	ppb	39.4	3682.82	1000	
23	Na	45	He	169.274	ppb	25.6	30785.29	200000	
24	Mg	45	He	34.459	ppb	128.0	1762.99	200000	
27	Al	45	He	12.997	ppb	63.1	272.24	200000	
28	Si	45	H2	-10.721	ppb	N/A	5113.26	10000	
39	K	45	He	43.588	ppb	17.0	20397.15	200000	
40	Ca	45	H2	126.737	ppb	5.1	36026.93	200000	
51	V	89	He	0.524	ppb	13.2	624.48	1000	
52	Cr	89	He	0.700	ppb	6.7	1184.66	2000	
55	Mn	89	He	0.637	ppb	107.7	369.95	2000	
56	Fe	89	H2	11.844	ppb	8.1	21072.73	100000	
59	Co	89	He	0.133	ppb	121.1	235.59	1000	
60	Ni	89	He	0.256	ppb	49.6	613.37	1000	
63	Cu	89	He	5.014	ppb	6.0	5118.92	2000	
66	Zn	89	He	0.821	ppb	17.4	707.82	2000	
75	As	89	He	0.060	ppb	229.6	358.38	1000	
78	Se	89	H2	0.046	ppb	29.7	3.17	1000	
88	Sr	89	He	1.791	ppb	139.4	721.28	2000	
95	Mo	89	He	0.163	ppb	83.5	141.12	1000	
107	Ag	89	He	0.032	ppb	66.3	70.01	100	
111	Cd	89	He	0.053	ppb	135.9	10.37	1000	
118	Sn	159	He	0.257	ppb	51.5	512.25	1000	
121	Sb	159	No Gas	0.017	ppb	71.5	196.89	1000	
137	Ba	159	No Gas	0.176	ppb	30.5	300.35	2000	
182	W	159	No Gas	0.045	ppb	43.8	150.17	1000	
205	Tl	209	No Gas	-0.079	ppb	N/A	196.89	1000	
208	Pb	209	No Gas	-0.051	ppb	N/A	1668.58	2000	
232	Th	209	No Gas	0.119	ppb	17.3	997.83	1000	
238	U	209	No Gas	0.006	ppb	30.7	50.06	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4254906.06	2.0	4285305.73	99.29	29.5	120.4	
Sc	45	No Gas	8628071.20	0.6	8716701.08	98.98	29.5	120.4	
Sc	45	H2	1037982.28	1.5	1073440.43	96.7	29.5	120.4	
Sc	45	He	276015.49	1.0	283880.71	97.23	29.5	120.4	
Ge	72	No Gas	1718837.07	1.9	1715165.05	100.21	29.5	120.4	
Ge	72	H2	328787.80	1.9	363056.55	90.56	29.5	120.4	
Ge	72	He	173272.22	1.5	177772.18	97.47	29.5	120.4	
Y	89	H2	5373463.90	1.9	5502376.66	97.66	29.5	120.4	
Y	89	He	1436348.14	1.2	1468553.09	97.81	29.5	120.4	
Tb	159	No Gas	15795274.90	1.0	15204271.44	103.89	29.5	120.4	
Tb	159	He	5817897.97	1.4	5847670.12	99.49	29.5	120.4	
Bi	209	No Gas	7241514.38	1.9	6985104.03	103.67	29.5	120.4	

Sample Report

Sample Name	RINSE
File Name	038SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 10:32:11
Sample Type	Sample
Total Dilution	1.0000
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	-0.001	ppb	N/A	16.67	100	
11	B	6	No Gas	0.027	ppb	132.8	3620.58	1000	
23	Na	45	He	-10.080	ppb	N/A	14907.73	200000	
24	Mg	45	He	0.193	ppb	77.0	308.91	200000	
27	Al	45	He	0.360	ppb	15.1	94.45	200000	
28	Si	45	H2	0.501	ppb	245.8	5508.71	10000	
39	K	45	He	4.007	ppb	57.8	19411.16	200000	
40	Ca	45	H2	1.242	ppb	129.3	5894.22	200000	
51	V	89	He	-0.006	ppb	N/A	311.13	1000	
52	Cr	89	He	0.035	ppb	199.2	808.17	2000	
55	Mn	89	He	-0.015	ppb	N/A	139.31	2000	
56	Fe	89	H2	0.026	ppb	104.4	11671.33	100000	
59	Co	89	He	0.001	ppb	329.3	95.56	1000	
60	Ni	89	He	0.013	ppb	106.8	560.03	1000	
63	Cu	89	He	0.138	ppb	8.8	1675.72	2000	
66	Zn	89	He	-0.193	ppb	N/A	506.70	2000	
75	As	89	He	0.038	ppb	196.9	373.71	1000	
78	Se	89	H2	0.005	ppb	75.1	2.33	1000	
88	Sr	89	He	0.005	ppb	98.5	26.67	2000	
95	Mo	89	He	0.011	ppb	104.6	94.45	1000	
107	Ag	89	He	0.001	ppb	178.6	31.11	100	
111	Cd	89	He	0.002	ppb	129.3	2.22	1000	
118	Sn	159	He	0.026	ppb	134.7	470.03	1000	
121	Sb	159	No Gas	-0.002	ppb	N/A	120.13	1000	
137	Ba	159	No Gas	0.000	ppb	5840.2	106.79	2000	
182	W	159	No Gas	0.006	ppb	20.3	116.80	1000	
205	Tl	209	No Gas	-0.017	ppb	N/A	186.88	1000	
208	Pb	209	No Gas	-0.005	ppb	N/A	1882.16	2000	
232	Th	209	No Gas	0.003	ppb	53.7	437.16	1000	
238	U	209	No Gas	0.001	ppb	39.4	56.73	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4344964.60	3.1	4285305.73	101.39	29.5	120.4	
Sc	45	No Gas	8663321.77	2.1	8716701.08	99.39	29.5	120.4	
Sc	45	H2	1045645.78	1.1	1073440.43	97.41	29.5	120.4	
Sc	45	He	273504.49	0.6	283880.71	96.34	29.5	120.4	
Ge	72	No Gas	1729161.80	2.7	1715165.05	100.82	29.5	120.4	
Ge	72	H2	342971.18	1.7	363056.55	94.47	29.5	120.4	
Ge	72	He	174210.03	0.3	177772.18	98	29.5	120.4	
Y	89	H2	5467616.28	1.2	5502376.66	99.37	29.5	120.4	
Y	89	He	1449727.23	2.2	1468553.09	98.72	29.5	120.4	
Tb	159	No Gas	16013841.71	2.4	15204271.44	105.32	29.5	120.4	
Tb	159	He	5889826.72	0.6	5847670.12	100.72	29.5	120.4	
Bi	209	No Gas	7457863.17	2.6	6985104.03	106.77	29.5	120.4	

Sample Report

Sample Name SO4724-001R

File Name 039SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:34:50

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.009	ppb	175.7	30.00	100	
11	B	6	No Gas	0.714	ppb	20.9	3941.79	1000	
23	Na	45	He	19017.471	ppb	0.8	1358849.95	200000	
24	Mg	45	He	6962.160	ppb	0.9	295955.24	200000	
27	Al	45	He	44.157	ppb	5.4	751.16	200000	
28	Si	45	H2	2559.578	ppb	2.3	72323.66	10000	
39	K	45	He	1233.252	ppb	1.1	60118.43	200000	
40	Ca	45	H2	85619.156	ppb	2.6	20902726.77	200000	
51	V	89	He	1.564	ppb	6.4	1204.54	1000	
52	Cr	89	He	0.355	ppb	32.3	923.89	2000	
55	Mn	89	He	0.767	ppb	6.6	405.94	2000	
56	Fe	89	H2	11.525	ppb	3.2	20417.87	100000	
59	Co	89	He	0.199	ppb	9.4	304.47	1000	
60	Ni	89	He	3.991	ppb	4.5	1721.28	1000	
63	Cu	89	He	13.671	ppb	2.1	11906.60	2000	
66	Zn	89	He	35.348	ppb	2.4	4635.39	2000	
75	As	89	He	0.865	ppb	12.9	426.72	1000	
78	Se	89	H2	0.145	ppb	29.6	7.00	1000	
88	Sr	89	He	554.487	ppb	0.8	213819.65	2000	
95	Mo	89	He	0.123	ppb	53.4	121.11	1000	
107	Ag	89	He	0.018	ppb	49.6	48.89	100	
111	Cd	89	He	0.025	ppb	63.9	5.19	1000	
118	Sn	159	He	0.644	ppb	27.7	651.17	1000	
121	Sb	159	No Gas	0.050	ppb	32.8	297.00	1000	
137	Ba	159	No Gas	35.899	ppb	3.5	40055.18	2000	
182	W	159	No Gas	0.040	ppb	30.4	140.16	1000	
205	Tl	209	No Gas	-0.066	ppb	N/A	256.96	1000	
208	Pb	209	No Gas	0.701	ppb	2.8	6451.25	2000	
232	Th	209	No Gas	0.090	ppb	27.7	847.66	1000	
238	U	209	No Gas	0.702	ppb	2.8	3921.68	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4291575.23	2.3	4285305.73	100.15	29.5	120.4	
Sc	45	No Gas	8536218.84	2.2	8716701.08	97.93	29.5	120.4	
Sc	45	H2	1011704.32	1.7	1073440.43	94.25	29.5	120.4	
Sc	45	He	271689.39	0.7	283880.71	95.71	29.5	120.4	
Ge	72	No Gas	1702978.84	1.7	1715165.05	99.29	29.5	120.4	
Ge	72	H2	318827.68	1.7	363056.55	87.82	29.5	120.4	
Ge	72	He	171329.39	1.2	177772.18	96.38	29.5	120.4	
Y	89	H2	5272251.81	1.9	5502376.66	95.82	29.5	120.4	
Y	89	He	1419764.30	1.7	1468553.09	96.68	29.5	120.4	
Tb	159	No Gas	15841424.07	2.9	15204271.44	104.19	29.5	120.4	
Tb	159	He	5786629.50	0.7	5847670.12	98.96	29.5	120.4	
Bi	209	No Gas	7340108.39	2.2	6985104.03	105.08	29.5	120.4	

Sample Report

Sample Name SO4724-002R

File Name 040SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:37:24

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	-0.004	ppb	N/A	16.66	100	
11	B	6	No Gas	10.289	ppb	3.1	9996.01	1000	
23	Na	45	He	19009.848	ppb	1.0	1360586.28	200000	
24	Mg	45	He	7005.803	ppb	1.1	298305.43	200000	
27	Al	45	He	8.839	ppb	21.4	203.35	200000	
28	Si	45	H2	2514.343	ppb	1.9	70931.56	10000	
39	K	45	He	1299.365	ppb	2.1	62449.10	200000	
40	Ca	45	H2	87728.078	ppb	0.8	21355003.99	200000	
51	V	89	He	0.472	ppb	17.5	580.04	1000	
52	Cr	89	He	0.806	ppb	22.6	1231.33	2000	
55	Mn	89	He	1.268	ppb	14.6	559.24	2000	
56	Fe	89	H2	34.454	ppb	1.9	38686.75	100000	
59	Co	89	He	0.037	ppb	26.4	124.45	1000	
60	Ni	89	He	0.397	ppb	39.4	640.04	1000	
63	Cu	89	He	7.838	ppb	2.2	7198.77	2000	
66	Zn	89	He	6.008	ppb	0.7	1274.56	2000	
75	As	89	He	0.461	ppb	24.6	385.38	1000	
78	Se	89	H2	0.104	ppb	7.3	5.33	1000	
88	Sr	89	He	566.495	ppb	1.0	215693.13	2000	
95	Mo	89	He	0.141	ppb	37.1	127.79	1000	
107	Ag	89	He	0.007	ppb	169.2	34.45	100	
111	Cd	89	He	0.007	ppb	149.0	1.85	1000	
118	Sn	159	He	0.401	ppb	27.6	561.15	1000	
121	Sb	159	No Gas	0.017	ppb	51.2	196.89	1000	
137	Ba	159	No Gas	47.243	ppb	3.1	52840.75	2000	
182	W	159	No Gas	0.044	ppb	52.0	150.17	1000	
205	Tl	209	No Gas	-0.079	ppb	N/A	196.89	1000	
208	Pb	209	No Gas	0.321	ppb	10.9	4001.41	2000	
232	Th	209	No Gas	0.070	ppb	16.3	727.52	1000	
238	U	209	No Gas	0.187	ppb	11.4	1047.89	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4288195.49	1.9	4285305.73	100.07	29.5	120.4	
Sc	45	No Gas	8575532.94	1.8	8716701.08	98.38	29.5	120.4	
Sc	45	H2	1008481.74	0.4	1073440.43	93.95	29.5	120.4	
Sc	45	He	272149.79	0.7	283880.71	95.87	29.5	120.4	
Ge	72	No Gas	1721590.73	1.5	1715165.05	100.37	29.5	120.4	
Ge	72	H2	321233.64	1.5	363056.55	88.48	29.5	120.4	
Ge	72	He	169636.78	0.6	177772.18	95.42	29.5	120.4	
Y	89	H2	5247667.43	1.0	5502376.66	95.37	29.5	120.4	
Y	89	He	1401760.85	0.8	1468553.09	95.45	29.5	120.4	
Tb	159	No Gas	15885725.18	2.5	15204271.44	104.48	29.5	120.4	
Tb	159	He	5782036.51	0.4	5847670.12	98.88	29.5	120.4	
Bi	209	No Gas	7267380.61	2.6	6985104.03	104.04	29.5	120.4	

Sample Report

Sample Name SO4724-002RA

File Name 041SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:40:02

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	9.831	ppb	3.7	9560.12	100	
11	B	6	No Gas	203.531	ppb	3.7	130609.96	1000	
23	Na	45	He	29812.757	ppb	0.9	2084654.92	200000	
24	Mg	45	He	8084.725	ppb	0.6	337946.47	200000	
27	Al	45	He	1021.198	ppb	2.2	15646.82	200000	
28	Si	45	H2	7222.893	ppb	1.5	194053.33	10000	
39	K	45	He	12486.056	ppb	0.8	431609.35	200000	
40	Ca	45	H2	88068.187	ppb	1.0	21452039.82	200000	
51	V	89	He	52.300	ppb	1.3	29182.18	1000	
52	Cr	89	He	52.994	ppb	1.9	37664.54	2000	
55	Mn	89	He	21.274	ppb	1.3	6819.75	2000	
56	Fe	89	H2	1048.042	ppb	1.3	860881.76	100000	
59	Co	89	He	10.376	ppb	4.3	11205.29	1000	
60	Ni	89	He	21.142	ppb	1.6	6695.18	1000	
63	Cu	89	He	40.679	ppb	0.7	32533.28	2000	
66	Zn	89	He	108.985	ppb	1.5	12748.49	2000	
75	As	89	He	51.743	ppb	1.5	4912.41	1000	
78	Se	89	H2	48.836	ppb	2.5	1934.88	1000	
88	Sr	89	He	610.082	ppb	0.5	230125.03	2000	
95	Mo	89	He	53.531	ppb	0.6	22927.70	1000	
107	Ag	89	He	8.773	ppb	2.8	11772.17	100	
111	Cd	89	He	10.394	ppb	1.9	1816.07	1000	
118	Sn	159	He	51.662	ppb	0.9	19120.84	1000	
121	Sb	159	No Gas	9.803	ppb	3.3	29522.11	1000	
137	Ba	159	No Gas	66.398	ppb	0.5	73502.12	2000	
182	W	159	No Gas	51.715	ppb	1.4	117334.66	1000	
205	Tl	209	No Gas	10.814	ppb	2.2	46239.12	1000	
208	Pb	209	No Gas	10.474	ppb	0.9	67911.13	2000	
232	Th	209	No Gas	10.513	ppb	2.5	60098.75	1000	
238	U	209	No Gas	11.164	ppb	4.9	61605.17	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4238049.41	3.1	4285305.73	98.9	29.5	120.4	
Sc	45	No Gas	8525682.89	2.1	8716701.08	97.81	29.5	120.4	
Sc	45	H2	1009151.61	0.4	1073440.43	94.01	29.5	120.4	
Sc	45	He	267197.24	1.0	283880.71	94.12	29.5	120.4	
Ge	72	No Gas	1713351.59	2.3	1715165.05	99.89	29.5	120.4	
Ge	72	H2	322820.70	0.6	363056.55	88.92	29.5	120.4	
Ge	72	He	168513.06	1.0	177772.18	94.79	29.5	120.4	
Y	89	H2	5313515.93	0.3	5502376.66	96.57	29.5	120.4	
Y	89	He	1388714.77	1.1	1468553.09	94.56	29.5	120.4	
Tb	159	No Gas	15726219.21	1.7	15204271.44	103.43	29.5	120.4	
Tb	159	He	5717024.22	0.9	5847670.12	97.77	29.5	120.4	
Bi	209	No Gas	7283811.99	2.7	6985104.03	104.28	29.5	120.4	

Sample Report

Sample Name RINSE

File Name 042SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:42:36

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.002	ppb	43.2	32.22	100	
11	B	6	No Gas	0.301	ppb	20.3	4529.74	1000	
23	Na	45	He	-7.768	ppb	N/A	15422.03	200000	
24	Mg	45	He	0.264	ppb	59.0	317.81	200000	
27	Al	45	He	0.704	ppb	60.6	118.90	200000	
28	Si	45	H2	-0.440	ppb	N/A	5206.67	10000	
39	K	45	He	3.848	ppb	135.7	19004.24	200000	
40	Ca	45	H2	4.750	ppb	2.6	9985.01	200000	
51	V	89	He	-0.021	ppb	N/A	260.01	1000	
52	Cr	89	He	0.046	ppb	105.6	829.46	2000	
55	Mn	89	He	-0.006	ppb	N/A	150.64	2000	
56	Fe	89	H2	0.103	ppb	59.1	11550.98	100000	
59	Co	89	He	-0.001	ppb	N/A	77.78	1000	
60	Ni	89	He	-0.060	ppb	N/A	437.80	1000	
63	Cu	89	He	0.170	ppb	12.9	1759.07	2000	
66	Zn	89	He	-0.037	ppb	N/A	582.25	2000	
75	As	89	He	0.040	ppb	28.1	365.05	1000	
78	Se	89	H2	0.016	ppb	83.4	4.33	1000	
88	Sr	89	He	0.018	ppb	19.0	51.12	2000	
95	Mo	89	He	0.014	ppb	98.6	96.67	1000	
107	Ag	89	He	0.001	ppb	165.0	32.22	100	
111	Cd	89	He	0.001	ppb	82.1	1.48	1000	
118	Sn	159	He	0.008	ppb	298.3	431.13	1000	
121	Sb	159	No Gas	0.003	ppb	42.5	186.88	1000	
137	Ba	159	No Gas	0.013	ppb	90.6	176.87	2000	
182	W	159	No Gas	0.020	ppb	40.7	276.98	1000	
205	Tl	209	No Gas	-0.017	ppb	N/A	190.21	1000	
208	Pb	209	No Gas	-0.011	ppb	N/A	1715.31	2000	
232	Th	209	No Gas	0.011	ppb	19.6	660.75	1000	
238	U	209	No Gas	0.003	ppb	65.9	93.44	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4373297.26	1.9	4285305.73	102.05	29.5	120.4	
Sc	45	No Gas	8538218.44	1.5	8716701.08	97.95	29.5	120.4	
Sc	45	H2	1011827.05	0.9	1073440.43	94.26	29.5	120.4	
Sc	45	He	268145.40	0.4	283880.71	94.46	29.5	120.4	
Ge	72	No Gas	1709628.64	1.7	1715165.05	99.68	29.5	120.4	
Ge	72	H2	329772.90	2.8	363056.55	90.83	29.5	120.4	
Ge	72	He	169332.57	1.2	177772.18	95.25	29.5	120.4	
Y	89	H2	5264857.17	2.1	5502376.66	95.68	29.5	120.4	
Y	89	He	1412774.72	1.0	1468553.09	96.2	29.5	120.4	
Tb	159	No Gas	15940406.99	1.1	15204271.44	104.84	29.5	120.4	
Tb	159	He	5816883.73	0.3	5847670.12	99.47	29.5	120.4	
Bi	209	No Gas	7576043.69	1.9	6985104.03	108.46	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	043_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 10:45:16
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	24.434	ppb	3.2	121746.12	25	97.74	89.8	110.2	
11	B	6	No Gas	24.319	ppb	3.9	81543.78	25	97.28	89.8	110.2	
23	Na	45	He	5430.470	ppb	1.2	1882353.12	5000	108.61	89.8	110.2	
24	Mg	45	He	5360.885	ppb	0.7	1109272.41	5000	107.22	89.8	110.2	
27	Al	45	He	508.740	ppb	0.4	38515.11	500	101.75	89.8	110.2	
28	Si	45	H2	480.059	ppb	0.5	68108.18	500	96.01	89.8	110.2	
39	K	45	He	5181.820	ppb	0.5	867685.98	5000	103.64	89.8	110.2	
40	Ca	45	H2	5066.162	ppb	0.3	6183214.70	5000	101.32	89.8	110.2	
51	V	89	He	25.112	ppb	0.7	71023.32	25	100.45	89.8	110.2	
52	Cr	89	He	25.346	ppb	1.3	90971.24	25	101.38	89.8	110.2	
55	Mn	89	He	24.708	ppb	0.6	39631.62	25	98.83	89.8	110.2	
56	Fe	89	H2	4965.661	ppb	2.4	20066874.71	5000	99.31	89.8	110.2	
59	Co	89	He	25.453	ppb	1.1	139294.25	25	101.81	89.8	110.2	
60	Ni	89	He	25.698	ppb	1.2	38831.57	25	102.79	89.8	110.2	
63	Cu	89	He	25.840	ppb	0.6	103038.61	25	103.36	89.8	110.2	
66	Zn	89	He	25.417	ppb	2.5	15066.40	25	101.67	89.8	110.2	
75	As	89	He	25.014	ppb	0.7	11620.78	25	100.06	89.8	110.2	
78	Se	89	H2	24.438	ppb	1.9	4822.79	25	97.75	89.8	110.2	
88	Sr	89	He	24.754	ppb	0.3	47645.85	25	99.02	89.8	110.2	
95	Mo	89	He	25.534	ppb	1.8	55694.27	25	102.14	89.8	110.2	
107	Ag	89	He	26.267	ppb	0.6	179477.24	25	105.07	89.8	110.2	
111	Cd	89	He	26.248	ppb	0.2	23386.59	25	104.99	89.8	110.2	
118	Sn	159	He	24.875	ppb	1.6	45859.17	25	99.5	89.8	110.2	
121	Sb	159	No Gas	24.274	ppb	4.1	370512.63	25	97.1	89.8	110.2	
137	Ba	159	No Gas	24.543	ppb	4.0	138195.49	25	98.17	89.8	110.2	
182	W	159	No Gas	25.149	ppb	4.3	290339.88	25	100.6	89.8	110.2	
205	Tl	209	No Gas	27.369	ppb	2.6	588205.84	25	109.48	89.8	110.2	
208	Pb	209	No Gas	25.113	ppb	2.6	804800.65	25	100.45	89.8	110.2	
232	Th	209	No Gas	26.785	ppb	3.2	773967.84	25	107.14	89.8	110.2	
238	U	209	No Gas	27.576	ppb	2.3	773369.87	25	110.3	89.8	110.2	> +/- 10%

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4351736.17	3.1	4285305.73	101.55	29.5	120.4	
Sc	45	No Gas	8491346.26	2.6	8716701.08	97.41	29.5	120.4	
Sc	45	H2	1010805.40	1.3	1073440.43	94.17	29.5	120.4	
Sc	45	He	264669.73	0.2	283880.71	93.23	29.5	120.4	
Ge	72	No Gas	1689647.21	3.0	1715165.05	98.51	29.5	120.4	
Ge	72	H2	325874.71	0.8	363056.55	89.76	29.5	120.4	
Ge	72	He	169812.89	1.0	177772.18	95.52	29.5	120.4	
Y	89	H2	5295571.84	1.7	5502376.66	96.24	29.5	120.4	
Y	89	He	1416828.12	0.6	1468553.09	96.48	29.5	120.4	
Tb	159	No Gas	16022037.40	3.3	15204271.44	105.38	29.5	120.4	
Tb	159	He	5767831.58	0.5	5847670.12	98.63	29.5	120.4	
Bi	209	No Gas	7402509.54	3.1	6985104.03	105.98	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	044_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 10:47:50
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.028	ppb	13.9	158.90	0.2	
11	B	6	No Gas	0.271	ppb	20.6	4400.82	4	
23	Na	45	He	-8.517	ppb	N/A	15101.42	200	
24	Mg	45	He	0.737	ppb	18.4	415.60	20	
27	Al	45	He	0.375	ppb	26.9	93.34	20	
28	Si	45	H2	-2.021	ppb	N/A	5013.29	100	
39	K	45	He	6.428	ppb	70.2	19354.38	200	
40	Ca	45	H2	1.711	ppb	26.4	6292.75	20	
51	V	89	He	-0.045	ppb	N/A	192.23	1	
52	Cr	89	He	0.045	ppb	56.8	824.07	1	
55	Mn	89	He	-0.017	ppb	N/A	131.31	0.4	
56	Fe	89	H2	2.267	ppb	30.2	20558.78	20	
59	Co	89	He	0.008	ppb	71.7	126.68	0.2	
60	Ni	89	He	-0.008	ppb	N/A	513.36	0.4	
63	Cu	89	He	0.128	ppb	16.6	1589.04	0.6	
66	Zn	89	He	-0.166	ppb	N/A	507.81	2	
75	As	89	He	-0.006	ppb	N/A	343.37	1	
78	Se	89	H2	0.028	ppb	9.2	6.83	1	
88	Sr	89	He	0.004	ppb	89.1	23.33	1	
95	Mo	89	He	0.047	ppb	30.5	170.01	1	
107	Ag	89	He	0.005	ppb	19.6	58.89	0.2	
111	Cd	89	He	0.003	ppb	75.2	2.96	0.2	
118	Sn	159	He	0.041	ppb	26.9	485.58	1	
121	Sb	159	No Gas	0.033	ppb	12.9	650.74	0.2	
137	Ba	159	No Gas	0.017	ppb	29.7	200.23	0.4	
182	W	159	No Gas	0.069	ppb	12.8	840.97	1	
205	Tl	209	No Gas	0.013	ppb	77.6	827.63	0.2	
208	Pb	209	No Gas	0.017	ppb	35.8	2583.00	0.2	
232	Th	209	No Gas	0.242	ppb	6.8	7317.11	1	
238	U	209	No Gas	0.037	ppb	28.1	1057.91	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4341769.17	2.8	4285305.73	101.32	29.5	120.4	
Sc	45	No Gas	8512155.82	1.6	8716701.08	97.65	29.5	120.4	
Sc	45	H2	1014550.94	0.6	1073440.43	94.51	29.5	120.4	
Sc	45	He	267131.01	1.3	283880.71	94.1	29.5	120.4	
Ge	72	No Gas	1701079.52	2.2	1715165.05	99.18	29.5	120.4	
Ge	72	H2	329494.66	1.9	363056.55	90.76	29.5	120.4	
Ge	72	He	168269.32	1.3	177772.18	94.65	29.5	120.4	
Y	89	H2	5344227.63	1.1	5502376.66	97.13	29.5	120.4	
Y	89	He	1409174.49	0.8	1468553.09	95.96	29.5	120.4	
Tb	159	No Gas	15841264.21	1.1	15204271.44	104.19	29.5	120.4	
Tb	159	He	5731229.22	1.4	5847670.12	98.01	29.5	120.4	
Bi	209	No Gas	7391961.02	1.8	6985104.03	105.82	29.5	120.4	

Sample Report

Sample Name SO4724-002RL

File Name 045SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:50:29

Sample Type Sample

Total Dilution 25.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.061	ppb	108.9	33.33	100	
11	B	6	No Gas	11.296	ppb	7.0	4956.57	1000	
23	Na	45	He	20186.252	ppb	0.9	299072.11	200000	
24	Mg	45	He	7084.017	ppb	0.9	59667.67	200000	
27	Al	45	He	21.578	ppb	50.8	131.12	200000	
28	Si	45	H2	2641.196	ppb	1.8	19364.77	10000	
39	K	45	He	1339.570	ppb	2.9	27273.75	200000	
40	Ca	45	H2	88162.333	ppb	1.4	4367312.68	200000	
51	V	89	He	-0.472	ppb	N/A	263.35	1000	
52	Cr	89	He	1.756	ppb	72.6	908.33	2000	
55	Mn	89	He	1.115	ppb	17.5	227.96	2000	
56	Fe	89	H2	43.039	ppb	5.4	18158.77	100000	
59	Co	89	He	0.104	ppb	109.1	106.68	1000	
60	Ni	89	He	0.578	ppb	225.7	554.47	1000	
63	Cu	89	He	9.334	ppb	8.2	2528.10	2000	
66	Zn	89	He	7.496	ppb	37.8	763.38	2000	
75	As	89	He	0.986	ppb	81.9	360.71	1000	
78	Se	89	H2	0.428	ppb	21.7	4.67	1000	
88	Sr	89	He	571.419	ppb	1.0	43365.05	2000	
95	Mo	89	He	0.462	ppb	83.5	106.67	1000	
107	Ag	89	He	0.017	ppb	81.8	28.89	100	
111	Cd	89	He	0.064	ppb	30.0	2.96	1000	
118	Sn	159	He	1.590	ppb	12.3	532.26	1000	
121	Sb	159	No Gas	0.131	ppb	115.7	223.59	1000	
137	Ba	159	No Gas	47.878	ppb	2.1	10693.01	2000	
182	W	159	No Gas	0.313	ppb	36.4	190.22	1000	
205	Tl	209	No Gas	-0.420	ppb	N/A	176.87	1000	
208	Pb	209	No Gas	0.254	ppb	90.0	2312.67	2000	
232	Th	209	No Gas	1.629	ppb	12.6	2179.28	1000	
238	U	209	No Gas	0.266	ppb	14.3	310.35	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4322589.62	2.1	4285305.73	100.87	29.5	120.4	
Sc	45	No Gas	8348367.97	1.4	8716701.08	95.77	29.5	120.4	
Sc	45	H2	1025354.15	1.2	1073440.43	95.52	29.5	120.4	
Sc	45	He	268206.42	0.9	283880.71	94.48	29.5	120.4	
Ge	72	No Gas	1687870.13	2.8	1715165.05	98.41	29.5	120.4	
Ge	72	H2	326444.33	0.9	363056.55	89.92	29.5	120.4	
Ge	72	He	169693.52	1.3	177772.18	95.46	29.5	120.4	
Y	89	H2	5296423.74	0.6	5502376.66	96.26	29.5	120.4	
Y	89	He	1396622.72	1.8	1468553.09	95.1	29.5	120.4	
Tb	159	No Gas	15734804.63	1.4	15204271.44	103.49	29.5	120.4	
Tb	159	He	5795546.93	0.2	5847670.12	99.11	29.5	120.4	
Bi	209	No Gas	7273413.31	1.1	6985104.03	104.13	29.5	120.4	

Sample Report

Sample Name SO4724-002RP

File Name 046SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:53:02

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	47.105	ppb	1.8	46926.84	100	
11	B	6	No Gas	469.545	ppb	1.6	304598.99	1000	
23	Na	45	He	26500.611	ppb	1.9	1867919.52	200000	
24	Mg	45	He	12058.399	ppb	1.9	507403.31	200000	
27	Al	45	He	1984.596	ppb	1.3	30561.34	200000	
28	Si	45	H2	3480.553	ppb	0.5	96815.01	10000	
39	K	45	He	12243.959	ppb	1.2	426568.71	200000	
40	Ca	45	H2	88640.301	ppb	0.9	21722796.34	200000	
51	V	89	He	497.467	ppb	0.3	277925.99	1000	
52	Cr	89	He	199.897	ppb	0.2	141827.12	2000	
55	Mn	89	He	498.896	ppb	0.4	158132.45	2000	
56	Fe	89	H2	1058.552	ppb	1.4	862771.25	100000	
59	Co	89	He	511.311	ppb	1.1	554377.93	1000	
60	Ni	89	He	505.033	ppb	1.0	149730.45	1000	
63	Cu	89	He	259.379	ppb	0.4	203910.21	2000	
66	Zn	89	He	507.930	ppb	0.3	57877.63	2000	
75	As	89	He	100.778	ppb	1.8	9347.16	1000	
78	Se	89	H2	97.014	ppb	0.4	3812.52	1000	
88	Sr	89	He	1033.983	ppb	0.3	394347.74	2000	
95	Mo	89	He	101.142	ppb	0.3	43739.87	1000	
107	Ag	89	He	51.830	ppb	0.8	70210.30	100	
111	Cd	89	He	251.400	ppb	0.5	44396.33	1000	
118	Sn	159	He	495.010	ppb	0.3	180695.06	1000	
121	Sb	159	No Gas	98.096	ppb	0.8	289909.76	1000	
137	Ba	159	No Gas	1815.071	ppb	0.2	1977240.91	2000	
182	W	159	No Gas	101.354	ppb	2.5	226515.23	1000	
205	Tl	209	No Gas	109.090	ppb	1.8	454732.54	1000	
208	Pb	209	No Gas	102.742	ppb	1.2	638851.52	2000	
232	Th	209	No Gas	107.756	ppb	1.9	603885.05	1000	
238	U	209	No Gas	110.668	ppb	2.0	601784.86	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4346638.31	1.3	4285305.73	101.43	29.5	120.4	
Sc	45	No Gas	8373374.43	1.0	8716701.08	96.06	29.5	120.4	
Sc	45	H2	1015246.30	0.6	1073440.43	94.58	29.5	120.4	
Sc	45	He	269085.24	1.5	283880.71	94.79	29.5	120.4	
Ge	72	No Gas	1679086.69	2.1	1715165.05	97.9	29.5	120.4	
Ge	72	H2	316678.43	2.2	363056.55	87.23	29.5	120.4	
Ge	72	He	169195.06	1.0	177772.18	95.18	29.5	120.4	
Y	89	H2	5272075.17	1.6	5502376.66	95.81	29.5	120.4	
Y	89	He	1404106.52	0.4	1468553.09	95.61	29.5	120.4	
Tb	159	No Gas	15495980.60	1.3	15204271.44	101.92	29.5	120.4	
Tb	159	He	5748743.25	0.9	5847670.12	98.31	29.5	120.4	
Bi	209	No Gas	7174077.26	1.0	6985104.03	102.71	29.5	120.4	

Sample Report

Sample Name SO4724-002RS

File Name 047SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:55:39

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	47.478	ppb	3.5	47381.83	100	
11	B	6	No Gas	476.657	ppb	3.2	309738.19	1000	
23	Na	45	He	26705.131	ppb	1.1	1883092.58	200000	
24	Mg	45	He	12004.201	ppb	0.8	505369.93	200000	
27	Al	45	He	1985.406	ppb	1.2	30588.01	200000	
28	Si	45	H2	3469.635	ppb	1.3	95330.76	10000	
39	K	45	He	12252.678	ppb	0.4	427034.98	200000	
40	Ca	45	H2	87764.613	ppb	0.3	21241166.49	200000	
51	V	89	He	504.739	ppb	0.6	280374.36	1000	
52	Cr	89	He	201.923	ppb	1.2	142433.42	2000	
55	Mn	89	He	504.178	ppb	0.7	158888.53	2000	
56	Fe	89	H2	1054.005	ppb	1.4	850129.37	100000	
59	Co	89	He	515.562	ppb	0.5	555802.12	1000	
60	Ni	89	He	513.230	ppb	0.6	151283.11	1000	
63	Cu	89	He	264.378	ppb	0.4	206634.31	2000	
66	Zn	89	He	507.414	ppb	0.1	57490.32	2000	
75	As	89	He	101.651	ppb	1.5	9370.85	1000	
78	Se	89	H2	96.962	ppb	1.5	3771.01	1000	
88	Sr	89	He	1041.626	ppb	0.2	394992.06	2000	
95	Mo	89	He	103.119	ppb	1.9	44336.25	1000	
107	Ag	89	He	52.637	ppb	1.0	70893.62	100	
111	Cd	89	He	254.082	ppb	0.8	44615.94	1000	
118	Sn	159	He	499.158	ppb	0.2	182646.60	1000	
121	Sb	159	No Gas	98.623	ppb	1.5	295685.29	1000	
137	Ba	159	No Gas	1826.058	ppb	2.1	2017825.46	2000	
182	W	159	No Gas	101.347	ppb	2.1	229807.13	1000	
205	Tl	209	No Gas	108.687	ppb	0.8	455586.99	1000	
208	Pb	209	No Gas	102.764	ppb	1.7	642473.89	2000	
232	Th	209	No Gas	110.456	ppb	2.3	622403.20	1000	
238	U	209	No Gas	111.287	ppb	1.8	608498.25	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4356414.49	2.5	4285305.73	101.66	29.5	120.4	
Sc	45	No Gas	8398475.26	1.4	8716701.08	96.35	29.5	120.4	
Sc	45	H2	1002654.28	1.0	1073440.43	93.41	29.5	120.4	
Sc	45	He	269176.69	0.8	283880.71	94.82	29.5	120.4	
Ge	72	No Gas	1690778.05	2.8	1715165.05	98.58	29.5	120.4	
Ge	72	H2	316146.55	0.8	363056.55	87.08	29.5	120.4	
Ge	72	He	168924.21	0.8	177772.18	95.02	29.5	120.4	
Y	89	H2	5218273.19	1.9	5502376.66	94.84	29.5	120.4	
Y	89	He	1396096.94	0.7	1468553.09	95.07	29.5	120.4	
Tb	159	No Gas	15720502.27	0.7	15204271.44	103.4	29.5	120.4	
Tb	159	He	5762598.32	0.7	5847670.12	98.55	29.5	120.4	
Bi	209	No Gas	7213215.46	0.7	6985104.03	103.27	29.5	120.4	

Sample Report

Sample Name RINSE

File Name 048SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:58:12

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.010	ppb	22.2	68.89	100	
11	B	6	No Gas	1.164	ppb	10.1	7278.75	1000	
23	Na	45	He	-8.325	ppb	N/A	15228.16	200000	
24	Mg	45	He	0.433	ppb	22.0	353.36	200000	
27	Al	45	He	0.340	ppb	56.6	91.11	200000	
28	Si	45	H2	-1.705	ppb	N/A	5066.55	10000	
39	K	45	He	4.302	ppb	97.1	19075.87	200000	
40	Ca	45	H2	8.905	ppb	43.8	15136.18	200000	
51	V	89	He	-0.020	ppb	N/A	262.23	1000	
52	Cr	89	He	0.024	ppb	38.6	753.25	2000	
55	Mn	89	He	0.002	ppb	352.5	162.64	2000	
56	Fe	89	H2	0.092	ppb	177.6	11611.57	100000	
59	Co	89	He	0.022	ppb	27.4	206.69	1000	
60	Ni	89	He	0.022	ppb	145.7	560.03	1000	
63	Cu	89	He	0.174	ppb	16.3	1772.40	2000	
66	Zn	89	He	-0.042	ppb	N/A	578.92	2000	
75	As	89	He	0.004	ppb	1157.4	348.71	1000	
78	Se	89	H2	0.028	ppb	13.7	6.83	1000	
88	Sr	89	He	0.034	ppb	37.8	81.11	2000	
95	Mo	89	He	0.031	ppb	36.9	134.45	1000	
107	Ag	89	He	0.003	ppb	45.0	46.67	100	
111	Cd	89	He	0.010	ppb	12.8	10.00	1000	
118	Sn	159	He	0.073	ppb	43.4	560.04	1000	
121	Sb	159	No Gas	0.029	ppb	34.6	584.00	1000	
137	Ba	159	No Gas	0.296	ppb	27.5	1745.40	2000	
182	W	159	No Gas	0.048	ppb	5.7	594.01	1000	
205	Tl	209	No Gas	0.005	ppb	156.7	637.40	1000	
208	Pb	209	No Gas	0.004	ppb	126.1	2132.44	2000	
232	Th	209	No Gas	0.273	ppb	9.0	8201.96	1000	
238	U	209	No Gas	0.024	ppb	39.3	694.14	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4350456.03	2.6	4285305.73	101.52	29.5	120.4	
Sc	45	No Gas	8434018.82	1.5	8716701.08	96.76	29.5	120.4	
Sc	45	H2	1016949.32	0.3	1073440.43	94.74	29.5	120.4	
Sc	45	He	268125.19	1.3	283880.71	94.45	29.5	120.4	
Ge	72	No Gas	1706583.89	1.4	1715165.05	99.5	29.5	120.4	
Ge	72	H2	331046.54	0.8	363056.55	91.18	29.5	120.4	
Ge	72	He	169311.68	1.4	177772.18	95.24	29.5	120.4	
Y	89	H2	5314492.85	0.2	5502376.66	96.59	29.5	120.4	
Y	89	He	1412305.52	0.9	1468553.09	96.17	29.5	120.4	
Tb	159	No Gas	15734691.16	2.6	15204271.44	103.49	29.5	120.4	
Tb	159	He	5898825.54	0.3	5847670.12	100.87	29.5	120.4	
Bi	209	No Gas	7377013.37	1.4	6985104.03	105.61	29.5	120.4	

Sample Report

Sample Name SO4724-003R

File Name 049SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 11:00:52

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.015	ppb	30.0	35.56	100	
11	B	6	No Gas	2.986	ppb	7.7	5375.63	1000	
23	Na	45	He	19237.654	ppb	0.6	1349638.85	200000	
24	Mg	45	He	7003.428	ppb	0.9	292350.68	200000	
27	Al	45	He	20.883	ppb	14.7	383.35	200000	
28	Si	45	H2	2525.986	ppb	1.7	71447.56	10000	
39	K	45	He	1306.922	ppb	3.5	61460.34	200000	
40	Ca	45	H2	86964.460	ppb	1.3	21231401.49	200000	
51	V	89	He	0.537	ppb	12.0	616.71	1000	
52	Cr	89	He	0.294	ppb	22.7	869.22	2000	
55	Mn	89	He	0.476	ppb	10.1	308.62	2000	
56	Fe	89	H2	3.793	ppb	15.6	14376.87	100000	
59	Co	89	He	0.107	ppb	28.6	200.02	1000	
60	Ni	89	He	1.371	ppb	14.0	926.73	1000	
63	Cu	89	He	11.844	ppb	2.5	10320.83	2000	
66	Zn	89	He	34.784	ppb	4.1	4510.88	2000	
75	As	89	He	0.200	ppb	49.3	362.05	1000	
78	Se	89	H2	0.139	ppb	7.7	6.83	1000	
88	Sr	89	He	557.184	ppb	0.8	212047.94	2000	
95	Mo	89	He	0.077	ppb	75.9	100.01	1000	
107	Ag	89	He	0.012	ppb	24.9	40.00	100	
111	Cd	89	He	0.015	ppb	86.3	3.33	1000	
118	Sn	159	He	0.720	ppb	13.7	674.49	1000	
121	Sb	159	No Gas	0.038	ppb	90.3	256.96	1000	
137	Ba	159	No Gas	43.008	ppb	1.2	47169.58	2000	
182	W	159	No Gas	0.061	ppb	18.2	183.54	1000	
205	Tl	209	No Gas	-0.076	ppb	N/A	210.24	1000	
208	Pb	209	No Gas	0.446	ppb	13.1	4762.40	2000	
232	Th	209	No Gas	0.750	ppb	12.6	4559.29	1000	
238	U	209	No Gas	0.244	ppb	11.1	1351.58	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4288267.13	2.4	4285305.73	100.07	29.5	120.4	
Sc	45	No Gas	8320030.47	0.9	8716701.08	95.45	29.5	120.4	
Sc	45	H2	1011440.00	0.9	1073440.43	94.22	29.5	120.4	
Sc	45	He	266797.75	1.3	283880.71	93.98	29.5	120.4	
Ge	72	No Gas	1681854.89	1.6	1715165.05	98.06	29.5	120.4	
Ge	72	H2	324387.92	1.2	363056.55	89.35	29.5	120.4	
Ge	72	He	168096.14	1.8	177772.18	94.56	29.5	120.4	
Y	89	H2	5339462.14	2.2	5502376.66	97.04	29.5	120.4	
Y	89	He	1401166.82	1.6	1468553.09	95.41	29.5	120.4	
Tb	159	No Gas	15569413.66	0.8	15204271.44	102.4	29.5	120.4	
Tb	159	He	5749996.65	0.8	5847670.12	98.33	29.5	120.4	
Bi	209	No Gas	7238668.10	3.0	6985104.03	103.63	29.5	120.4	

Sample Report

Sample Name SO4724-004R

File Name 050SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 11:03:25

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.008	ppb	22.5	28.89	100	
11	B	6	No Gas	57.700	ppb	2.1	40087.52	1000	
23	Na	45	He	15270.721	ppb	1.4	1082006.02	200000	
24	Mg	45	He	26040.693	ppb	0.5	1093418.32	200000	
27	Al	45	He	10.466	ppb	18.4	225.57	200000	
28	Si	45	H2	4009.126	ppb	1.4	108868.65	10000	
39	K	45	He	767.179	ppb	0.6	43917.56	200000	
40	Ca	45	H2	61279.256	ppb	1.4	14768358.67	200000	
51	V	89	He	0.761	ppb	68.2	742.27	1000	
52	Cr	89	He	0.687	ppb	32.2	1148.56	2000	
55	Mn	89	He	0.709	ppb	75.1	383.27	2000	
56	Fe	89	H2	13.348	ppb	7.1	21948.60	100000	
59	Co	89	He	0.383	ppb	103.3	500.06	1000	
60	Ni	89	He	0.616	ppb	76.2	705.60	1000	
63	Cu	89	He	21.448	ppb	2.8	17850.88	2000	
66	Zn	89	He	21.211	ppb	4.9	2990.44	2000	
75	As	89	He	0.309	ppb	48.5	372.38	1000	
78	Se	89	H2	0.192	ppb	19.5	8.83	1000	
88	Sr	89	He	1212.520	ppb	1.2	462328.31	2000	
95	Mo	89	He	0.210	ppb	53.2	157.78	1000	
107	Ag	89	He	0.041	ppb	77.8	80.01	100	
111	Cd	89	He	0.176	ppb	147.3	31.85	1000	
118	Sn	159	He	0.764	ppb	69.0	688.93	1000	
121	Sb	159	No Gas	0.063	ppb	30.0	330.37	1000	
137	Ba	159	No Gas	50.342	ppb	2.4	55206.62	2000	
182	W	159	No Gas	0.041	ppb	39.5	140.16	1000	
205	Tl	209	No Gas	-0.083	ppb	N/A	180.20	1000	
208	Pb	209	No Gas	0.398	ppb	2.8	4478.64	2000	
232	Th	209	No Gas	0.348	ppb	11.3	2302.79	1000	
238	U	209	No Gas	0.096	ppb	22.3	547.30	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4298938.68	1.3	4285305.73	100.32	29.5	120.4	
Sc	45	No Gas	8293989.95	0.8	8716701.08	95.15	29.5	120.4	
Sc	45	H2	998351.30	2.2	1073440.43	93	29.5	120.4	
Sc	45	He	268541.52	0.8	283880.71	94.6	29.5	120.4	
Ge	72	No Gas	1682952.28	1.9	1715165.05	98.12	29.5	120.4	
Ge	72	H2	322138.07	0.8	363056.55	88.73	29.5	120.4	
Ge	72	He	168900.13	1.6	177772.18	95.01	29.5	120.4	
Y	89	H2	5285579.72	1.0	5502376.66	96.06	29.5	120.4	
Y	89	He	1403800.81	0.1	1468553.09	95.59	29.5	120.4	
Tb	159	No Gas	15574646.85	1.7	15204271.44	102.44	29.5	120.4	
Tb	159	He	5741595.19	0.6	5847670.12	98.19	29.5	120.4	
Bi	209	No Gas	7250081.49	1.5	6985104.03	103.79	29.5	120.4	

Sample Report

Sample Name SO4724-005R

File Name 051SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 11:06:02

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.001	ppb	1330.0	22.22	100	
11	B	6	No Gas	43.473	ppb	3.8	30847.17	1000	
23	Na	45	He	16060.816	ppb	1.1	1135337.50	200000	
24	Mg	45	He	26254.574	ppb	1.7	1100666.98	200000	
27	Al	45	He	8.738	ppb	19.0	198.90	200000	
28	Si	45	H2	3735.616	ppb	0.8	102847.63	10000	
39	K	45	He	764.097	ppb	2.7	43746.91	200000	
40	Ca	45	H2	60820.943	ppb	1.6	14808235.47	200000	
51	V	89	He	0.488	ppb	11.1	588.92	1000	
52	Cr	89	He	0.502	ppb	23.7	1015.94	2000	
55	Mn	89	He	1.402	ppb	3.7	601.24	2000	
56	Fe	89	H2	112.909	ppb	0.6	102114.55	100000	
59	Co	89	He	0.086	ppb	32.4	177.79	1000	
60	Ni	89	He	0.688	ppb	21.6	725.60	1000	
63	Cu	89	He	12.207	ppb	4.7	10604.40	2000	
66	Zn	89	He	7.609	ppb	4.3	1454.58	2000	
75	As	89	He	0.068	ppb	434.7	350.38	1000	
78	Se	89	H2	0.213	ppb	26.8	9.67	1000	
88	Sr	89	He	1542.679	ppb	1.6	587142.62	2000	
95	Mo	89	He	0.121	ppb	27.0	118.90	1000	
107	Ag	89	He	0.011	ppb	167.7	38.89	100	
111	Cd	89	He	0.021	ppb	52.0	4.45	1000	
118	Sn	159	He	0.592	ppb	11.5	633.37	1000	
121	Sb	159	No Gas	0.056	ppb	44.2	310.35	1000	
137	Ba	159	No Gas	49.277	ppb	0.7	54371.52	2000	
182	W	159	No Gas	0.038	ppb	42.1	133.49	1000	
205	Tl	209	No Gas	-0.098	ppb	N/A	120.14	1000	
208	Pb	209	No Gas	0.342	ppb	3.4	4158.27	2000	
232	Th	209	No Gas	0.231	ppb	5.4	1645.28	1000	
238	U	209	No Gas	0.422	ppb	7.8	2352.85	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4271608.70	3.5	4285305.73	99.68	29.5	120.4	
Sc	45	No Gas	8331169.94	2.1	8716701.08	95.58	29.5	120.4	
Sc	45	H2	1008671.34	0.9	1073440.43	93.97	29.5	120.4	
Sc	45	He	268119.07	0.2	283880.71	94.45	29.5	120.4	
Ge	72	No Gas	1681917.47	3.6	1715165.05	98.06	29.5	120.4	
Ge	72	H2	323781.42	1.6	363056.55	89.18	29.5	120.4	
Ge	72	He	170158.94	0.3	177772.18	95.72	29.5	120.4	
Y	89	H2	5279402.03	0.5	5502376.66	95.95	29.5	120.4	
Y	89	He	1401381.98	1.0	1468553.09	95.43	29.5	120.4	
Tb	159	No Gas	15666280.60	1.2	15204271.44	103.04	29.5	120.4	
Tb	159	He	5800455.96	0.5	5847670.12	99.19	29.5	120.4	
Bi	209	No Gas	7300430.64	1.3	6985104.03	104.51	29.5	120.4	

Sample Report

Sample Name SO4724-006R

File Name 052SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 11:08:34

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.002	ppb	257.9	23.33	100	
11	B	6	No Gas	42.692	ppb	4.2	30143.24	1000	
23	Na	45	He	15517.423	ppb	0.9	1106536.93	200000	
24	Mg	45	He	25531.886	ppb	1.3	1079187.77	200000	
27	Al	45	He	10.930	ppb	16.8	234.46	200000	
28	Si	45	H2	3697.646	ppb	1.4	101522.01	10000	
39	K	45	He	738.756	ppb	3.4	43250.52	200000	
40	Ca	45	H2	60028.316	ppb	1.5	14568113.81	200000	
51	V	89	He	0.645	ppb	10.2	676.71	1000	
52	Cr	89	He	0.457	ppb	30.6	985.26	2000	
55	Mn	89	He	1.525	ppb	1.5	640.57	2000	
56	Fe	89	H2	101.492	ppb	0.8	93065.98	100000	
59	Co	89	He	0.057	ppb	55.5	146.68	1000	
60	Ni	89	He	2.668	ppb	8.6	1310.11	1000	
63	Cu	89	He	18.521	ppb	2.3	15541.41	2000	
66	Zn	89	He	19.226	ppb	4.4	2763.71	2000	
75	As	89	He	0.131	ppb	350.5	356.05	1000	
78	Se	89	H2	0.149	ppb	33.9	7.17	1000	
88	Sr	89	He	1514.797	ppb	0.6	576788.19	2000	
95	Mo	89	He	0.131	ppb	32.9	123.34	1000	
107	Ag	89	He	0.017	ppb	50.7	47.78	100	
111	Cd	89	He	0.031	ppb	92.8	6.29	1000	
118	Sn	159	He	0.590	ppb	34.4	628.93	1000	
121	Sb	159	No Gas	0.064	ppb	15.2	333.71	1000	
137	Ba	159	No Gas	49.157	ppb	0.7	53879.21	2000	
182	W	159	No Gas	0.016	ppb	32.1	83.43	1000	
205	Tl	209	No Gas	-0.081	ppb	N/A	186.88	1000	
208	Pb	209	No Gas	2.365	ppb	4.9	16616.28	2000	
232	Th	209	No Gas	0.139	ppb	3.9	1104.62	1000	
238	U	209	No Gas	0.422	ppb	6.6	2316.12	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4241443.32	2.9	4285305.73	98.98	29.5	120.4	
Sc	45	No Gas	8390213.57	0.9	8716701.08	96.25	29.5	120.4	
Sc	45	H2	1005479.55	2.4	1073440.43	93.67	29.5	120.4	
Sc	45	He	270304.72	0.7	283880.71	95.22	29.5	120.4	
Ge	72	No Gas	1684882.17	1.9	1715165.05	98.23	29.5	120.4	
Ge	72	H2	322081.16	1.8	363056.55	88.71	29.5	120.4	
Ge	72	He	169108.29	0.3	177772.18	95.13	29.5	120.4	
Y	89	H2	5287953.24	1.8	5502376.66	96.1	29.5	120.4	
Y	89	He	1401926.87	1.3	1468553.09	95.46	29.5	120.4	
Tb	159	No Gas	15562107.55	1.8	15204271.44	102.35	29.5	120.4	
Tb	159	He	5771801.58	1.2	5847670.12	98.7	29.5	120.4	
Bi	209	No Gas	7176736.12	3.0	6985104.03	102.74	29.5	120.4	

Sample Report

Sample Name RINSE

File Name 053SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 11:11:11

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	-0.001	ppb	N/A	14.44	100	
11	B	6	No Gas	0.109	ppb	34.2	3909.56	1000	
23	Na	45	He	-5.062	ppb	N/A	16001.08	200000	
24	Mg	45	He	8.186	ppb	105.2	1927.56	200000	
27	Al	45	He	0.411	ppb	17.4	94.45	200000	
28	Si	45	H2	-3.624	ppb	N/A	4796.16	10000	
39	K	45	He	5.168	ppb	19.5	18812.25	200000	
40	Ca	45	H2	2.028	ppb	17.1	6668.47	200000	
51	V	89	He	-0.010	ppb	N/A	288.90	1000	
52	Cr	89	He	0.299	ppb	158.0	1713.61	2000	
55	Mn	89	He	-0.003	ppb	N/A	153.31	2000	
56	Fe	89	H2	0.033	ppb	308.3	11385.54	100000	
59	Co	89	He	0.023	ppb	124.0	206.69	1000	
60	Ni	89	He	0.008	ppb	113.2	534.47	1000	
63	Cu	89	He	0.139	ppb	29.4	1623.49	2000	
66	Zn	89	He	-0.069	ppb	N/A	558.92	2000	
75	As	89	He	-0.004	ppb	N/A	342.38	1000	
78	Se	89	H2	0.004	ppb	132.4	2.17	1000	
88	Sr	89	He	0.520	ppb	103.8	1001.38	2000	
95	Mo	89	He	0.015	ppb	14.2	98.89	1000	
107	Ag	89	He	0.003	ppb	84.2	47.78	100	
111	Cd	89	He	0.006	ppb	162.3	6.30	1000	
118	Sn	159	He	0.004	ppb	644.9	422.25	1000	
121	Sb	159	No Gas	-0.001	ppb	N/A	136.82	1000	
137	Ba	159	No Gas	0.005	ppb	324.3	130.15	2000	
182	W	159	No Gas	0.005	ppb	62.7	106.79	1000	
205	Tl	209	No Gas	-0.019	ppb	N/A	140.16	1000	
208	Pb	209	No Gas	-0.011	ppb	N/A	1681.92	2000	
232	Th	209	No Gas	0.004	ppb	59.9	437.17	1000	
238	U	209	No Gas	0.000	ppb	907.8	20.02	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4375490.02	2.5	4285305.73	102.1	29.5	120.4	
Sc	45	No Gas	8337205.14	1.0	8716701.08	95.65	29.5	120.4	
Sc	45	H2	1013218.97	1.5	1073440.43	94.39	29.5	120.4	
Sc	45	He	262398.46	1.0	283880.71	92.43	29.5	120.4	
Ge	72	No Gas	1675953.17	2.2	1715165.05	97.71	29.5	120.4	
Ge	72	H2	326633.08	1.1	363056.55	89.97	29.5	120.4	
Ge	72	He	168498.55	0.5	177772.18	94.78	29.5	120.4	
Y	89	H2	5319206.52	0.4	5502376.66	96.67	29.5	120.4	
Y	89	He	1400835.78	0.6	1468553.09	95.39	29.5	120.4	
Tb	159	No Gas	15665826.85	1.7	15204271.44	103.04	29.5	120.4	
Tb	159	He	5789459.29	0.8	5847670.12	99	29.5	120.4	
Bi	209	No Gas	7378176.41	1.7	6985104.03	105.63	29.5	120.4	

Sample Report

Sample Name RINSE

File Name 054SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 11:13:47

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.000	ppb	N/A	20.00	100	
11	B	6	No Gas	0.072	ppb	70.1	3785.07	1000	
23	Na	45	He	-12.581	ppb	N/A	13431.21	200000	
24	Mg	45	He	-0.037	ppb	N/A	248.91	200000	
27	Al	45	He	0.487	ppb	25.3	100.00	200000	
28	Si	45	H2	-1.604	ppb	N/A	5046.60	10000	
39	K	45	He	5.254	ppb	96.1	18795.63	200000	
40	Ca	45	H2	0.711	ppb	9.8	5038.85	200000	
51	V	89	He	-0.016	ppb	N/A	272.24	1000	
52	Cr	89	He	0.089	ppb	149.6	971.62	2000	
55	Mn	89	He	-0.015	ppb	N/A	133.98	2000	
56	Fe	89	H2	0.077	ppb	87.0	11547.64	100000	
59	Co	89	He	0.001	ppb	518.3	91.12	1000	
60	Ni	89	He	-0.005	ppb	N/A	513.36	1000	
63	Cu	89	He	0.076	ppb	24.8	1373.45	2000	
66	Zn	89	He	-0.166	ppb	N/A	503.36	2000	
75	As	89	He	-0.009	ppb	N/A	339.04	1000	
78	Se	89	H2	0.001	ppb	632.6	1.50	1000	
88	Sr	89	He	0.013	ppb	22.7	40.00	2000	
95	Mo	89	He	0.008	ppb	72.3	84.45	1000	
107	Ag	89	He	0.001	ppb	273.9	28.89	100	
111	Cd	89	He	0.000	ppb	1911.8	0.74	1000	
118	Sn	159	He	0.003	ppb	919.9	415.58	1000	
121	Sb	159	No Gas	0.002	ppb	139.7	176.86	1000	
137	Ba	159	No Gas	0.000	ppb	N/A	103.45	2000	
182	W	159	No Gas	0.003	ppb	36.0	83.43	1000	
205	Tl	209	No Gas	-0.018	ppb	N/A	153.51	1000	
208	Pb	209	No Gas	-0.005	ppb	N/A	1878.82	2000	
232	Th	209	No Gas	0.002	ppb	105.5	387.11	1000	
238	U	209	No Gas	0.001	ppb	107.2	53.39	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4366372.83	2.5	4285305.73	101.89	29.5	120.4	
Sc	45	No Gas	8306257.21	1.2	8716701.08	95.29	29.5	120.4	
Sc	45	H2	1009051.03	2.2	1073440.43	94	29.5	120.4	
Sc	45	He	262021.41	0.9	283880.71	92.3	29.5	120.4	
Ge	72	No Gas	1673438.22	2.3	1715165.05	97.57	29.5	120.4	
Ge	72	H2	333160.48	0.4	363056.55	91.77	29.5	120.4	
Ge	72	He	166186.72	0.6	177772.18	93.48	29.5	120.4	
Y	89	H2	5311447.15	0.8	5502376.66	96.53	29.5	120.4	
Y	89	He	1397831.16	0.9	1468553.09	95.18	29.5	120.4	
Tb	159	No Gas	15795067.54	1.7	15204271.44	103.89	29.5	120.4	
Tb	159	He	5724317.55	0.9	5847670.12	97.89	29.5	120.4	
Bi	209	No Gas	7465060.42	2.0	6985104.03	106.87	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	055_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 11:16:27
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	24.422	ppb	2.4	121449.88	25	97.69	89.8	110.2	
11	B	6	No Gas	23.768	ppb	1.0	79638.69	25	95.07	89.8	110.2	
23	Na	45	He	5436.191	ppb	1.2	1852510.52	5000	108.72	89.8	110.2	
24	Mg	45	He	5329.483	ppb	0.6	1084226.69	5000	106.59	89.8	110.2	
27	Al	45	He	508.210	ppb	1.7	37831.20	500	101.64	89.8	110.2	
28	Si	45	H2	478.727	ppb	0.7	66770.62	500	95.75	89.8	110.2	
39	K	45	He	5152.715	ppb	0.4	848399.21	5000	103.05	89.8	110.2	
40	Ca	45	H2	5130.626	ppb	0.8	6154286.71	5000	102.61	89.8	110.2	
51	V	89	He	25.499	ppb	1.0	70048.23	25	102	89.8	110.2	
52	Cr	89	He	25.396	ppb	0.2	88550.95	25	101.58	89.8	110.2	
55	Mn	89	He	25.141	ppb	0.5	39172.43	25	100.56	89.8	110.2	
56	Fe	89	H2	4983.880	ppb	1.0	19888222.31	5000	99.68	89.8	110.2	
59	Co	89	He	25.481	ppb	1.8	135453.06	25	101.92	89.8	110.2	
60	Ni	89	He	25.889	ppb	2.0	38003.78	25	103.56	89.8	110.2	
63	Cu	89	He	25.890	ppb	0.7	100288.64	25	103.56	89.8	110.2	
66	Zn	89	He	25.368	ppb	1.7	14608.12	25	101.47	89.8	110.2	
75	As	89	He	25.402	ppb	1.4	11458.30	25	101.61	89.8	110.2	
78	Se	89	H2	25.046	ppb	0.8	4879.97	25	100.18	89.8	110.2	
88	Sr	89	He	24.737	ppb	0.7	46254.45	25	98.95	89.8	110.2	
95	Mo	89	He	25.802	ppb	1.1	54664.78	25	103.21	89.8	110.2	
107	Ag	89	He	26.648	ppb	0.7	176878.19	25	106.59	89.8	110.2	
111	Cd	89	He	26.363	ppb	0.8	22817.11	25	105.45	89.8	110.2	
118	Sn	159	He	24.371	ppb	0.6	44665.02	25	97.48	89.8	110.2	
121	Sb	159	No Gas	24.455	ppb	2.2	364801.46	25	97.82	89.8	110.2	
137	Ba	159	No Gas	24.700	ppb	1.8	135922.15	25	98.8	89.8	110.2	
182	W	159	No Gas	25.317	ppb	1.3	285678.33	25	101.27	89.8	110.2	
205	Tl	209	No Gas	27.119	ppb	2.2	584437.27	25	108.48	89.8	110.2	
208	Pb	209	No Gas	25.379	ppb	1.8	815576.48	25	101.52	89.8	110.2	
232	Th	209	No Gas	26.766	ppb	1.6	775636.31	25	107.06	89.8	110.2	
238	U	209	No Gas	27.613	ppb	1.4	776539.08	25	110.45	89.8	110.2	> +/- 10%

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4341101.47	1.1	4285305.73	101.3	29.5	120.4	
Sc	45	No Gas	8188059.96	1.0	8716701.08	93.94	29.5	120.4	
Sc	45	H2	993451.07	1.9	1073440.43	92.55	29.5	120.4	
Sc	45	He	260227.79	1.7	283880.71	91.67	29.5	120.4	
Ge	72	No Gas	1642429.07	0.6	1715165.05	95.76	29.5	120.4	
Ge	72	H2	324099.48	2.2	363056.55	89.27	29.5	120.4	
Ge	72	He	165083.71	1.5	177772.18	92.86	29.5	120.4	
Y	89	H2	5228161.73	1.6	5502376.66	95.02	29.5	120.4	
Y	89	He	1376349.88	1.2	1468553.09	93.72	29.5	120.4	
Tb	159	No Gas	15647405.88	1.4	15204271.44	102.91	29.5	120.4	
Tb	159	He	5732219.36	1.3	5847670.12	98.03	29.5	120.4	
Bi	209	No Gas	7420217.87	1.4	6985104.03	106.23	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	056_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 11:19:00
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.030	ppb	31.0	172.23	0.2	
11	B	6	No Gas	0.228	ppb	38.7	4266.33	4	
23	Na	45	He	-9.121	ppb	N/A	14657.27	200	
24	Mg	45	He	2.294	ppb	82.8	729.02	20	
27	Al	45	He	0.529	ppb	54.7	103.34	20	
28	Si	45	H2	-1.735	ppb	N/A	5039.98	100	
39	K	45	He	6.858	ppb	66.1	19110.96	200	
40	Ca	45	H2	3.108	ppb	89.7	8023.05	20	
51	V	89	He	-0.038	ppb	N/A	211.12	1	
52	Cr	89	He	0.041	ppb	115.1	802.70	1	
55	Mn	89	He	-0.005	ppb	N/A	149.97	0.4	
56	Fe	89	H2	3.713	ppb	80.9	26187.38	20	
59	Co	89	He	0.007	ppb	76.2	122.23	0.2	
60	Ni	89	He	-0.014	ppb	N/A	500.02	0.4	
63	Cu	89	He	0.074	ppb	28.6	1360.12	0.6	
66	Zn	89	He	-0.150	ppb	N/A	511.14	2	
75	As	89	He	-0.028	ppb	N/A	329.71	1	
78	Se	89	H2	0.034	ppb	25.3	8.00	1	
88	Sr	89	He	0.026	ppb	70.8	65.56	1	
95	Mo	89	He	0.054	ppb	33.8	181.12	1	
107	Ag	89	He	0.015	ppb	68.4	124.45	0.2	
111	Cd	89	He	0.011	ppb	115.4	10.37	0.2	
118	Sn	159	He	0.068	ppb	17.8	538.92	1	
121	Sb	159	No Gas	0.035	ppb	22.0	667.43	0.2	
137	Ba	159	No Gas	0.023	ppb	57.5	226.92	0.4	
182	W	159	No Gas	0.069	ppb	24.7	824.29	1	
205	Tl	209	No Gas	0.012	ppb	124.9	804.26	0.2	
208	Pb	209	No Gas	0.017	ppb	88.1	2572.99	0.2	
232	Th	209	No Gas	0.229	ppb	3.5	6993.08	1	
238	U	209	No Gas	0.035	ppb	29.0	1004.50	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4344466.09	0.5	4285305.73	101.38	29.5	120.4	
Sc	45	No Gas	8218208.65	1.3	8716701.08	94.28	29.5	120.4	
Sc	45	H2	1012112.77	1.9	1073440.43	94.29	29.5	120.4	
Sc	45	He	262787.30	1.1	283880.71	92.57	29.5	120.4	
Ge	72	No Gas	1661962.26	1.2	1715165.05	96.9	29.5	120.4	
Ge	72	H2	328945.04	1.6	363056.55	90.6	29.5	120.4	
Ge	72	He	166654.21	1.2	177772.18	93.75	29.5	120.4	
Y	89	H2	5286913.03	0.5	5502376.66	96.08	29.5	120.4	
Y	89	He	1393246.84	1.1	1468553.09	94.87	29.5	120.4	
Tb	159	No Gas	15714801.15	2.7	15204271.44	103.36	29.5	120.4	
Tb	159	He	5778116.09	1.0	5847670.12	98.81	29.5	120.4	
Bi	209	No Gas	7453698.02	2.3	6985104.03	106.71	29.5	120.4	

Prep Blank (PB) Report

Sample Name	PBSOI15IMS2
File Name	057_PB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 11:21:39
Sample Type	PB
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	6	No Gas	-0.001	ppb	N/A	20.00	0.5	
B	11	6	No Gas	1.147	ppb	17.5	4172.97	10	
Na	23	45	He	-3.779	ppb	N/A	17703.88	500	
Mg	24	45	He	12.144	ppb	10.8	764.52	50	
Al	27	45	He	10.473	ppb	15.8	223.34	50	
Si	28	45	H2	-12.975	ppb	N/A	4879.79	250	
K	39	45	He	59.842	ppb	22.8	20175.26	500	
Ca	40	45	H2	79.325	ppb	0.9	23336.59	50	PB 6020 Fails DoD
V	51	89	He	0.476	ppb	25.1	578.92	2.5	
Cr	52	89	He	0.837	ppb	15.3	1243.84	2.5	
Mn	55	89	He	0.399	ppb	3.6	282.62	1	
Fe	56	89	H2	26.445	ppb	2.9	32119.53	50	
Co	59	89	He	0.051	ppb	103.2	140.01	0.5	
Ni	60	89	He	0.147	ppb	55.0	562.25	1	
Cu	63	89	He	3.461	ppb	3.3	3757.31	1.5	PB 6020 Fails DoD PB 6020 Fails Non-DoD
Zn	66	89	He	3.849	ppb	17.9	1024.52	5	
As	75	89	He	0.124	ppb	70.0	353.04	2.5	
Se	78	89	H2	0.074	ppb	18.6	4.17	2.5	
Sr	88	89	He	0.167	ppb	8.1	78.89	2.5	
Mo	95	89	He	0.133	ppb	29.3	123.34	2.5	
Ag	107	89	He	0.005	ppb	122.8	31.11	0.5	
Cd	111	89	He	0.009	ppb	146.0	2.22	0.5	
Sn	118	159	He	41.824	ppb	0.6	15620.73	2.5	PB 6020 Fails DoD PB 6020 Fails Non-DoD
Sb	121	159	No Gas	0.044	ppb	7.2	276.98	0.5	
Ba	137	159	No Gas	0.288	ppb	12.2	420.48	1	
W	182	159	No Gas	0.072	ppb	21.2	210.24	2.5	
Tl	205	209	No Gas	-0.069	ppb	N/A	240.27	0.5	
Pb	208	209	No Gas	-0.023	ppb	N/A	1838.78	0.5	
Th	232	209	No Gas	0.709	ppb	11.9	4332.30	2.5	
U	238	209	No Gas	0.018	ppb	6.7	116.80	0.5	

QC ISTD Table

Prep Blank (PB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4248554.08	2.6	4285305.73	99.14	29.5	120.4	
Sc	45	No Gas	8303671.09	2.4	8716701.08	95.26	29.5	120.4	
Sc	45	H2	1002447.37	1.1	1073440.43	93.39	29.5	120.4	
Sc	45	He	265812.16	1.0	283880.71	93.64	29.5	120.4	
Ge	72	No Gas	1641822.18	2.3	1715165.05	95.72	29.5	120.4	
Ge	72	H2	320185.99	2.4	363056.55	88.19	29.5	120.4	
Ge	72	He	166300.15	0.9	177772.18	93.55	29.5	120.4	
Y	89	H2	5223554.36	1.2	5502376.66	94.93	29.5	120.4	
Y	89	He	1392570.24	1.4	1468553.09	94.83	29.5	120.4	
Tb	159	No Gas	15672556.43	2.3	15204271.44	103.08	29.5	120.4	
Tb	159	He	5740228.18	1.8	5847670.12	98.16	29.5	120.4	
Bi	209	No Gas	7241045.27	1.5	6985104.03	103.66	29.5	120.4	

Laboratory Control Sample (LCS) Report

Sample Name	LCSOOI15IMS2
File Name	058LCSO.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 11:24:14
Sample Type	LCSO
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	6	No Gas	46.034	ppb	2.7	45810.08	50	18.41	79.5	120.4	
B	11	6	No Gas	456.298	ppb	1.8	295841.18	500	18.25	79.5	120.4	
Na	23	45	He	8752.536	ppb	1.5	617401.06	7500	23.34	79.5	120.4	
Mg	24	45	He	5238.364	ppb	1.5	216466.53	5000	20.95	79.5	120.4	
Al	27	45	He	1967.194	ppb	1.9	29728.44	2000	19.67	79.5	120.4	
Si	28	45	H2	901.735	ppb	0.9	28587.21	1000	18.03	79.5	120.4	
K	39	45	He	11088.102	ppb	1.8	380773.52	10000	22.18	79.5	120.4	
Ca	40	45	H2	2463.935	ppb	0.8	599289.06	2500	19.71	79.5	120.4	
V	51	89	He	485.906	ppb	1.8	269117.96	500	19.44	79.5	120.4	
Cr	52	89	He	197.424	ppb	1.0	138873.55	200	19.74	79.5	120.4	
Mn	55	89	He	493.283	ppb	1.5	154995.81	500	19.73	79.5	120.4	
Fe	56	89	H2	1053.811	ppb	4.5	853410.87	1000	21.08	79.5	120.4	
Co	59	89	He	510.664	ppb	1.9	548851.20	500	20.43	79.5	120.4	
Ni	60	89	He	512.035	ppb	1.1	150490.90	500	20.48	79.5	120.4	
Cu	63	89	He	259.466	ppb	1.1	202214.69	250	20.76	79.5	120.4	
Zn	66	89	He	495.245	ppb	1.5	55957.79	500	19.81	79.5	120.4	
As	75	89	He	98.506	ppb	1.3	9064.61	100	19.7	79.5	120.4	
Se	78	89	H2	95.157	ppb	2.1	3716.83	100	19.03	79.5	120.4	
Sr	88	89	He	482.721	ppb	0.4	182534.59	500	19.31	79.5	120.4	
Mo	95	89	He	99.721	ppb	1.8	42750.15	100	19.94	79.5	120.4	
Ag	107	89	He	51.821	ppb	2.3	69581.45	50	20.73	79.5	120.4	
Cd	111	89	He	251.007	ppb	1.2	43943.74	250	20.08	79.5	120.4	
Sn	118	159	He	529.086	ppb	0.1	193463.24	500	21.16	79.5	120.4	
Sb	121	159	No Gas	96.476	ppb	3.9	288881.93	100	19.3	79.5	120.4	
Ba	137	159	No Gas	1771.005	ppb	3.3	1954756.04	2000	17.71	79.5	120.4	
W	182	159	No Gas	99.504	ppb	2.2	225398.28	100	19.9	79.5	120.4	
Tl	205	209	No Gas	108.315	ppb	4.1	457486.24	100	21.66	79.5	120.4	
[Pb]	206	209	No Gas	101.342	ppb	4.6	160333.91	100	20.27	79.5	120.4	
[Pb]	207	209	No Gas	100.455	ppb	2.0	138689.66	100	20.09	79.5	120.4	
Pb	208	209	No Gas	100.697	ppb	2.6	634599.78	100	20.14	79.5	120.4	
Th	232	209	No Gas	105.104	ppb	3.2	596927.04	100	21.02	79.5	120.4	
U	238	209	No Gas	108.276	ppb	3.9	596587.27	100	21.66	79.5	120.4	

QC ISTD Table

Laboratory Control Sample (LCS) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4343021.04	2.0	4285305.73	101.35	29.5	120.4	
Sc	45	No Gas	8327938.69	1.2	8716701.08	95.54	29.5	120.4	
Sc	45	H2	1000943.80	2.1	1073440.43	93.25	29.5	120.4	
Sc	45	He	264064.45	1.4	283880.71	93.02	29.5	120.4	
Ge	72	No Gas	1669565.36	1.6	1715165.05	97.34	29.5	120.4	
Ge	72	H2	316299.13	1.3	363056.55	87.12	29.5	120.4	
Ge	72	He	166156.25	1.3	177772.18	93.47	29.5	120.4	
Y	89	H2	5239704.00	1.1	5502376.66	95.23	29.5	120.4	
Y	89	He	1392148.12	1.7	1468553.09	94.8	29.5	120.4	
Tb	159	No Gas	15708098.52	2.3	15204271.44	103.31	29.5	120.4	
Tb	159	He	5759308.66	0.6	5847670.12	98.49	29.5	120.4	
Bi	209	No Gas	7273014.58	2.5	6985104.03	104.12	29.5	120.4	

Sample Report

Sample Name SO5599-001

File Name 059SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 11:26:54

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	4.983	ppb	3.8	4769.85	100	
11	B	6	No Gas	16.712	ppb	3.5	13642.42	1000	
23	Na	45	He	1740.954	ppb	1.0	139541.48	200000	
24	Mg	45	He	73528.999	ppb	0.7	3089452.53	200000	
27	Al	45	He	180672.541	ppb	1.2	2773394.30	200000	
28	Si	45	H2	2350.639	ppb	1.9	67101.35	10000	
39	K	45	He	37195.617	ppb	0.5	1256843.40	200000	
40	Ca	45	H2	26997.639	ppb	1.1	6619194.41	200000	
51	V	89	He	545.712	ppb	0.5	315645.16	1000	
52	Cr	89	He	260.578	ppb	0.8	191222.30	2000	
55	Mn	89	He	7401.011	ppb	0.5	2426571.31	2000	
56	Fe	89	H2	243087.282	ppb	0.9	202309118.66	100000	
59	Co	89	He	131.295	ppb	0.8	147459.00	1000	
60	Ni	89	He	241.485	ppb	0.2	74411.95	1000	
63	Cu	89	He	257.011	ppb	0.9	209218.58	2000	
66	Zn	89	He	536.856	ppb	0.3	63303.51	2000	
75	As	89	He	437.943	ppb	0.4	40860.16	1000	
78	Se	89	H2	4.032	ppb	5.4	165.16	1000	
88	Sr	89	He	108.224	ppb	1.1	42753.07	2000	
95	Mo	89	He	11.399	ppb	5.7	5165.61	1000	
107	Ag	89	He	3.006	ppb	6.2	4239.72	100	
111	Cd	89	He	1.191	ppb	1.4	218.52	1000	
118	Sn	159	He	47.630	ppb	2.9	17487.54	1000	
121	Sb	159	No Gas	1.875	ppb	1.9	5747.63	1000	
137	Ba	159	No Gas	975.968	ppb	2.4	1075207.67	2000	
182	W	159	No Gas	2.404	ppb	0.2	5483.96	1000	
205	Tl	209	No Gas	2.271	ppb	1.3	9804.84	1000	
208	Pb	209	No Gas	215.516	ppb	3.0	1314099.53	2000	
232	Th	209	No Gas	56.063	ppb	4.6	308664.34	1000	
238	U	209	No Gas	15.059	ppb	6.1	80396.68	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4161763.49	2.3	4285305.73	97.12	29.5	120.4	
Sc	45	No Gas	8361659.60	2.0	8716701.08	95.93	29.5	120.4	
Sc	45	H2	1015301.72	0.4	1073440.43	94.58	29.5	120.4	
Sc	45	He	268746.84	1.7	283880.71	94.67	29.5	120.4	
Ge	72	No Gas	1627738.07	1.8	1715165.05	94.9	29.5	120.4	
Ge	72	H2	313924.97	0.3	363056.55	86.47	29.5	120.4	
Ge	72	He	167089.16	1.1	177772.18	93.99	29.5	120.4	
Y	89	H2	5454184.83	0.5	5502376.66	99.12	29.5	120.4	
Y	89	He	1453808.10	0.7	1468553.09	99	29.5	120.4	
Tb	159	No Gas	15676077.82	2.2	15204271.44	103.1	29.5	120.4	
Tb	159	He	5661774.22	1.5	5847670.12	96.82	29.5	120.4	
Bi	209	No Gas	7049979.52	3.0	6985104.03	100.93	29.5	120.4	

Sample Report

Sample Name SO5599-002

File Name 060SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 11:29:29

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	5.369	ppb	3.8	5188.90	100	
11	B	6	No Gas	14.560	ppb	6.3	12442.46	1000	
23	Na	45	He	1719.332	ppb	1.3	143082.23	200000	
24	Mg	45	He	68795.099	ppb	0.4	2995900.48	200000	
27	Al	45	He	163399.136	ppb	0.6	2599634.25	200000	
28	Si	45	H2	2230.084	ppb	0.7	65818.36	10000	
39	K	45	He	22015.583	ppb	2.9	778759.77	200000	
40	Ca	45	H2	24005.619	ppb	1.6	6058954.91	200000	
51	V	89	He	368.070	ppb	0.3	214947.58	1000	
52	Cr	89	He	316.335	ppb	0.6	234100.02	2000	
55	Mn	89	He	5904.570	ppb	0.8	1953630.58	2000	
56	Fe	89	H2	211027.481	ppb	1.9	178659329.70	100000	
59	Co	89	He	114.393	ppb	0.5	129660.56	1000	
60	Ni	89	He	256.938	ppb	0.1	79862.11	1000	
63	Cu	89	He	188.555	ppb	0.8	155186.02	2000	
66	Zn	89	He	506.523	ppb	0.4	60308.20	2000	
75	As	89	He	315.575	ppb	1.1	29811.71	1000	
78	Se	89	H2	3.838	ppb	3.9	159.99	1000	
88	Sr	89	He	100.683	ppb	0.4	40136.31	2000	
95	Mo	89	He	8.160	ppb	2.7	3751.76	1000	
107	Ag	89	He	4.287	ppb	4.4	6090.47	100	
111	Cd	89	He	1.279	ppb	3.5	236.67	1000	
118	Sn	159	He	49.952	ppb	0.9	18518.90	1000	
121	Sb	159	No Gas	1.935	ppb	3.3	5911.29	1000	
137	Ba	159	No Gas	538.221	ppb	2.0	591850.85	2000	
182	W	159	No Gas	1.874	ppb	7.4	4275.51	1000	
205	Tl	209	No Gas	2.059	ppb	3.7	8913.11	1000	
208	Pb	209	No Gas	199.482	ppb	2.1	1212377.14	2000	
232	Th	209	No Gas	58.004	ppb	3.3	318354.49	1000	
238	U	209	No Gas	15.770	ppb	2.5	83956.00	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4204504.05	2.5	4285305.73	98.11	29.5	120.4	
Sc	45	No Gas	8589909.61	1.8	8716701.08	98.55	29.5	120.4	
Sc	45	H2	1045283.75	1.9	1073440.43	97.38	29.5	120.4	
Sc	45	He	278553.63	0.7	283880.71	98.12	29.5	120.4	
Ge	72	No Gas	1671940.59	2.4	1715165.05	97.48	29.5	120.4	
Ge	72	H2	323572.97	2.0	363056.55	89.12	29.5	120.4	
Ge	72	He	171583.49	0.8	177772.18	96.52	29.5	120.4	
Y	89	H2	5549166.10	1.3	5502376.66	100.85	29.5	120.4	
Y	89	He	1467082.93	0.6	1468553.09	99.9	29.5	120.4	
Tb	159	No Gas	15643751.99	1.8	15204271.44	102.89	29.5	120.4	
Tb	159	He	5721910.96	1.2	5847670.12	97.85	29.5	120.4	
Bi	209	No Gas	7024368.03	2.4	6985104.03	100.56	29.5	120.4	

Sample Report

Sample Name RINSE

File Name 061SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 11:32:09

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.002	ppb	68.0	28.89	100	
11	B	6	No Gas	0.117	ppb	46.5	3836.20	1000	
23	Na	45	He	-17.839	ppb	N/A	12045.24	200000	
24	Mg	45	He	16.520	ppb	121.5	3783.49	200000	
27	Al	45	He	39.287	ppb	112.7	3121.41	200000	
28	Si	45	H2	0.829	ppb	295.7	5470.62	10000	
39	K	45	He	8.623	ppb	102.6	20005.55	200000	
40	Ca	45	H2	4.273	ppb	120.1	9577.31	200000	
51	V	89	He	0.080	ppb	241.9	558.96	1000	
52	Cr	89	He	0.144	ppb	74.7	1206.63	2000	
55	Mn	89	He	1.650	ppb	118.5	2864.19	2000	
56	Fe	89	H2	38.986	ppb	110.5	175327.49	100000	
59	Co	89	He	0.063	ppb	109.2	442.29	1000	
60	Ni	89	He	0.052	ppb	331.2	618.94	1000	
63	Cu	89	He	0.137	ppb	64.1	1669.07	2000	
66	Zn	89	He	-0.015	ppb	N/A	608.93	2000	
75	As	89	He	0.094	ppb	144.9	398.72	1000	
78	Se	89	H2	0.002	ppb	316.4	1.67	1000	
88	Sr	89	He	0.080	ppb	122.4	174.46	2000	
95	Mo	89	He	0.013	ppb	73.6	97.78	1000	
107	Ag	89	He	0.013	ppb	105.6	115.56	100	
111	Cd	89	He	0.022	ppb	140.3	20.37	1000	
118	Sn	159	He	0.041	ppb	181.6	495.59	1000	
121	Sb	159	No Gas	0.004	ppb	149.7	210.24	1000	
137	Ba	159	No Gas	0.053	ppb	12.1	397.12	2000	
182	W	159	No Gas	0.005	ppb	49.9	100.11	1000	
205	Tl	209	No Gas	-0.017	ppb	N/A	176.87	1000	
208	Pb	209	No Gas	0.024	ppb	13.8	2769.89	2000	
232	Th	209	No Gas	0.082	ppb	5.7	2673.30	1000	
238	U	209	No Gas	0.004	ppb	3.2	116.79	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4263991.76	1.9	4285305.73	99.5	29.5	120.4	
Sc	45	No Gas	8433105.20	1.2	8716701.08	96.75	29.5	120.4	
Sc	45	H2	1030499.40	0.7	1073440.43	96	29.5	120.4	
Sc	45	He	270910.81	1.6	283880.71	95.43	29.5	120.4	
Ge	72	No Gas	1689246.96	2.0	1715165.05	98.49	29.5	120.4	
Ge	72	H2	337448.36	2.1	363056.55	92.95	29.5	120.4	
Ge	72	He	171991.40	0.8	177772.18	96.75	29.5	120.4	
Y	89	H2	5485886.42	1.3	5502376.66	99.7	29.5	120.4	
Y	89	He	1445967.56	0.6	1468553.09	98.46	29.5	120.4	
Tb	159	No Gas	15741527.82	1.4	15204271.44	103.53	29.5	120.4	
Tb	159	He	5871795.40	1.0	5847670.12	100.41	29.5	120.4	
Bi	209	No Gas	7316436.34	2.2	6985104.03	104.74	29.5	120.4	

Sample Report

Sample Name RINSE

File Name 062SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 11:34:44

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	-0.001	ppb	N/A	16.66	100	
11	B	6	No Gas	0.075	ppb	18.0	3761.73	1000	
23	Na	45	He	-18.695	ppb	N/A	11761.23	200000	
24	Mg	45	He	-0.131	ppb	N/A	237.80	200000	
27	Al	45	He	1.215	ppb	34.0	160.01	200000	
28	Si	45	H2	-2.117	ppb	N/A	5136.65	10000	
39	K	45	He	0.541	ppb	141.4	18678.81	200000	
40	Ca	45	H2	0.030	ppb	162.5	4350.83	200000	
51	V	89	He	-0.056	ppb	N/A	165.56	1000	
52	Cr	89	He	0.015	ppb	164.9	729.95	2000	
55	Mn	89	He	0.012	ppb	75.7	181.30	2000	
56	Fe	89	H2	1.464	ppb	14.5	17654.20	100000	
59	Co	89	He	0.005	ppb	113.6	113.34	1000	
60	Ni	89	He	-0.033	ppb	N/A	484.47	1000	
63	Cu	89	He	0.094	ppb	14.5	1477.92	2000	
66	Zn	89	He	-0.166	ppb	N/A	515.58	2000	
75	As	89	He	0.033	ppb	131.5	366.38	1000	
78	Se	89	H2	-0.003	ppb	N/A	0.67	1000	
88	Sr	89	He	0.004	ppb	164.5	24.45	2000	
95	Mo	89	He	-0.003	ppb	N/A	61.12	1000	
107	Ag	89	He	0.001	ppb	175.2	34.45	100	
111	Cd	89	He	0.000	ppb	287.7	1.11	1000	
118	Sn	159	He	0.011	ppb	149.3	443.36	1000	
121	Sb	159	No Gas	0.000	ppb	N/A	143.50	1000	
137	Ba	159	No Gas	0.001	ppb	418.5	110.12	2000	
182	W	159	No Gas	0.003	ppb	15.4	83.43	1000	
205	Tl	209	No Gas	-0.016	ppb	N/A	193.55	1000	
208	Pb	209	No Gas	-0.003	ppb	N/A	1898.85	2000	
232	Th	209	No Gas	0.019	ppb	21.5	861.00	1000	
238	U	209	No Gas	0.000	ppb	123.2	26.69	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4331638.36	1.9	4285305.73	101.08	29.5	120.4	
Sc	45	No Gas	8441737.37	1.6	8716701.08	96.85	29.5	120.4	
Sc	45	H2	1042802.48	2.2	1073440.43	97.15	29.5	120.4	
Sc	45	He	271380.18	0.7	283880.71	95.6	29.5	120.4	
Ge	72	No Gas	1688271.82	1.8	1715165.05	98.43	29.5	120.4	
Ge	72	H2	340900.65	2.0	363056.55	93.9	29.5	120.4	
Ge	72	He	172338.94	1.5	177772.18	96.94	29.5	120.4	
Y	89	H2	5462162.65	2.3	5502376.66	99.27	29.5	120.4	
Y	89	He	1431411.72	0.2	1468553.09	97.47	29.5	120.4	
Tb	159	No Gas	15593732.27	1.5	15204271.44	102.56	29.5	120.4	
Tb	159	He	5891374.22	0.4	5847670.12	100.75	29.5	120.4	
Bi	209	No Gas	7276226.44	1.1	6985104.03	104.17	29.5	120.4	

Prep Blank (PB) Report

Sample Name	PBWOI23IMW2
File Name	063_PB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 11:37:24
Sample Type	PB
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	6	No Gas	-0.006	ppb	N/A	15.56	0.5	
B	11	6	No Gas	0.375	ppb	34.4	3728.38	10	
Na	23	45	He	-67.090	ppb	N/A	13671.80	500	
Mg	24	45	He	4.959	ppb	14.9	477.82	50	
Al	27	45	He	7.027	ppb	14.8	175.56	50	
Si	28	45	H2	-4.131	ppb	N/A	5193.41	250	
K	39	45	He	16.900	ppb	126.5	19226.04	500	
Ca	40	45	H2	17.006	ppb	7.7	8397.27	50	
V	51	89	He	0.150	ppb	39.9	406.69	2.5	
Cr	52	89	He	0.284	ppb	34.8	875.88	2.5	
Mn	55	89	He	0.519	ppb	14.5	327.28	1	
Fe	56	89	H2	27.375	ppb	57.1	33757.37	50	
Co	59	89	He	0.009	ppb	149.7	95.56	0.5	
Ni	60	89	He	-0.063	ppb	N/A	512.25	1	
Cu	63	89	He	2.889	ppb	2.5	3387.20	1.5	PB 6020 Fails DoD
Zn	66	89	He	0.878	ppb	18.6	707.83	5	
As	75	89	He	0.146	ppb	286.0	362.71	2.5	
Se	78	89	H2	0.001	ppb	5537.1	1.33	2.5	
Sr	88	89	He	0.033	ppb	60.4	28.89	2.5	
Mo	95	89	He	0.025	ppb	152.5	78.89	2.5	
Ag	107	89	He	0.016	ppb	56.6	46.67	0.5	
Cd	111	89	He	-0.002	ppb	N/A	0.37	0.5	
Sn	118	159	He	0.356	ppb	46.7	547.81	2.5	
Sb	121	159	No Gas	0.014	ppb	42.5	183.54	0.5	
Ba	137	159	No Gas	0.108	ppb	31.3	220.25	1	
W	182	159	No Gas	0.024	ppb	87.4	100.12	2.5	
Tl	205	209	No Gas	-0.082	ppb	N/A	180.20	0.5	
Pb	208	209	No Gas	0.006	ppb	629.8	1995.64	0.5	
Th	232	209	No Gas	0.211	ppb	19.3	1501.77	2.5	
U	238	209	No Gas	0.004	ppb	75.9	40.05	0.5	

QC ISTD Table

Prep Blank (PB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4291286.97	2.3	4285305.73	100.14	29.5	120.4	
Sc	45	No Gas	8372630.36	1.1	8716701.08	96.05	29.5	120.4	
Sc	45	H2	1019120.74	0.6	1073440.43	94.94	29.5	120.4	
Sc	45	He	272416.00	1.2	283880.71	95.96	29.5	120.4	
Ge	72	No Gas	1666651.58	1.5	1715165.05	97.17	29.5	120.4	
Ge	72	H2	331504.72	0.2	363056.55	91.31	29.5	120.4	
Ge	72	He	171658.66	0.4	177772.18	96.56	29.5	120.4	
Y	89	H2	5378131.74	1.1	5502376.66	97.74	29.5	120.4	
Y	89	He	1423384.92	1.2	1468553.09	96.92	29.5	120.4	
Tb	159	No Gas	15518692.41	1.1	15204271.44	102.07	29.5	120.4	
Tb	159	He	5809135.40	0.9	5847670.12	99.34	29.5	120.4	
Bi	209	No Gas	7145096.46	0.6	6985104.03	102.29	29.5	120.4	

Laboratory Control Sample (LCS) Report

Sample Name	LCSWOI23IMW2
File Name	064LCSW.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 11:39:58
Sample Type	LCSW
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	6	No Gas	48.545	ppb	2.9	48379.45	50	19.42	79.5	120.4	
B	11	6	No Gas	474.920	ppb	2.9	308176.93	500	19	79.5	120.4	
Na	23	45	He	8871.371	ppb	0.8	649809.13	7500	23.66	79.5	120.4	DoD
Mg	24	45	He	5372.667	ppb	0.8	230623.65	5000	21.49	79.5	120.4	
Al	27	45	He	2057.312	ppb	0.5	32296.22	2000	20.57	79.5	120.4	
Si	28	45	H2	954.008	ppb	3.8	30610.04	1000	19.08	0	200	
K	39	45	He	11408.763	ppb	0.3	406471.42	10000	22.82	79.5	120.4	
Ca	40	45	H2	2574.225	ppb	2.7	639784.36	2500	20.59	79.5	120.4	
V	51	89	He	510.857	ppb	1.0	290880.87	500	20.43	79.5	120.4	
Cr	52	89	He	205.201	ppb	1.0	148365.24	200	20.52	79.5	120.4	
Mn	55	89	He	514.773	ppb	1.0	166293.79	500	20.59	79.5	120.4	
Fe	56	89	H2	1054.283	ppb	2.2	875864.73	1000	21.09	79.5	120.4	
Co	59	89	He	528.781	ppb	0.3	584370.04	500	21.15	79.5	120.4	
Ni	60	89	He	527.367	ppb	1.0	159330.94	500	21.09	79.5	120.4	
Cu	63	89	He	269.742	ppb	1.0	216083.86	250	21.58	79.5	120.4	
Zn	66	89	He	521.984	ppb	0.4	60609.10	500	20.88	79.5	120.4	
As	75	89	He	103.513	ppb	0.5	9776.17	100	20.7	79.5	120.4	
Se	78	89	H2	100.910	ppb	2.6	4042.41	100	20.18	79.5	120.4	
Sr	88	89	He	503.924	ppb	0.7	195893.98	500	20.16	79.5	120.4	
Mo	95	89	He	104.974	ppb	0.5	46270.51	100	21	79.5	120.4	
Ag	107	89	He	53.148	ppb	1.1	73375.98	50	21.26	79.5	120.4	
Cd	111	89	He	259.053	ppb	1.0	46626.37	250	20.72	79.5	120.4	
Sn	118	159	He	510.086	ppb	0.8	186709.80	500	20.4	79.5	120.4	
Sb	121	159	No Gas	101.640	ppb	2.3	301112.87	100	20.33	79.5	120.4	
Ba	137	159	No Gas	1866.656	ppb	2.1	2038352.16	2000	18.67	79.5	120.4	
W	182	159	No Gas	102.205	ppb	2.4	229010.56	100	20.44	79.5	120.4	
Tl	205	209	No Gas	112.082	ppb	2.7	464432.05	100	22.42	79.5	120.4	
[Pb]	206	209	No Gas	105.511	ppb	2.0	163792.54	100	21.1	79.5	120.4	
[Pb]	207	209	No Gas	105.630	ppb	2.9	143002.52	100	21.13	79.5	120.4	
Pb	208	209	No Gas	105.435	ppb	2.2	651698.67	100	21.09	79.5	120.4	
Th	232	209	No Gas	109.870	ppb	3.4	612052.90	100	21.97	79.5	120.4	
U	238	209	No Gas	111.653	ppb	3.3	603507.99	100	22.33	79.5	120.4	

QC ISTD Table

Laboratory Control Sample (LCS) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4349342.83	1.8	4285305.73	101.49	29.5	120.4	
Sc	45	No Gas	8444507.96	1.0	8716701.08	96.88	29.5	120.4	
Sc	45	H2	1023323.94	1.9	1073440.43	95.33	29.5	120.4	
Sc	45	He	274284.97	1.0	283880.71	96.62	29.5	120.4	
Ge	72	No Gas	1689718.51	1.4	1715165.05	98.52	29.5	120.4	
Ge	72	H2	327272.10	1.5	363056.55	90.14	29.5	120.4	
Ge	72	He	171637.38	0.6	177772.18	96.55	29.5	120.4	
Y	89	H2	5376256.80	2.5	5502376.66	97.71	29.5	120.4	
Y	89	He	1431171.07	1.3	1468553.09	97.45	29.5	120.4	
Tb	159	No Gas	15538231.30	2.2	15204271.44	102.2	29.5	120.4	
Tb	159	He	5764907.55	1.0	5847670.12	98.58	29.5	120.4	
Bi	209	No Gas	7133408.78	2.0	6985104.03	102.12	29.5	120.4	

Sample Report

Sample Name	RINSE
File Name	065SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 11:42:38
Sample Type	Sample
Total Dilution	1.0000
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.008	ppb	7.8	62.22	100	
11	B	6	No Gas	0.887	ppb	8.7	6387.20	1000	
23	Na	45	He	-19.757	ppb	N/A	11540.77	200000	
24	Mg	45	He	-0.166	ppb	N/A	233.35	200000	
27	Al	45	He	0.069	ppb	463.0	72.22	200000	
28	Si	45	H2	-1.070	ppb	N/A	5216.77	10000	
39	K	45	He	2.467	ppb	117.8	19255.93	200000	
40	Ca	45	H2	0.244	ppb	127.3	4560.91	200000	
51	V	89	He	-0.045	ppb	N/A	200.01	1000	
52	Cr	89	He	0.005	ppb	246.9	703.23	2000	
55	Mn	89	He	0.032	ppb	41.7	216.63	2000	
56	Fe	89	H2	0.526	ppb	25.4	13732.42	100000	
59	Co	89	He	0.016	ppb	38.6	175.57	1000	
60	Ni	89	He	-0.002	ppb	N/A	538.92	1000	
63	Cu	89	He	0.136	ppb	2.5	1669.05	2000	
66	Zn	89	He	-0.099	ppb	N/A	562.25	2000	
75	As	89	He	0.013	ppb	198.7	362.71	1000	
78	Se	89	H2	0.026	ppb	113.2	6.67	1000	
88	Sr	89	He	0.015	ppb	61.1	46.67	2000	
95	Mo	89	He	0.029	ppb	67.4	133.34	1000	
107	Ag	89	He	0.002	ppb	56.6	37.78	100	
111	Cd	89	He	0.011	ppb	74.6	11.11	1000	
118	Sn	159	He	0.070	ppb	41.1	552.26	1000	
121	Sb	159	No Gas	0.022	ppb	43.5	473.87	1000	
137	Ba	159	No Gas	0.253	ppb	71.3	1498.48	2000	
182	W	159	No Gas	0.037	ppb	10.2	467.20	1000	
205	Tl	209	No Gas	0.001	ppb	2118.7	550.63	1000	
208	Pb	209	No Gas	0.009	ppb	122.2	2292.67	2000	
232	Th	209	No Gas	0.193	ppb	8.7	5851.63	1000	
238	U	209	No Gas	0.019	ppb	73.5	533.95	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4348332.50	2.7	4285305.73	101.47	29.5	120.4	
Sc	45	No Gas	8569171.27	2.4	8716701.08	98.31	29.5	120.4	
Sc	45	H2	1030319.61	1.8	1073440.43	95.98	29.5	120.4	
Sc	45	He	275020.02	0.7	283880.71	96.88	29.5	120.4	
Ge	72	No Gas	1709502.01	1.9	1715165.05	99.67	29.5	120.4	
Ge	72	H2	341269.42	1.1	363056.55	94	29.5	120.4	
Ge	72	He	172980.16	0.2	177772.18	97.3	29.5	120.4	
Y	89	H2	5457675.87	0.4	5502376.66	99.19	29.5	120.4	
Y	89	He	1452840.12	0.5	1468553.09	98.93	29.5	120.4	
Tb	159	No Gas	15607855.74	2.0	15204271.44	102.65	29.5	120.4	
Tb	159	He	5875607.34	0.8	5847670.12	100.48	29.5	120.4	
Bi	209	No Gas	7319558.36	1.6	6985104.03	104.79	29.5	120.4	

Sample Report

Sample Name	RINSE
File Name	066SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 11:45:14
Sample Type	Sample
Total Dilution	1.0000
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	-0.002	ppb	N/A	13.33	100	
11	B	6	No Gas	0.202	ppb	12.6	4265.21	1000	
23	Na	45	He	-19.265	ppb	N/A	11701.19	200000	
24	Mg	45	He	-0.371	ppb	N/A	188.90	200000	
27	Al	45	He	0.469	ppb	51.6	103.34	200000	
28	Si	45	H2	-1.585	ppb	N/A	5157.01	10000	
39	K	45	He	0.959	ppb	236.1	18970.77	200000	
40	Ca	45	H2	-0.025	ppb	N/A	4237.44	200000	
51	V	89	He	-0.044	ppb	N/A	200.01	1000	
52	Cr	89	He	0.005	ppb	430.4	700.62	2000	
55	Mn	89	He	-0.003	ppb	N/A	157.97	2000	
56	Fe	89	H2	0.108	ppb	151.2	11985.22	100000	
59	Co	89	He	0.005	ppb	66.9	117.79	1000	
60	Ni	89	He	0.008	ppb	110.8	551.14	1000	
63	Cu	89	He	0.095	ppb	2.4	1496.80	2000	
66	Zn	89	He	-0.148	ppb	N/A	531.14	2000	
75	As	89	He	-0.004	ppb	N/A	353.37	1000	
78	Se	89	H2	0.007	ppb	106.9	2.67	1000	
88	Sr	89	He	0.004	ppb	105.3	24.44	2000	
95	Mo	89	He	0.013	ppb	12.4	97.78	1000	
107	Ag	89	He	0.000	ppb	N/A	22.22	100	
111	Cd	89	He	0.003	ppb	85.4	3.33	1000	
118	Sn	159	He	0.036	ppb	24.3	488.92	1000	
121	Sb	159	No Gas	0.000	ppb	N/A	136.82	1000	
137	Ba	159	No Gas	0.015	ppb	26.1	183.54	2000	
182	W	159	No Gas	0.005	ppb	75.5	106.79	1000	
205	Tl	209	No Gas	-0.018	ppb	N/A	146.83	1000	
208	Pb	209	No Gas	-0.005	ppb	N/A	1865.49	2000	
232	Th	209	No Gas	0.032	ppb	21.4	1264.83	1000	
238	U	209	No Gas	0.002	ppb	85.3	73.42	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4432105.23	1.8	4285305.73	103.43	29.5	120.4	
Sc	45	No Gas	8432701.15	2.1	8716701.08	96.74	29.5	120.4	
Sc	45	H2	1032432.32	1.4	1073440.43	96.18	29.5	120.4	
Sc	45	He	274616.32	1.0	283880.71	96.74	29.5	120.4	
Ge	72	No Gas	1686363.78	2.3	1715165.05	98.32	29.5	120.4	
Ge	72	H2	338433.86	2.1	363056.55	93.22	29.5	120.4	
Ge	72	He	172045.20	0.8	177772.18	96.78	29.5	120.4	
Y	89	H2	5457346.90	1.8	5502376.66	99.18	29.5	120.4	
Y	89	He	1445812.39	0.3	1468553.09	98.45	29.5	120.4	
Tb	159	No Gas	15581988.24	3.0	15204271.44	102.48	29.5	120.4	
Tb	159	He	5885944.43	1.1	5847670.12	100.65	29.5	120.4	
Bi	209	No Gas	7391033.17	2.8	6985104.03	105.81	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	067_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 11:47:54
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	24.829	ppb	3.5	122825.76	25	99.32	89.8	110.2	
11	B	6	No Gas	24.472	ppb	2.4	81466.36	25	97.89	89.8	110.2	
23	Na	45	He	5389.423	ppb	0.4	1942260.72	5000	107.79	89.8	110.2	
24	Mg	45	He	5256.079	ppb	2.0	1130676.96	5000	105.12	89.8	110.2	
27	Al	45	He	504.592	ppb	2.5	39715.07	500	100.92	89.8	110.2	
28	Si	45	H2	476.486	ppb	2.5	70066.84	500	95.3	89.8	110.2	
39	K	45	He	5190.049	ppb	2.9	903451.74	5000	103.8	89.8	110.2	
40	Ca	45	H2	5145.884	ppb	1.8	6505476.91	5000	102.92	89.8	110.2	
51	V	89	He	25.479	ppb	1.8	72919.62	25	101.92	89.8	110.2	
52	Cr	89	He	25.499	ppb	1.7	92616.58	25	102	89.8	110.2	
55	Mn	89	He	25.533	ppb	1.1	41441.80	25	102.13	89.8	110.2	
56	Fe	89	H2	5024.378	ppb	0.5	20899189.49	5000	100.49	89.8	110.2	
59	Co	89	He	25.786	ppb	1.6	142816.49	25	103.14	89.8	110.2	
60	Ni	89	He	25.880	ppb	1.5	39573.67	25	103.52	89.8	110.2	
63	Cu	89	He	26.220	ppb	1.4	105790.04	25	104.88	89.8	110.2	
66	Zn	89	He	25.555	ppb	2.5	15325.61	25	102.22	89.8	110.2	
75	As	89	He	25.444	ppb	2.4	11956.11	25	101.78	89.8	110.2	
78	Se	89	H2	25.104	ppb	0.5	5098.53	25	100.42	89.8	110.2	
88	Sr	89	He	25.209	ppb	2.1	49102.19	25	100.84	89.8	110.2	
95	Mo	89	He	25.600	ppb	0.8	56508.96	25	102.4	89.8	110.2	
107	Ag	89	He	26.308	ppb	1.3	181916.42	25	105.23	89.8	110.2	
111	Cd	89	He	26.049	ppb	1.1	23487.51	25	104.2	89.8	110.2	
118	Sn	159	He	24.938	ppb	1.9	46964.00	25	99.75	89.8	110.2	
121	Sb	159	No Gas	24.837	ppb	2.1	367833.60	25	99.35	89.8	110.2	
137	Ba	159	No Gas	24.981	ppb	2.1	136469.98	25	99.92	89.8	110.2	
182	W	159	No Gas	25.409	ppb	0.8	284720.44	25	101.64	89.8	110.2	
205	Tl	209	No Gas	27.629	ppb	2.3	578014.04	25	110.52	89.8	110.2	> +/- 10%
208	Pb	209	No Gas	25.470	ppb	1.2	794536.31	25	101.88	89.8	110.2	
232	Th	209	No Gas	27.393	ppb	1.6	770555.38	25	109.57	89.8	110.2	
238	U	209	No Gas	27.843	ppb	2.0	759984.13	25	111.37	89.8	110.2	> +/- 10%

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4319422.24	1.9	4285305.73	100.8	29.5	120.4	
Sc	45	No Gas	8527031.21	2.0	8716701.08	97.82	29.5	120.4	
Sc	45	H2	1047204.73	2.1	1073440.43	97.56	29.5	120.4	
Sc	45	He	275151.22	0.2	283880.71	96.92	29.5	120.4	
Ge	72	No Gas	1691334.02	1.6	1715165.05	98.61	29.5	120.4	
Ge	72	H2	336523.84	2.8	363056.55	92.69	29.5	120.4	
Ge	72	He	172117.38	0.6	177772.18	96.82	29.5	120.4	
Y	89	H2	5449580.22	1.5	5502376.66	99.04	29.5	120.4	
Y	89	He	1433841.54	0.3	1468553.09	97.64	29.5	120.4	
Tb	159	No Gas	15535665.18	1.9	15204271.44	102.18	29.5	120.4	
Tb	159	He	5891810.19	0.2	5847670.12	100.75	29.5	120.4	
Bi	209	No Gas	7203094.04	1.9	6985104.03	103.12	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	068_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 11:50:28
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.035	ppb	35.5	200.01	0.2	
11	B	6	No Gas	0.274	ppb	14.6	4498.63	4	
23	Na	45	He	-16.999	ppb	N/A	12449.12	200	
24	Mg	45	He	0.484	ppb	40.2	371.15	20	
27	Al	45	He	0.274	ppb	29.9	87.78	20	
28	Si	45	H2	-1.605	ppb	N/A	5260.20	100	
39	K	45	He	5.070	ppb	103.5	19581.43	200	
40	Ca	45	H2	1.704	ppb	71.3	6513.17	20	
51	V	89	He	-0.055	ppb	N/A	168.90	1	
52	Cr	89	He	0.018	ppb	120.8	749.28	1	
55	Mn	89	He	-0.018	ppb	N/A	134.64	0.4	
56	Fe	89	H2	2.743	ppb	42.8	23338.74	20	
59	Co	89	He	0.008	ppb	72.2	133.35	0.2	
60	Ni	89	He	-0.040	ppb	N/A	478.92	0.4	
63	Cu	89	He	0.081	ppb	28.2	1443.47	0.6	
66	Zn	89	He	-0.126	ppb	N/A	544.47	2	
75	As	89	He	0.026	ppb	193.0	367.38	1	
78	Se	89	H2	0.027	ppb	36.9	7.00	1	
88	Sr	89	He	0.005	ppb	85.2	25.56	1	
95	Mo	89	He	0.041	ppb	5.1	161.12	1	
107	Ag	89	He	0.007	ppb	41.1	73.34	0.2	
111	Cd	89	He	0.004	ppb	59.5	4.44	0.2	
118	Sn	159	He	0.044	ppb	77.0	503.36	1	
121	Sb	159	No Gas	0.038	ppb	30.6	704.14	0.2	
137	Ba	159	No Gas	0.024	ppb	54.7	230.26	0.4	
182	W	159	No Gas	0.075	ppb	11.6	881.01	1	
205	Tl	209	No Gas	0.018	ppb	63.2	917.74	0.2	
208	Pb	209	No Gas	0.020	ppb	60.6	2619.72	0.2	
232	Th	209	No Gas	0.212	ppb	7.7	6338.79	1	
238	U	209	No Gas	0.037	ppb	25.3	1031.22	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4429869.04	2.3	4285305.73	103.37	29.5	120.4	
Sc	45	No Gas	8475327.84	1.5	8716701.08	97.23	29.5	120.4	
Sc	45	H2	1053394.69	1.2	1073440.43	98.13	29.5	120.4	
Sc	45	He	273375.43	0.8	283880.71	96.3	29.5	120.4	
Ge	72	No Gas	1682495.29	2.6	1715165.05	98.1	29.5	120.4	
Ge	72	H2	341898.25	1.7	363056.55	94.17	29.5	120.4	
Ge	72	He	172531.47	0.7	177772.18	97.05	29.5	120.4	
Y	89	H2	5555013.46	1.4	5502376.66	100.96	29.5	120.4	
Y	89	He	1447205.05	0.6	1468553.09	98.55	29.5	120.4	
Tb	159	No Gas	15404487.55	2.3	15204271.44	101.32	29.5	120.4	
Tb	159	He	5878336.51	0.5	5847670.12	100.52	29.5	120.4	
Bi	209	No Gas	7256788.57	1.4	6985104.03	103.89	29.5	120.4	

Logbooks and Supporting Documents

Katahdin Analytical Services, Inc. | **Metals Preparation Benchsheet**

Reagents and Consumables Information: | **Method:** 7470

HNO3: MSr238 H2SO4: Mr239 Digestion Vessles: 20030143-90-0318-MF

KMNO4: Mr3074 K2S2O8: Mr3068 NH2OH-HCl: MC3048

Standards/Spiking Information:

1ppm A : MW80353

Pipet 1ppm B : MW20888

MW1 LCSW = 125uL of 1ppm A to 25mL

MW1 Spike(S/P) = 25uL of 1ppm A to 25mL

MW4 ICV = 600uL of 1ppm B to 100 mL

MW5 S10.0 = 1000uL of 1ppm A to 100 mL

Heat Source ID : C

Start Time: 8:50 /Temp. 90 °C

End Time: 10:50 /Temp. 90 °C

Thermometer ID/Pos: DIG76 / 45

Sample ID	Batch ID	Initial Wt/Vol	Initial Units	Final Vol	Final Units	MX	Meth	Anal.	Date	Bottle	pH <2
LCSWOG27HGW2	OG27HGW2	0.025	L	0.025	L	AQ	HG	SF	07/27/2021	~	~
PBWOG27HGW2	OG27HGW2		L		L	AQ	HG	SF	07/27/2021	~	~
SO4698-001	OG27HGW2		L		L	AQ	HG	SF	07/27/2021	G	✓
SO4698-002	OG27HGW2		L		L	AQ	HG	SF	07/27/2021	G	
SO4699-001	OG27HGW2		L		L	AQ	HG	SF	07/27/2021	G	
SO4723-001	OG27HGW2		L		L	AQ	HG	SF	07/27/2021	P	
SO4723-001P	OG27HGW2		L		L	AQ	HG	SF	07/27/2021	P	
SO4723-001S	OG27HGW2		L		L	AQ	HG	SF	07/27/2021	P	
SO4723-002	OG27HGW2		L		L	AQ	HG	SF	07/27/2021	F	
SO4723-003	OG27HGW2		L		L	AQ	HG	SF	07/27/2021		
SO4723-004	OG27HGW2		L		L	AQ	HG	SF	07/27/2021		
SO4723-005	OG27HGW2		L		L	AQ	HG	SF	07/27/2021		
SO4723-006	OG27HGW2		L		L	AQ	HG	SF	07/27/2021	~	
SO4723-008	OG27HGW2	"	L	"	L	AQ	HG	SF	07/27/2021	"	
										~	

SF 7/27/21 SO4725-001

"

Client IDs verified-SF

REVIEWED

CD 7-28-21

KATAHDIN ANALYTICAL METALS SECTION

Katahdin Analytical Services 4000231

Katahdin Analytical Services, Inc.

Metals Preparation Benchsheet

Reagents and Consumables Information:

Method: 3010-MS

HNO3: MSC 842 **HCL:** MSC 841 **Digestion Vessels:** ML0005000034

1:1 HNO3: MC 3090 **1:1 HCL:** MC 3082

Pipet **LCS/Spiking Information:**

MP1 **CLPP-SPK-1 (ID/Vol):** MS2338 / 0.05 mL

MP4 **CLPP-SPK-INT1 (ID/Vol):** MW80357 / 0.5 mL

MP1 **CLPP-SPK-INT2 (ID/Vol):** MW80358 / 0.5 mL

— — **Spike (ID/Vol):** — / — mL

Heat Source ID : A

Start Time: 0952 **/Temp.** 90 °C

End Time: 1625 **/Temp.** 95 °C

Thermometer ID/Pos: IAIC 30 / 1.2

Sample ID	Batch ID	Initial Wt/Vol	Initial Units	Final Vol	Final Units	MX	Meth	Anal.	Date	Bottle	pH <2
LCSWOG29IMW2	OG29IMW2	0.05	L	0.05	L	AQ	IM	CD	07/29/2021	-	✓
PBWOG29IMW2	OG29IMW2		L		L	AQ	IM	CD	07/29/2021	-	
SO4723-001	OG29IMW2		L		L	AQ	IM	CD	07/29/2021	Q	
SO4723-001P	OG29IMW2		L		L	AQ	IM	CD	07/29/2021	↓	
SO4723-001S	OG29IMW2		L		L	AQ	IM	CD	07/29/2021	↓	
SO4723-002	OG29IMW2		L		L	AQ	IM	CD	07/29/2021	F	
SO4723-003	OG29IMW2		L		L	AQ	IM	CD	07/29/2021		
SO4723-004	OG29IMW2		L		L	AQ	IM	CD	07/29/2021		
SO4723-005	OG29IMW2		L		L	AQ	IM	CD	07/29/2021		
SO4723-006	OG29IMW2		L		L	AQ	IM	CD	07/29/2021		
SO4723-008	OG29IMW2		L		L	AQ	IM	CD	07/29/2021	↓	
SO4724-001	OG29IMW2		L		L	AQ	IM	CD	07/29/2021	Q	
SO4724-002	OG29IMW2		L		L	AQ	IM	CD	07/29/2021	↓	
SO4724-002P	OG29IMW2		L		L	AQ	IM	CD	07/29/2021	↓	
SO4724-002S	OG29IMW2		L		L	AQ	IM	CD	07/29/2021	F	
SO4724-003	OG29IMW2		L		L	AQ	IM	CD	07/29/2021		
SO4724-004	OG29IMW2		L		L	AQ	IM	CD	07/29/2021		
SO4724-005	OG29IMW2		L		L	AQ	IM	CD	07/29/2021		
SO4724-006	OG29IMW2	↓	L	↓	L	AQ	IM	CD	07/29/2021	↓	↓

Client ID's verified CD 7-29-21

REVIEWED

EP 8/31/21

KATAHDIN ANALYTICAL METALS SECTION

Digestion performed by: CD / ~~SF~~ **On:** 7-29-21

CD 7-29-21

Katahdin Analytical Services 4000232

Katahdin Analytical Services, Inc.

Metals Preparation Benchsheet

Reagents and Consumables Information:

Method: 3010-MS

HNO3: MSR249 **HCL:** MSR248 **Digestion Vessels:** MLD02600000110

1:1 HNO3: MR3139 **1:1 HCL:** MR3133

Pipet	LCS/Spiking Information:
M9	CLPP-SPK-1 (ID/Vol): MS2328 / 0.05 mL
M21	CLPP-SPK-INT1 (ID/Vol): MW20510 / 0.5 mL
M21	CLPP-SPK-INT2 (ID/Vol): MW20482 / 0.5 mL
—	— Spike (ID/Vol): — / — mL

Heat Source ID : A
Start Time: 1149 **/Temp.** 90 °C
End Time: 1705 **/Temp.** 91 °C
Thermometer ID/Pos: ALC30 / 1,6

Sample ID	Batch ID	Initial Wt/Vol	Initial Units	Final Vol	Final Units	MX	Meth	Anal.	Date	Bottle	pH ≤2
LCSWOI23IMW2	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021	—	✓
PBWOI23IMW2	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021	—	
SO4723-001R	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021	R	
SO4723-001RP	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021	R	
SO4723-001RS	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021	R	
SO4723-002R	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021	F	
SO4723-003R	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021		
SO4723-004R	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021		
SO4723-005R	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021		
SO4723-006R	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021		
SO4723-008R	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021		
SO4724-001R	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021		
SO4724-002R	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021	Q	
SO4724-002RP	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021		
SO4724-002RS	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021		
SO4724-003R	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021	F	
SO4724-004R	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021		
SO4724-005R	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021		
SO4724-006R	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021		

REVIEWED
EQ 9127121
KATAHDIN ANALYTICAL
METALS SECTION

Client IDs Verified
JT 9-23-21

Digestion performed by: JT **On:** 9-23-21

Katahdin Analytical Services 4000233

VERINA CONSULTING GROUP, LLC
LO-58 NIKE MISSILE
BATTERY LAUNCH SITE
SO4724

KATAHDIN ANALYTICAL SERVICES
600 TECHNOLOGY WAY
SCARBOROUGH, ME 04074

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SAMPLE DATA PACKAGE

NARRATIVE
KATAHDIN ANALYTICAL SERVICES
VERINA CONSULTING GROUP, LLC
LO-58 NIKE MISSILE BATTERY LAUNCH SITE
SO4724

Sample Receipt

The following samples were received on July 22, 2021 and were logged in under Katahdin Analytical Services work order number SO4724 for a hardcopy due date of August 10, 2021.

KATAHDIN Sample No.	VERINA CONSULTING Sample Identification
SO4724-1	DW-01-EFF-SUMMER2021
SO4724-2	DW-01-INF-SUMMER2021
SO4724-3	DW-01-MID-SUMMER2021
SO4724-4	DW-02R-EFF-SUMMER2021
SO4724-5	DW-02R-INF-SUMMER2021
SO4724-6	DW-FD-SUMMER2021
SO4724-7	DW-TB-SUMMER2021

The samples were logged in for the analyses specified on the chain of custody form. All problems encountered and resolved during sample receipt have been documented on the applicable chain of custody forms.

We certify that the test results provided in this report meet all the requirements of the NELAC standards unless otherwise noted in this narrative or in the Report of Analysis.

We certify that the test results provided in this report are accredited under the laboratory's ISO/IEC 17025:2017 and DoD-ELAP accreditation issued by the ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation L2223.

Analytes which are reported but not listed on our ANAB scope of accreditation will be "^" flagged and the following language will be included in the case narrative for all DoD compliant work: "^" Indicates this analyte is not included on Katahdin Analytical Services DoD-ELAP Scope of Accreditation.

Sample analyses have been performed by the methods as noted herein.

Should you have any questions or comments concerning this Report of Analysis, please do not hesitate to contact your Katahdin Analytical Services Project Manager, **Ms. Heather Manz**. This narrative is an integral part of the Report of Analysis.

Organics Analysis

The samples of Work Order SO4724 were analyzed in accordance with Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, EPA publication SW-846, Third Edition, Final Updates I (1993), II (1995), IIA (1994), IIB (1995), III (1997), IIIA (1999), IIIB (2005), IV (2008), and V (2015), and/or with "Methods for the Determination of Organic Compounds in Drinking Water", U.S. EPA, Environmental Monitoring and Support Laboratory - Cincinnati (September 1995), and/or Method for the Determination

of Volatile Petroleum Hydrocarbons (VPH), MADEP, May 2004, Revision 1.1, and/or for the specific methods listed below or on the Report of Analysis.

Sample SO4724-2 was used for the matrix spike (MS) and matrix spike duplicate (MSD), as requested by the client.

MA VPH Analysis

There were no protocol deviations or observations noted by the organics laboratory staff for this analysis.

8270D SIM Analysis

The independent check standard (file N3624) associated with the initial calibration (ICAL) on 07/28/2021 had a low concentration for the target analyte benzo(a)pyrene that exceeded the DoD QSM acceptance limit of ±20% of the expected value from the ICAL. The Independent Check Report consists of the full list of spiked analytes, but only the client's list of target analytes are evaluated.
Note: The Form VII has a column for %D that is set to 20%. The DoD QSM 5.3 criterion for an opening CV is 20%D and a closing CV is 50%D. All of the compounds in the CV's were evaluated to either 20% criteria for opening CV's or 50% criteria for closing CV's.

524.2 Analysis

The independent check standard (file D3324A) associated with the initial calibration on the D instrument on 07/29/2021 had high concentrations for the target analytes chloroethane and acetone and low concentrations for the target analytes 4-methyl-2-pentanone, 2-hexanone, dibromochloromethane, 1,2,4-trichlorobenzene, naphthalene and 1,2,3-trichlorobenzene, which exceeded the DoD QSM acceptance limit of ±20% of the expected value from the ICAL. The Independent Check Report consists of the full list of spiked analytes, but only the client's list of target analytes are evaluated.

The opening CV (file D3322) had a high response for the target analyte chloroethane and low responses for the target analytes 2-hexanone and naphthalene that resulted in a %D that was outside of the DoD QSM acceptance limit of ±20%.

The target analytes chloromethane and chloroform were detected below ½ the LOQ in the method blank WG303440-2. According to the DoD QSM, a method blank is considered to be contaminated if the concentration of any target analyte in the blank exceeds ½ the reporting limit and is greater than 1/10 the amount measured in any associated sample or 1/10 the regulatory limit (whichever is greater). Since the method blank was acceptable, no further action was taken.

The reported percent recovery acceptance limits for the Laboratory Control Samples (LCS's) are method limits for the full list of spiked compounds. The recoveries of the spiked analytes in the LCS, LCSD, Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are compared to these acceptance limits. Katahdin standard operating procedure is to take corrective action only if the number of spiked analytes in the LCS that are outside of the QC limits is greater than the DoD QSM allowable number of exceedances. If the associated MS/MSD has greater than the allowable number of exceedances, no corrective action is taken, as long the LCS is acceptable. The LCS WG303440-1 had high recoveries for two target analytes and low recoveries for three target analytes that were outside of the method acceptance limits. The DoD QSM allowable number of exceedances for sixty four target analytes is three analytes. Since the LCSD WG303440-5 was acceptable, no further action was taken.

There were no other protocol deviations or observations noted by the organics laboratory staff.

Metals Analysis

The samples associated with Katahdin Work Order SO4724 were prepared and analyzed for metals in accordance with "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA publication SW846, Third Edition, Final Updates I (1993), II (1995), IIA (1994), IIB (1995), III (1997), IIIA (1999), IIIB (2005), IV (2008), and V (2015), Office of Solid Waste and Emergency Response, U.S. EPA.

Inductively-Coupled Plasma Mass Spectrometric Analysis (ICP-MS)

Aqueous-matrix Katahdin Sample Numbers SO4724-(1-6) were originally digested for ICP-MS analysis on 07/29/21 (QC Batch OG29IMW2) in accordance with USEPA Method 3010A. Per client request, Katahdin Sample Number SO4724-2 was digested with duplicate matrix-spiked aliquots. Due to QC failures for copper, silver, and zinc, the samples were re-digested on 09/23/21 (QC Batch OI23IMW2). The measured copper concentration in the preparation blank associated with this re-digestion batch was above project acceptance criteria. After consultation with the client, the copper results were reported with narration and flagged with a "B" qualifier to indicate blank contamination. These re-digestates are identified on sample preparation logbooks, analysis run logs, and throughout the raw data by the suffix "R" appended to the Katahdin Sample Number, e.g. "SO4724-001R".

ICP-MS analyses of Katahdin Work Order SO4724 sample digestates were performed using an Agilent 7800 ICP-MS spectrometer in accordance with USEPA Method 6020A. Results for all standards and samples are reported using the mean of 3 replicate measurements. All sample digestates were diluted by a factor of 5 during analysis to reduce mass interferences from chlorine, which is present in the digestates from the hydrochloric acid used in digesting the samples. All samples were analyzed within holding times and all analytical run QC criteria were met, with the following exception:

The ICSA standard analyzed in analytical batch LOI24A was outside laboratory acceptance criteria for copper. After consultation with the client, the copper results were reported with narration.

Internal standard recoveries for ICP-MS analyses can be found in the raw data section of the accompanying data package. The following table indicates which analytes are associated with each internal standard element.

Internal Standard Element	**Associated Analytes**
Lithium	Beryllium, Boron
Scandium	Sodium, Magnesium, Aluminum, Potassium, Calcium
Germanium or Yttrium	Vanadium, Chromium, Manganese, Iron, Cobalt, Nickel, Copper, Zinc, Arsenic, Selenium, Silver, Cadmium, Strontium, Molybdenum
Terbium	Antimony, Barium, Tin, Tungsten
Bismuth	Lead, Thallium, Thorium, Uranium

Instrument tuning information can also be found in the raw data section in the reports labeled "USEPA Method Tune Report". For Method 6020A, the relative standard deviation was determined from 5 replicate measurements and the peak width was measured at 10% of the peak height.

Analysis of Mercury by Cold Vapor Atomic Absorption (CVAA)

Aqueous-matrix Katahdin Sample Numbers SO4724-(1-6) were digested for mercury analysis on 07/29/21 (QC Batch OG29HGW2) in accordance with USEPA Method 7470A. Per client request, Katahdin Sample Number SO4724-2 was digested with duplicate matrix-spiked aliquots.

Mercury analyses of the Katahdin Work Order SO4724 sample digestates were performed using a Cetac M6100 automated mercury analyzer in accordance with USEPA Method 7470A. All samples were analyzed within holding times and all analytical run QC criteria were met.

Matrix QC Summary

The measured recovery of calcium in the matrix spiked aliquots of Katahdin Sample Number SO4724-2 is outside the laboratory's acceptance limits. This may be attributable to the native concentration in the sample being much greater than the spike added. Because the recovery of calcium in the laboratory control sample is within acceptance limits, no corrective action was required.

The measured recovery of calcium in the post-digestion spiked aliquot of Katahdin Sample Number SO4724-2 is outside laboratory acceptance criteria (80%-120% recovery of the added element). This may be attributable to the native concentration in the sample being much greater than the spike added.

Reporting of Metals Results

Per client request, analytical results for client samples on Form I and preparation blanks on Form IIIP have been reported using the laboratory's limits of detection (LOD). All results were evaluated down to the laboratory's method detection limits (MDLs). Results that fall between the MDL and the LOQ are flagged with "J" in the C-qualifier column, and the measured concentration appears in the concentration column. Results that are less than the MDL are flagged with "U" in the C-qualifier column, and the LOD is listed in the concentration column. These LOQs, MDLs and LODs have been adjusted for each sample based on the sample amounts used in preparation and analysis.

Analytical results on Forms VA, VD, VII, and IX for client samples, matrix QC samples (duplicates and matrix spikes), and laboratory control samples have been reported down to the laboratory's method detection limits (MDLs). Analytical results that are below the MDLs are flagged with "U" in the C-qualifier column, and the adjusted LOD is listed in the concentration column.

Analytical results for instrument run QC samples (ICVs, ICBs, etc.) have been reported down to the laboratory's instrument detection limits (IDLs).

IDLs, LODs, MDLs, and LOQs are listed on Form 10 of the accompanying data package.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Quality Assurance Officer, or their designee, as verified by the following signature.

Leslie Dimond ***Oct 01, 2021***

Leslie Dimond
Quality Assurance Officer

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

Katahdin Analytical Services, LLC. Sample Receipt Condition Report

Client: Verina / Nobis	KAS PM: HHM	Sampled By: Client
Project:	KIMS Entry By: GM	Delivered By: Client
KAS Work Order#: 504723 / 504724	KIMS Review By: HHM	Received By: MF
	Labeled By: GM	
SDG #:	Cooler: 1 of 4	Date/Time Rec.: 7-22-21 / 2030

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		✓			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	✓				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 1.1 Thermometer ID: IR-1
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals (except Hg soil) analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) or insufficient ice may not meet certain regulatory requirements and may invalidate certain data.
If yes, was there sufficient ice to meet temperature requirements?	✓				
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals (except Hg soil) analysis.
6. Volatiles: **Aqueous:** No bubble larger than a pea?	✓				
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
D.I. Water - Received within 48 hour HT?				✓	
7. Trip Blank present in cooler?	✓				
8. Proper sample containers and volume?	✓			✓	
9. Samples within hold time upon receipt?	✓			✓	
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2	✓				
Sulfide - >9				✓	
Cyanide – pH >12				✓	
11. Bottleware Prepped on:					

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments.

DW-TB & GW-TB received VPH vials, VPH not checked off on COC.

Katahdin Analytical Services, LLC. Sample Receipt Condition Report

Client: Verina / Nobis	KAS PM: HHM	Sampled By: Client	
Project:	KIMS Entry By: GN	Delivered By: Client	
KAS Work Order#: 504723 / 504724	KIMS Review By: HHM	Received By: MF	
	Labeled By: GM		
SDG #:	Cooler: 2 of 4	Date/Time Rec.: 7-22-21 / 2030	

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		✓			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	/				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 4.0 — Thermometer ID: IR-1
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals (except Hg soil) analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) or insufficient ice may not meet certain regulatory requirements and may invalidate certain data.
If yes, was there sufficient ice to meet temperature requirements?	✓				
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals (except Hg soil) analysis.
6. Volatiles:					
Aqueous: No bubble larger than a pea?	✓				
Soil/Sediment:					
Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
D.I. Water - Received within 48 hour HT?				✓	
7. Trip Blank present in cooler?		✓			
8. Proper sample containers and volume?	/				
9. Samples within hold time upon receipt?	/				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2				/	
Sulfide - >9				/	
Cyanide – pH >12				/	
11. Bottleware Prepped on:					

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments.

Katahdin Analytical Services, LLC. — Sample Receipt Condition Report

Client: Verina / Nobis	KAS PM: HHM	Sampled By: Client
Project:	KIMS Entry By: GM	Delivered By: Client
KAS Work Order#: 504723 / 504724	KIMS Review By: HHM	Received By: MF
	Labeled By: GM	
SDG #:	Cooler: 3 of 4	Date/Time Rec.: 7-22-21 / 2030

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		✓			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	/				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 6.0 — Thermometer ID: IR-1
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals (except Hg soil) analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) or insufficient ice may not meet certain regulatory requirements and may invalidate certain data.
If yes, was there sufficient ice to meet temperature requirements?	✓				
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals (except Hg soil) analysis.
6. Volatiles: **Aqueous:** No bubble larger than a pea?	✓				
Soil/Sediment:					
Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
D.I. Water - Received within 48 hour HT?				✓	
7. Trip Blank present in cooler?		✓			
8. Proper sample containers and volume?	/				
9. Samples within hold time upon receipt?	/				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2	/				
Sulfide - >9				/	
Cyanide – pH >12				/	
11. Bottleware Prepped on:					

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments.

Katahdin Analytical Services, LLC. — Sample Receipt Condition Report

Client: Verina / Nobis	KAS PM: HHM	Sampled By: Client
Project:	KIMS Entry By: GN	Delivered By: Client
KAS Work Order#: 504723 / 504724	KIMS Review By: HHM	Received By: MF
	Labeled By: GN	
SDG #:	Cooler: 4 of 4	Date/Time Rec.: 7-22-21 / 2030

Receipt Criteria	Y	N	EX*	NA	Comments and/or Resolution
1. Custody seals present / intact?		✓			
2. Chain of Custody present in cooler?	✓				
3. Chain of Custody signed by client?	✓				
4. Chain of Custody matches samples?	/				
5. Temperature Blanks present? If not, take temperature of any sample w/ IR gun.	✓				Temp (°C): 3.1 — Thermometer ID: IR-1
Samples received at <6 °C w/o freezing?	✓				Note: Not required for metals (except Hg soil) analysis.
Ice packs or ice present?	✓				The lack of ice or ice packs (i.e. no attempt to begin cooling process) or insufficient ice may not meet certain regulatory requirements and may invalidate certain data.
If yes, was there sufficient ice to meet temperature requirements?	✓				
If temp. out, has the cooling process begun (i.e. ice or packs present) and sample collection times <6hrs., but samples are not yet cool?				✓	Note: No cooling process required for metals (except Hg soil) analysis.
6. Volatiles: **Aqueous:** No bubble larger than a pea?	✓				
Soil/Sediment: Received in airtight container?				✓	
Received in methanol?				✓	
Methanol covering soil?				✓	
D.I. Water - Received within 48 hour HT?				✓	
7. Trip Blank present in cooler?		✓			
8. Proper sample containers and volume?	/				
9. Samples within hold time upon receipt?	/				
10. Aqueous samples properly preserved? Metals, COD, NH3, TKN, O/G, phenol, TPO4, N+N, TOC, DRO, TPH – pH <2	/				
Sulfide - >9				/	
Cyanide – pH >12				/	
11. Bottleware Prepped on:					

* Log-In Notes to Exceptions: document any problems with samples or discrepancies or pH adjustments.

CHAIN-OF-CUSTODY RECORD

Verina Consulting Group, LLC, Bridgewater, NJ
Robert Gan
1011 US-22, Bridgewater Township, NJ 08807
(908) 864-4400, RGan@vcg-llc.com

COC # 072021-GWDW

Project Name: D01ME0077-02, Nike 58 - SI in Launch Area	Laboratory: Katahdin Analytical Services, Scarborough, ME	Event: Nike 58 Summer Groundwater 2021 Sampling
Project Number: D01ME0077-02	POC: Heather Manz, (207) 874-2400, hmanz@katahdinlab.com	
WBS Code:	Ship to: 600 Technology Way, Scarborough, ME 04074	

Comments:
BNASIM (A) = PAH 8270 SIM
E524.2 (A) = VOCs DW
MADEPVP (A) = MADEP VPH
SW6020A (A) = 13 PP Metals
SW7470A (A) = Mercury Water
SW8260C (A) = VOCs GW

504724

Equipment:

Code	Matrix
WG	Ground Water
WP	Drinking Water

Code	Container/Preservative
1	3x 40 mL Vials with PTFE lined Septum Caps, HCL to pH < 2, Cool to 4degC ± 2 degC
6	2x 1 L Amber glass bottle with Teflon lined cap, Cool to 0deg to 6 degC, protected from light, in sealed vials with PTFE-lined septa
12	2x 40-mL vials w/Teflon lined septa screw caps, Add 3 to 4 drops of 1:1 HCL to pH < 2, Cool to 4degC ± 2 degC
13	1x 250 mL PTFE, plastic, HNO3 to pH < 2
13	1x Plastic or Glass, Aqueous samples must be acidified to a pH < 2 with HNO3
31	3x 40 mL Vials with PTFE lined Septum Caps, HCL to pH < 2, Cool to 4degC ± 2 degC

Event: Nike 58 Summer Groundwater 2021 Sampling

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: BNASIM (A)	E524.2 (A)	MADEPVP (A)	SW6020A (A)	SW7470A (A)	SW8260C (A)					Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						6	31	12	13	13	1										
1	DW-01-EFF-SUMMER2021	WP	7/20/2021	1652	CP	X	X	X	X	X						DW-01-EFF	N1	0.00	0.00	1	SDG - 1
2	DW-01-INF-SUMMER2021	WP	7/20/2021	1715	CP	X	X	X	X	X						DW-01-INF	N1	0.00	0.00	1	
3	DW-01-INF-SUMMER2021-MS	WP	7/20/2021	1715	CP	X	X	X	X	X						DW-01-INF	MS1	0.00	0.00	1	
4	DW-01-INF-SUMMER2021-MSD	WP	7/20/2021	1715	CP	X	X	X	X	X						DW-01-INF	SD1	0.00	0.00	1	
5	DW-01-MID-SUMMER2021	WP	7/20/2021	1705	CP	X	X	X	X	X						DW-01-MID	N1	0.00	0.00	1	
6	DW-02R-EFF-SUMMER2021	WP	7/21/2021	1400	JS	X	X	X	X	X						DW-02R-EFF	N1	0.00	0.00	1	
7	DW-02R-INF-SUMMER2021	WP	7/21/2021	1415	JS	X	X	X	X	X						DW-02R-INF	N1	0.00	0.00	1	
8	DW-FD-SUMMER2021	WP	7/21/2021	1430	JS	X	X	X	X	X							FD1	0.00	0.00	1	

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
[signature]	7-22-21		[signature]	7-22-21	8:30 pm

Shipping Date / Carrier / Airbill Number
Shipping Date:

Received by Laboratory: *(Signature, Date, Time)* **& condition**
[signature] 7-22-21 8:30 pm

00000012

CHAIN-OF-CUSTODY RECORD

Verina Consulting Group, LLC, Bridgewater, NJ
Robert Gan
1011 US-22, Bridgewater Township, NJ 08807
(908) 864-4400, RGan@vcg-llc.com

COC # 072021-GWDW

Project Name: D01ME0077-02, Nike 58 - SI in Launch Area	Laboratory: Katahdin Analytical Services, Scarborough, ME	Event: Nike 58 Summer Groundwater 2021 Sampling
Project Number: D01ME0077-02	POC: Heather Manz, (207) 874-2400, hmanz@katahdinlab.com	
WBS Code:	Ship to: 600 Technology Way, Scarborough, ME 04074	

Comments:
BNASIM (A) = PAH 8270 SIM
E524.2 (A) = VOCs DW
MADEPVP (A) = MADEP VPH
SW6020A (A) = 13 PP Metals
SW7470A (A) = Mercury Water
SW8260C (A) = VOCs GW

S04724

Equipment:

Code	Matrix
WG	Ground Water
WP	Drinking Water

Code	Container/Preservative
1	3x 40 mL Vials with PTFE lined Septum Caps, HCL to pH < 2, Cool to 4degC ± 2 degC
6	2x 1 L Amber glass bottle with Teflon lined cap, Cool to 0deg to 6 degC, protected from light, in sealed vials with PTFE-lined septa
12	2x 40-mL vials w/Teflon lined septa screw caps, Add 3 to 4 drops of 1:1 HCL to pH < 2, Cool to 4degC ± 2 degC
13	1x 250 mL PTFE, plastic, HNO3 to pH < 2
13	1x Plastic or Glass, Aqueous samples must be acidified to a pH < 2 with HNO3
31	3x 40 mL Vials with PTFE lined Septum Caps, HCL to pH < 2, Cool to 4degC ± 2 degC

Event: Nike 58 Summer Groundwater 2021 Sampling

						Analytical Test Method	BNASIM (A)	E524.2 (A)	MADEPVP (A)	SW6020A (A)	SW7470A (A)	SW8260C (A)						Sample	Depth (ft bgs)			
	Sample ID	Matrix	Date	Time	Samp Init.		6	31	12	13	13	1					Location ID	Type	Top	Bottom	Cooler	Comments
9	MW-01-SUMMER2021	WG	7/21/2021	1340	SM		X		X	X	X	X					MW-01	N1	131.00	141.00	1	SDG-2
10	MW-01-SUMMER2021-MS	WG	7/21/2021	1340	SM		X		X	X	X	X					MW-01	MS1	131.00	141.00	1	
11	MW-01-SUMMER2021-MSD	WG	7/21/2021	1340	SM		X		X	X	X	X					MW-01	SD1	131.00	141.00	1	
12	MW-02-SUMMER2021	WG	7/20/2021	1138	SM		X		X	X	X	X					MW-02	N1	50.00	60.00	1	
13	MW-03-SUMMER2021	WG	7/20/2021	1538	SM		X		X	X	X	X					MW-03	N1	36.00	46.00	1	
14	MW-04-SUMMER2021	WG	7/21/2021	1625	CP		X		X	X	X	X					MW-04	N1	70.00	80.00	1	
15	MW-05-SUMMER2021	WG	7/20/2021	1230	CP		X		X	X	X	X					MW-05	N1	70.00	80.00	1	
16	MW-FD-SUMMER2021	WG	7/20/2021	1215	SM		X		X	X	X	X						FD1	50.00	60.00	1	
17	DW-TB-SUMMER2021	WP	7/21/2021	0800	JS			X										TB				SDG-1
18	GW-TB-SUMMER2021	WG	7/21/2021	0800	JS							X						TB				SDG-2

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
	7-22-21			7-22-21	8:30 pm

Shipping Date / Carrier / Airbill Number
Shipping Date:

Received by Laboratory: *(Signature, Date, Time)* **& condition**
7/22/21 8:30 pm

CHAIN-OF-CUSTODY RECORD

Verina Consulting Group, LLC, Bridgewater, NJ
Robert Gan
1011 US-22, Bridgewater Township, NJ 08807
(908) 864-4400, RGan@vcg-llc.com

COC # 072021-GWDW

Project Name: D01ME0077-02, Nike 58 - SI in Launch Area	Laboratory: Katahdin Analytical Services, Scarborough, ME	Event: Nike 58 Summer Groundwater 2021 Sampling
Project Number: D01ME0077-02	POC: Heather Manz, (207) 874-2400, hmanz@katahdinlab.com	
WBS Code:	Ship to: 600 Technology Way, Scarborough, ME 04074	

Comments:
BNASIM (A) = PAH 8270 SIM
E524.2 (A) = VOCs DW
MADEPVP (A) = MADEP VPH
SW6020A (A) = 13 PP Metals
SW7470A (A) = Mercury Water
SW8260C (A) = VOCs GW

504723

Equipment:

Code	Matrix
WG	Ground Water
WP	Drinking Water

Code	Container/Preservative
1	3x 40 mL Vials with PTFE lined Septum Caps, HCL to pH < 2, Cool to 4degC ± 2 degC
6	2x 1 L Amber glass bottle with Teflon lined cap, Cool to 0deg to 6 degC, protected from light, in sealed vials with PTFE-lined septa
12	2x 40-mL vials w/Teflon lined septa screw caps, Add 3 to 4 drops of 1:1 HCL to pH < 2, Cool to 4degC ± 2 degC
13	1x 250 mL PTFE, plastic, HNO3 to pH < 2
13	1x Plastic or Glass, Aqueous samples must be acidified to a pH < 2 with HNO3
31	3x 40 mL Vials with PTFE lined Septum Caps, HCL to pH < 2, Cool to 4degC ± 2 degC

Event: Nike 58 Summer Groundwater 2021 Sampling

					Samp Init.	Analytical Test Method: BNASIM (A)	E524.2 (A)	MADEPVP (A)	SW6020A (A)	SW7470A (A)	SW8260C (A)					Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
	Sample ID	Matrix	Date	Time		6	31	12	13	13	1										
19	GW-EB-SUMMER2021	WG	7/22/2021	1010	SM	X		X	X	X	X						EB				SOC-2

Turnaround Time: NA

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
	7-22-21			7-22-21	8:30pm

Shipping Date / Carrier / Airbill Number
Shipping Date:

Received by Laboratory: *(Signature, Date, Time)* **& condition**
7-22-21 8:30pm

00000144

Katahdin Analytical Services

Login Chain of Custody Report (lno1)

Jul. 26, 2021
03:11 PM

Quote/Incoming: VERINA-LO58-NIKE

Login Number: SO4724

Account: VERINA001
Verina Consulting Group, LLC

Project: VERINA-LO58-NIKE
LO-58 Nike Battery Launch Site, Caribou,

Primary Report Address:

Michael Hansen
Verina Consulting
1011 US Highway 22
Suite 302
Bridgewater,NJ 08807
USA
mhansen@vcg-llc.com

Primary Invoice Address:

Michael Hansen
Verina Consulting
1011 US Highway 22
Suite 302
Bridgewater,NJ 08807
USA

Report CC Addresses:
Invoice CC Addresses:

Login Information:

ANALYSIS INSTRUCTIONS	:	DOD 5.3, ND to LOD w/ J flags. 8260C, 8270D. VPH report ranges & targets.
CHECK NO.	:	
CLIENT PO#	:	2102.0104-Katahdin-04272020
CLIENT PROJECT MANAGE	:	Robert Gan
CONTRACT	:	W912WJ19C0019
COOLER TEMPERATURE	:	1.1, 4.0, 6.0, 3.1
DELIVERY SERVICES	:	Client
EDD FORMAT	:	FUDSCHEM
LOGIN INITIALS	:	GN
PM	:	HHM
PROJECT NAME	:	LO-58 Nike Missile Battery Launch Site
QC LEVEL	:	IV
REPORT INSTRUCTIONS	:	Email PDF, EDD, & invoice to mhansen@vcg-llc.com. Invoice monthly.
SDG ID	:	
SDG STATUS	:	
VERBAL TAT	:	

3:15 pm, Jul 26, 2021

Login Number: SO4724

Quote/Incoming: VERINA-LO58-NIKE

Account: VERINA001
Verina Consulting Group, LLC

Project: VERINA-LO58-NIKE
LO-58 Nike Battery Launch Site, Caribou,

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SO4724-1	DW-01-EFF-SUMMER2021	20-JUL-21 16:52	22-JUL-21			10-AUG-21	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	E524.2-S	03-AUG-21	40mL Vial+HCl		
Aqueous	S	MA-VPH-LOD	03-AUG-21	40mL Vial+HCl		
Aqueous	S	SW3010MS-PREP	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ANTIMONY	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ARSENIC	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-BERYLLIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CADMIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CALCIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CHROMIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-COPPER	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-LEAD	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-MANGANESE	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-NICKEL	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-SELENIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-SILVER	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-THALLIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ZINC	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW7470-MERCURY	17-AUG-21	500mL Plastic+HNO3		
Aqueous	S	SW8270SIMPAH-S	27-JUL-21	1L N-Amber Glass		
Service	S	WASTE-DISPOSAL				

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SO4724-2	DW-01-INF-SUMMER2021	20-JUL-21 17:15	22-JUL-21			10-AUG-21	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	E524.2-S	03-AUG-21	40mL Vial+HCl		**MS/MSD**
Aqueous	S	MA-VPH-LOD	03-AUG-21	40mL Vial+HCl		
Aqueous	S	SW3010MS-PREP	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ANTIMONY	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ARSENIC	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-BERYLLIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CADMIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CALCIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CHROMIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-COPPER	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-LEAD	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-MANGANESE	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-NICKEL	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-SELENIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-SILVER	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-THALLIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ZINC	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW7470-MERCURY	17-AUG-21	500mL Plastic+HNO3		
Aqueous	S	SW8270SIMPAH-S	27-JUL-21	1L N-Amber Glass		
Service	S	WASTE-DISPOSAL				

3:15 pm, Jul 26, 2021

Login Number: SO4724

Quote/Incoming: VERINA-LO58-NIKE

Account: VERINA001
Verina Consulting Group, LLC

Project: VERINA-LO58-NIKE
LO-58 Nike Battery Launch Site, Caribou,

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SO4724-3	DW-01-MID-SUMMER2021	20-JUL-21 17:05	22-JUL-21			10-AUG-21	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	E524.2-S	03-AUG-21	40mL Vial+HCl		
Aqueous	S	MA-VPH-LOD	03-AUG-21	40mL Vial+HCl		
Aqueous	S	SW3010MS-PREP	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ANTIMONY	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ARSENIC	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-BERYLLIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CADMIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CALCIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CHROMIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-COPPER	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-LEAD	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-MANGANESE	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-NICKEL	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-SELENIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-SILVER	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-THALLIUM	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ZINC	16-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW7470-MERCURY	17-AUG-21	500mL Plastic+HNO3		
Aqueous	S	SW8270SIMPAH-S	27-JUL-21	1L N-Amber Glass		
Service	S	WASTE-DISPOSAL				

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SO4724-4	DW-02R-EFF-SUMMER2021	21-JUL-21 14:00	22-JUL-21			10-AUG-21	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	E524.2-S	04-AUG-21	40mL Vial+HCl		
Aqueous	S	MA-VPH-LOD	04-AUG-21	40mL Vial+HCl		
Aqueous	S	SW3010MS-PREP	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ANTIMONY	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ARSENIC	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-BERYLLIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CADMIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CALCIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CHROMIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-COPPER	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-LEAD	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-MANGANESE	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-NICKEL	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-SELENIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-SILVER	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-THALLIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ZINC	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW7470-MERCURY	18-AUG-21	500mL Plastic+HNO3		
Aqueous	S	SW8270SIMPAH-S	28-JUL-21	1L N-Amber Glass		
Service	S	WASTE-DISPOSAL				

3:15 pm, Jul 26, 2021

Login Number: SO4724

Quote/Incoming: VERINA-LO58-NIKE

Account: VERINA001
Verina Consulting Group, LLC

Project: VERINA-LO58-NIKE
LO-58 Nike Battery Launch Site, Caribou,

Laboratory Sample ID	Client Sample Number	Collect Date/Time	Receive Date	PR	Verbal Date	Due Date	Mailed
SO4724-5	DW-02R-INF-SUMMER2021	21-JUL-21 14:15	22-JUL-21			10-AUG-21	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	E524.2-S	04-AUG-21	40mL Vial+HCl		
Aqueous	S	MA-VPH-LOD	04-AUG-21	40mL Vial+HCl		
Aqueous	S	SW3010MS-PREP	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ANTIMONY	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ARSENIC	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-BERYLLIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CADMIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CALCIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CHROMIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-COPPER	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-LEAD	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-MANGANESE	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-NICKEL	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-SELENIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-SILVER	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-THALLIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ZINC	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW7470-MERCURY	18-AUG-21	500mL Plastic+HNO3		
Aqueous	S	SW8270SIMPAH-S	28-JUL-21	1L N-Amber Glass		
Service	S	WASTE-DISPOSAL				

SO4724-6	DW-FD-SUMMER2021	21-JUL-21 14:30	22-JUL-21			10-AUG-21	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	E524.2-S	04-AUG-21	40mL Vial+HCl		
Aqueous	S	MA-VPH-LOD	04-AUG-21	40mL Vial+HCl		
Aqueous	S	SW3010MS-PREP	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ANTIMONY	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ARSENIC	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-BERYLLIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CADMIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CALCIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-CHROMIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-COPPER	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-LEAD	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-MANGANESE	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-NICKEL	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-SELENIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-SILVER	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-THALLIUM	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW6020-ZINC	17-JAN-22	250mL Plastic+HNO3		
Aqueous	S	SW7470-MERCURY	18-AUG-21	500mL Plastic+HNO3		
Aqueous	S	SW8270SIMPAH-S	28-JUL-21	1L N-Amber Glass		
Service	S	WASTE-DISPOSAL				

SO4724-7	DW-TB-SUMMER2021	21-JUL-21 08:00	22-JUL-21			10-AUG-21	

Matrix		Product	Hold Date (shortest)	Bottle Type	Bottle Count	Comments
Aqueous	S	E524.2-S	04-AUG-21	40mL Vial+HCl		
Aqueous	S	MA-VPH-LOD	04-AUG-21	40mL Vial+HCl		
Service	S	WASTE-DISPOSAL				

Total Samples: 7 ***Total Analyses: 123***

3:15 pm, Jul 26, 2021

SAMPLE DATA SUMMARY PACKAGE

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

* Compound recovery or percent RPD (relative percent difference) was outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

C Indicates that the flagged compound did not meet DoD criteria in the corresponding daily calibration verification (CV).

L Indicates that the flagged compound did not meet DoD criteria in the corresponding Laboratory Control Sample (LCS) and/or Laboratory Control Sample Duplicate (LCSD) prepared and/or analyzed concurrently with the sample.

M Indicates that the flagged compound did not meet DoD criteria in the Matrix Spike and/or Matrix Spike Duplicate prepared and/or analyzed concurrently with the native sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

METALS SAMPLE FLAGGING

FLAG	SPECIFIED MEANING
E	The reported value is estimated because of the presence of interference (as indicated by serial dilution).
N	The pre-digestion spiked sample recovery is not within control limits.
*	The duplicate sample analysis relative percent difference (RPD) is not within control limits.
B	Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.
A	The post-digestion spiked sample recovery is not within control limits.
•	Analytical run QC sample (e.g. ICV, CCV, ICB, CCB, ICSA, ICSAB) not within control limits.
U	The analyte was not detected above the specified level. This level may be the Limit of Quantitation (LOQ) (previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client. Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.
J	The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ) (previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).
Q	One or more quality control criteria failed (e.g., LCS recovery, surrogate spike recovery or CCV).

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-1
Client ID: DW-01-EFF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3328.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	0.50	ug/L	1	1	1.0	0.10	0.50
Chloromethane	J	0.18	ug/L	1	1	1.0	0.077	0.50
Vinyl Chloride	U	0.50	ug/L	1	1	1.0	0.083	0.50
Bromomethane	U	0.50	ug/L	1	1	1.0	0.13	0.50
Chloroethane	UL	0.50	ug/L	1	1	1.0	0.085	0.50
Trichlorofluoromethane	U	0.25	ug/L	1	.5	0.50	0.072	0.25
1,1-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.084	0.25
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	J	0.66	ug/L	1	2.5	2.5	0.62	1.2
Acetone	JL	2.4	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.076	0.25
1,1-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.049	0.25
cis-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
2,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.14	0.25
Chloroform	U	0.25	ug/L	1	.5	0.50	0.047	0.25
Bromochloromethane	U	0.25	ug/L	1	.5	0.50	0.087	0.25
1,1,1-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.058	0.25
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.10	0.25
1,1-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.054	0.25
Carbon Tetrachloride	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Benzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
1,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.066	0.25
Trichloroethene	U	0.25	ug/L	1	.5	0.50	0.044	0.25
Dibromomethane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Bromodichloromethane	U	0.25	ug/L	1	.5	0.50	0.061	0.25
cis-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
Toluene	U	0.25	ug/L	1	1	1.0	0.061	0.25
trans-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.12	0.25
1,1,2-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.13	0.25
1,3-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Dibromochloromethane	U	0.25	ug/L	1	.5	0.50	0.092	0.25
Tetrachloroethene	U	0.25	ug/L	1	.5	0.50	0.073	0.25
4-Methyl-2-Pentanone	UL	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dibromoethane	U	0.25	ug/L	1	.5	0.50	0.090	0.25

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-1
Client ID: DW-01-EFF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3328.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
2-Hexanone	ULL	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.25	ug/L	1	.5	0.50	0.057	0.25
1,1,1,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Ethylbenzene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
m+p-Xylenes	U	0.25	ug/L	1	1	1.0	0.098	0.25
Bromoform	U	0.25	ug/L	1	.5	0.50	0.055	0.25
o-Xylene	U	0.25	ug/L	1	.5	0.50	0.043	0.25
Styrene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,1,2,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.11	0.25
1,2,3-Trichloropropane	U	0.25	ug/L	1	.5	0.50	0.099	0.25
Isopropylbenzene	U	0.25	ug/L	1	.5	0.50	0.059	0.25
Bromobenzene	U	0.25	ug/L	1	.5	0.50	0.066	0.25
2-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
N-Propylbenzene	U	0.25	ug/L	1	.5	0.50	0.063	0.25
4-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.077	0.25
1,3,5-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
1,2,4-Trichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.10	0.25
sec-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.085	0.25
1,3-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.049	0.25
p-Isopropyltoluene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,4-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.065	0.25
N-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.083	0.25
1,2-Dibromo-3-Chloropropane	U	0.25	ug/L	1	.5	0.50	0.080	0.25
1,2,4-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
Naphthalene	ULL	0.50	ug/L	1	1	1.0	0.14	0.50
Hexachlorobutadiene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2,3-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.13	0.50
Methyl tert-butyl Ether	U	0.25	ug/L	1	1	1.0	0.097	0.25
p-Bromofluorobenzene		67.6	%					
1,2-Dichlorobenzene-D4		78.0	%					

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-2
Client ID: DW-01-INF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3333.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	UM	0.50	ug/L	1	1	1.0	0.10	0.50
Chloromethane	J	0.096	ug/L	1	1	1.0	0.077	0.50
Vinyl Chloride	U	0.50	ug/L	1	1	1.0	0.083	0.50
Bromomethane	U	0.50	ug/L	1	1	1.0	0.13	0.50
Chloroethane	ULMM	0.50	ug/L	1	1	1.0	0.085	0.50
Trichlorofluoromethane	U	0.25	ug/L	1	.5	0.50	0.072	0.25
1,1-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.084	0.25
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	UMM	1.2	ug/L	1	2.5	2.5	0.62	1.2
Acetone	ULM	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.076	0.25
1,1-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.049	0.25
cis-1,2-Dichloroethene		0.74	ug/L	1	.5	0.50	0.053	0.25
2,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.14	0.25
Chloroform	J	0.053	ug/L	1	.5	0.50	0.047	0.25
Bromochloromethane	U	0.25	ug/L	1	.5	0.50	0.087	0.25
1,1,1-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.058	0.25
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.10	0.25
1,1-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.054	0.25
Carbon Tetrachloride	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Benzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
1,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.066	0.25
Trichloroethene		2.9	ug/L	1	.5	0.50	0.044	0.25
Dibromomethane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Bromodichloromethane	U	0.25	ug/L	1	.5	0.50	0.061	0.25
cis-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
Toluene	U	0.25	ug/L	1	1	1.0	0.061	0.25
trans-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.12	0.25
1,1,2-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.13	0.25
1,3-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Dibromochloromethane	U	0.25	ug/L	1	.5	0.50	0.092	0.25
Tetrachloroethene	U	0.25	ug/L	1	.5	0.50	0.073	0.25
4-Methyl-2-Pentanone	ULM	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dibromoethane	U	0.25	ug/L	1	.5	0.50	0.090	0.25

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-2
Client ID: DW-01-INF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3333.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
2-Hexanone	ULL	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.25	ug/L	1	.5	0.50	0.057	0.25
1,1,1,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Ethylbenzene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
m+p-Xylenes	U	0.25	ug/L	1	1	1.0	0.098	0.25
Bromoform	U	0.25	ug/L	1	.5	0.50	0.055	0.25
o-Xylene	U	0.25	ug/L	1	.5	0.50	0.043	0.25
Styrene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,1,2,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.11	0.25
1,2,3-Trichloropropane	U	0.25	ug/L	1	.5	0.50	0.099	0.25
Isopropylbenzene	U	0.25	ug/L	1	.5	0.50	0.059	0.25
Bromobenzene	U	0.25	ug/L	1	.5	0.50	0.066	0.25
2-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
N-Propylbenzene	U	0.25	ug/L	1	.5	0.50	0.063	0.25
4-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.077	0.25
1,3,5-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
1,2,4-Trichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.10	0.25
sec-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.085	0.25
1,3-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.049	0.25
p-Isopropyltoluene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,4-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.065	0.25
N-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.083	0.25
1,2-Dibromo-3-Chloropropane	U	0.25	ug/L	1	.5	0.50	0.080	0.25
1,2,4-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
Naphthalene	ULLMM	0.50	ug/L	1	1	1.0	0.14	0.50
Hexachlorobutadiene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2,3-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.13	0.50
Methyl tert-butyl Ether	U	0.25	ug/L	1	1	1.0	0.097	0.25
p-Bromofluorobenzene		68.2	%					
1,2-Dichlorobenzene-D4		78.7	%					

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-3
Client ID: DW-01-MID-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3329.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	0.50	ug/L	1	1	1.0	0.10	0.50
Chloromethane	J	0.12	ug/L	1	1	1.0	0.077	0.50
Vinyl Chloride	U	0.50	ug/L	1	1	1.0	0.083	0.50
Bromomethane	U	0.50	ug/L	1	1	1.0	0.13	0.50
Chloroethane	UL	0.50	ug/L	1	1	1.0	0.085	0.50
Trichlorofluoromethane	U	0.25	ug/L	1	.5	0.50	0.072	0.25
1,1-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.084	0.25
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	U	1.2	ug/L	1	2.5	2.5	0.62	1.2
Acetone	UL	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.076	0.25
1,1-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.049	0.25
cis-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
2,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.14	0.25
Chloroform	U	0.25	ug/L	1	.5	0.50	0.047	0.25
Bromochloromethane	U	0.25	ug/L	1	.5	0.50	0.087	0.25
1,1,1-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.058	0.25
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.10	0.25
1,1-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.054	0.25
Carbon Tetrachloride	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Benzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
1,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.066	0.25
Trichloroethene	U	0.25	ug/L	1	.5	0.50	0.044	0.25
Dibromomethane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Bromodichloromethane	U	0.25	ug/L	1	.5	0.50	0.061	0.25
cis-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
Toluene	U	0.25	ug/L	1	1	1.0	0.061	0.25
trans-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.12	0.25
1,1,2-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.13	0.25
1,3-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Dibromochloromethane	U	0.25	ug/L	1	.5	0.50	0.092	0.25
Tetrachloroethene	U	0.25	ug/L	1	.5	0.50	0.073	0.25
4-Methyl-2-Pentanone	UL	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dibromoethane	U	0.25	ug/L	1	.5	0.50	0.090	0.25

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-3
Client ID: DW-01-MID-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3329.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
2-Hexanone	ULL	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.25	ug/L	1	.5	0.50	0.057	0.25
1,1,1,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Ethylbenzene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
m+p-Xylenes	U	0.25	ug/L	1	1	1.0	0.098	0.25
Bromoform	U	0.25	ug/L	1	.5	0.50	0.055	0.25
o-Xylene	U	0.25	ug/L	1	.5	0.50	0.043	0.25
Styrene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,1,2,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.11	0.25
1,2,3-Trichloropropane	U	0.25	ug/L	1	.5	0.50	0.099	0.25
Isopropylbenzene	U	0.25	ug/L	1	.5	0.50	0.059	0.25
Bromobenzene	U	0.25	ug/L	1	.5	0.50	0.066	0.25
2-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
N-Propylbenzene	U	0.25	ug/L	1	.5	0.50	0.063	0.25
4-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.077	0.25
1,3,5-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
1,2,4-Trichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.10	0.25
sec-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.085	0.25
1,3-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.049	0.25
p-Isopropyltoluene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,4-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.065	0.25
N-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.083	0.25
1,2-Dibromo-3-Chloropropane	U	0.25	ug/L	1	.5	0.50	0.080	0.25
1,2,4-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
Naphthalene	ULL	0.50	ug/L	1	1	1.0	0.14	0.50
Hexachlorobutadiene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2,3-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.13	0.50
Methyl tert-butyl Ether	U	0.25	ug/L	1	1	1.0	0.097	0.25
p-Bromofluorobenzene		66.1	%					
1,2-Dichlorobenzene-D4		76.6	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-4
Client ID: DW-02R-EFF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3330.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	0.50	ug/L	1	1	1.0	0.10	0.50
Chloromethane	J	0.12	ug/L	1	1	1.0	0.077	0.50
Vinyl Chloride	U	0.50	ug/L	1	1	1.0	0.083	0.50
Bromomethane	U	0.50	ug/L	1	1	1.0	0.13	0.50
Chloroethane	UL	0.50	ug/L	1	1	1.0	0.085	0.50
Trichlorofluoromethane	U	0.25	ug/L	1	.5	0.50	0.072	0.25
1,1-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.084	0.25
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	J	0.67	ug/L	1	2.5	2.5	0.62	1.2
Acetone	UL	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.076	0.25
1,1-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.049	0.25
cis-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
2,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.14	0.25
Chloroform	U	0.25	ug/L	1	.5	0.50	0.047	0.25
Bromochloromethane	U	0.25	ug/L	1	.5	0.50	0.087	0.25
1,1,1-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.058	0.25
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.10	0.25
1,1-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.054	0.25
Carbon Tetrachloride	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Benzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
1,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.066	0.25
Trichloroethene	U	0.25	ug/L	1	.5	0.50	0.044	0.25
Dibromomethane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Bromodichloromethane	U	0.25	ug/L	1	.5	0.50	0.061	0.25
cis-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
Toluene	U	0.25	ug/L	1	1	1.0	0.061	0.25
trans-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.12	0.25
1,1,2-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.13	0.25
1,3-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Dibromochloromethane	U	0.25	ug/L	1	.5	0.50	0.092	0.25
Tetrachloroethene	U	0.25	ug/L	1	.5	0.50	0.073	0.25
4-Methyl-2-Pentanone	UL	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dibromoethane	U	0.25	ug/L	1	.5	0.50	0.090	0.25

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-4
Client ID: DW-02R-EFF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3330.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
2-Hexanone	ULL	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.25	ug/L	1	.5	0.50	0.057	0.25
1,1,1,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Ethylbenzene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
m+p-Xylenes	U	0.25	ug/L	1	1	1.0	0.098	0.25
Bromoform	U	0.25	ug/L	1	.5	0.50	0.055	0.25
o-Xylene	U	0.25	ug/L	1	.5	0.50	0.043	0.25
Styrene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,1,2,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.11	0.25
1,2,3-Trichloropropane	U	0.25	ug/L	1	.5	0.50	0.099	0.25
Isopropylbenzene	U	0.25	ug/L	1	.5	0.50	0.059	0.25
Bromobenzene	U	0.25	ug/L	1	.5	0.50	0.066	0.25
2-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
N-Propylbenzene	U	0.25	ug/L	1	.5	0.50	0.063	0.25
4-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.077	0.25
1,3,5-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
1,2,4-Trichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.10	0.25
sec-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.085	0.25
1,3-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.049	0.25
p-Isopropyltoluene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,4-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.065	0.25
N-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.083	0.25
1,2-Dibromo-3-Chloropropane	U	0.25	ug/L	1	.5	0.50	0.080	0.25
1,2,4-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
Naphthalene	ULL	0.50	ug/L	1	1	1.0	0.14	0.50
Hexachlorobutadiene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2,3-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.13	0.50
Methyl tert-butyl Ether	U	0.25	ug/L	1	1	1.0	0.097	0.25
p-Bromofluorobenzene		65.6	%					
1,2-Dichlorobenzene-D4		77.1	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-5
Client ID: DW-02R-INF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3331.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	0.50	ug/L	1	1	1.0	0.10	0.50
Chloromethane	J	0.12	ug/L	1	1	1.0	0.077	0.50
Vinyl Chloride	U	0.50	ug/L	1	1	1.0	0.083	0.50
Bromomethane	U	0.50	ug/L	1	1	1.0	0.13	0.50
Chloroethane	UL	0.50	ug/L	1	1	1.0	0.085	0.50
Trichlorofluoromethane	U	0.25	ug/L	1	.5	0.50	0.072	0.25
1,1-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.084	0.25
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	J	0.64	ug/L	1	2.5	2.5	0.62	1.2
Acetone	UL	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.076	0.25
1,1-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.049	0.25
cis-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
2,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.14	0.25
Chloroform	U	0.25	ug/L	1	.5	0.50	0.047	0.25
Bromochloromethane	U	0.25	ug/L	1	.5	0.50	0.087	0.25
1,1,1-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.058	0.25
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.10	0.25
1,1-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.054	0.25
Carbon Tetrachloride	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Benzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
1,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.066	0.25
Trichloroethene	U	0.25	ug/L	1	.5	0.50	0.044	0.25
Dibromomethane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Bromodichloromethane	U	0.25	ug/L	1	.5	0.50	0.061	0.25
cis-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
Toluene	U	0.25	ug/L	1	1	1.0	0.061	0.25
trans-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.12	0.25
1,1,2-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.13	0.25
1,3-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Dibromochloromethane	U	0.25	ug/L	1	.5	0.50	0.092	0.25
Tetrachloroethene	U	0.25	ug/L	1	.5	0.50	0.073	0.25
4-Methyl-2-Pentanone	UL	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dibromoethane	U	0.25	ug/L	1	.5	0.50	0.090	0.25

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-5
Client ID: DW-02R-INF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3331.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
2-Hexanone	ULL	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.25	ug/L	1	.5	0.50	0.057	0.25
1,1,1,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Ethylbenzene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
m+p-Xylenes	U	0.25	ug/L	1	1	1.0	0.098	0.25
Bromoform	U	0.25	ug/L	1	.5	0.50	0.055	0.25
o-Xylene	U	0.25	ug/L	1	.5	0.50	0.043	0.25
Styrene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,1,2,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.11	0.25
1,2,3-Trichloropropane	U	0.25	ug/L	1	.5	0.50	0.099	0.25
Isopropylbenzene	U	0.25	ug/L	1	.5	0.50	0.059	0.25
Bromobenzene	U	0.25	ug/L	1	.5	0.50	0.066	0.25
2-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
N-Propylbenzene	U	0.25	ug/L	1	.5	0.50	0.063	0.25
4-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.077	0.25
1,3,5-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
1,2,4-Trichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.10	0.25
sec-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.085	0.25
1,3-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.049	0.25
p-Isopropyltoluene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,4-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.065	0.25
N-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.083	0.25
1,2-Dibromo-3-Chloropropane	U	0.25	ug/L	1	.5	0.50	0.080	0.25
1,2,4-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
Naphthalene	ULL	0.50	ug/L	1	1	1.0	0.14	0.50
Hexachlorobutadiene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2,3-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.13	0.50
Methyl tert-butyl Ether	U	0.25	ug/L	1	1	1.0	0.097	0.25
p-Bromofluorobenzene		66.4	%					
1,2-Dichlorobenzene-D4		74.3	%					

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-6
Client ID: DW-FD-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3332.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	0.50	ug/L	1	1	1.0	0.10	0.50
Chloromethane	J	0.29	ug/L	1	1	1.0	0.077	0.50
Vinyl Chloride	U	0.50	ug/L	1	1	1.0	0.083	0.50
Bromomethane	U	0.50	ug/L	1	1	1.0	0.13	0.50
Chloroethane	UL	0.50	ug/L	1	1	1.0	0.085	0.50
Trichlorofluoromethane	U	0.25	ug/L	1	.5	0.50	0.072	0.25
1,1-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.084	0.25
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	J	1.1	ug/L	1	2.5	2.5	0.62	1.2
Acetone	UL	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.076	0.25
1,1-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.049	0.25
cis-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
2,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.14	0.25
Chloroform	U	0.25	ug/L	1	.5	0.50	0.047	0.25
Bromochloromethane	U	0.25	ug/L	1	.5	0.50	0.087	0.25
1,1,1-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.058	0.25
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.10	0.25
1,1-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.054	0.25
Carbon Tetrachloride	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Benzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
1,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.066	0.25
Trichloroethene	U	0.25	ug/L	1	.5	0.50	0.044	0.25
Dibromomethane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Bromodichloromethane	U	0.25	ug/L	1	.5	0.50	0.061	0.25
cis-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
Toluene	U	0.25	ug/L	1	1	1.0	0.061	0.25
trans-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.12	0.25
1,1,2-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.13	0.25
1,3-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Dibromochloromethane	U	0.25	ug/L	1	.5	0.50	0.092	0.25
Tetrachloroethene	U	0.25	ug/L	1	.5	0.50	0.073	0.25
4-Methyl-2-Pentanone	UL	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dibromoethane	U	0.25	ug/L	1	.5	0.50	0.090	0.25

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-6
Client ID: DW-FD-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3332.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
2-Hexanone	ULL	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.25	ug/L	1	.5	0.50	0.057	0.25
1,1,1,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Ethylbenzene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
m+p-Xylenes	U	0.25	ug/L	1	1	1.0	0.098	0.25
Bromoform	U	0.25	ug/L	1	.5	0.50	0.055	0.25
o-Xylene	U	0.25	ug/L	1	.5	0.50	0.043	0.25
Styrene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,1,2,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.11	0.25
1,2,3-Trichloropropane	U	0.25	ug/L	1	.5	0.50	0.099	0.25
Isopropylbenzene	U	0.25	ug/L	1	.5	0.50	0.059	0.25
Bromobenzene	U	0.25	ug/L	1	.5	0.50	0.066	0.25
2-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
N-Propylbenzene	U	0.25	ug/L	1	.5	0.50	0.063	0.25
4-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.077	0.25
1,3,5-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
1,2,4-Trichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.10	0.25
sec-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.085	0.25
1,3-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.049	0.25
p-Isopropyltoluene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,4-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.065	0.25
N-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.083	0.25
1,2-Dibromo-3-Chloropropane	U	0.25	ug/L	1	.5	0.50	0.080	0.25
1,2,4-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
Naphthalene	ULL	0.50	ug/L	1	1	1.0	0.14	0.50
Hexachlorobutadiene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2,3-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.13	0.50
Methyl tert-butyl Ether	U	0.25	ug/L	1	1	1.0	0.097	0.25
p-Bromofluorobenzene		65.2	%					
1,2-Dichlorobenzene-D4		74.3	%					

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-7
Client ID: DW-TB-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3327.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	0.50	ug/L	1	1	1.0	0.10	0.50
Chloromethane	J	0.13	ug/L	1	1	1.0	0.077	0.50
Vinyl Chloride	U	0.50	ug/L	1	1	1.0	0.083	0.50
Bromomethane	U	0.50	ug/L	1	1	1.0	0.13	0.50
Chloroethane	UL	0.50	ug/L	1	1	1.0	0.085	0.50
Trichlorofluoromethane	U	0.25	ug/L	1	.5	0.50	0.072	0.25
1,1-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.084	0.25
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride		8.6	ug/L	1	2.5	2.5	0.62	1.2
Acetone	UL	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.076	0.25
1,1-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.049	0.25
cis-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
2,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.14	0.25
Chloroform	U	0.25	ug/L	1	.5	0.50	0.047	0.25
Bromochloromethane	U	0.25	ug/L	1	.5	0.50	0.087	0.25
1,1,1-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.058	0.25
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.10	0.25
1,1-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.054	0.25
Carbon Tetrachloride	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Benzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
1,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.066	0.25
Trichloroethene	U	0.25	ug/L	1	.5	0.50	0.044	0.25
Dibromomethane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Bromodichloromethane	U	0.25	ug/L	1	.5	0.50	0.061	0.25
cis-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
Toluene	U	0.25	ug/L	1	1	1.0	0.061	0.25
trans-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.12	0.25
1,1,2-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.13	0.25
1,3-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Dibromochloromethane	U	0.25	ug/L	1	.5	0.50	0.092	0.25
Tetrachloroethene	U	0.25	ug/L	1	.5	0.50	0.073	0.25
4-Methyl-2-Pentanone	UL	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dibromoethane	U	0.25	ug/L	1	.5	0.50	0.090	0.25

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-7
Client ID: DW-TB-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3327.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
2-Hexanone	ULL	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.25	ug/L	1	.5	0.50	0.057	0.25
1,1,1,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Ethylbenzene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
m+p-Xylenes	U	0.25	ug/L	1	1	1.0	0.098	0.25
Bromoform	U	0.25	ug/L	1	.5	0.50	0.055	0.25
o-Xylene	U	0.25	ug/L	1	.5	0.50	0.043	0.25
Styrene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,1,2,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.11	0.25
1,2,3-Trichloropropane	U	0.25	ug/L	1	.5	0.50	0.099	0.25
Isopropylbenzene	U	0.25	ug/L	1	.5	0.50	0.059	0.25
Bromobenzene	U	0.25	ug/L	1	.5	0.50	0.066	0.25
2-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
N-Propylbenzene	U	0.25	ug/L	1	.5	0.50	0.063	0.25
4-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.077	0.25
1,3,5-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
1,2,4-Trichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.10	0.25
sec-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.085	0.25
1,3-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.049	0.25
p-Isopropyltoluene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,4-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.065	0.25
N-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.083	0.25
1,2-Dibromo-3-Chloropropane	U	0.25	ug/L	1	.5	0.50	0.080	0.25
1,2,4-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
Naphthalene	ULL	0.50	ug/L	1	1	1.0	0.14	0.50
Hexachlorobutadiene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2,3-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.13	0.50
Methyl tert-butyl Ether	U	0.25	ug/L	1	1	1.0	0.097	0.25
p-Bromofluorobenzene		70.4	%					
1,2-Dichlorobenzene-D4		76.4	%					

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-1
Client ID: DW-01-EFF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: N3636.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 29-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 02-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.093	ug/L	1	.2	0.19	0.060	0.093
2-Methylnaphthalene	U	0.093	ug/L	1	.2	0.19	0.072	0.093
1-Methylnaphthalene	U	0.093	ug/L	1	.2	0.19	0.064	0.093
Acenaphthylene	U	0.093	ug/L	1	.2	0.19	0.050	0.093
Acenaphthene	U	0.093	ug/L	1	.2	0.19	0.060	0.093
Fluorene	U	0.093	ug/L	1	.2	0.19	0.057	0.093
Phenanthrene	U	0.093	ug/L	1	.2	0.19	0.048	0.093
Anthracene	U	0.093	ug/L	1	.2	0.19	0.041	0.093
Fluoranthene	U	0.093	ug/L	1	.2	0.19	0.068	0.093
Pyrene	U	0.093	ug/L	1	.2	0.19	0.055	0.093
Benzo(a)anthracene	U	0.093	ug/L	1	.2	0.19	0.043	0.093
Chrysene	U	0.093	ug/L	1	.2	0.19	0.034	0.093
Benzo(b)Fluoranthene	U	0.093	ug/L	1	.2	0.19	0.083	0.093
Benzo(k)fluoranthene	U	0.093	ug/L	1	.2	0.19	0.046	0.093
Benzo(a)pyrene	U	0.093	ug/L	1	.2	0.19	0.062	0.093
Indeno(1,2,3-cd)pyrene	U	0.093	ug/L	1	.2	0.19	0.048	0.093
Dibenzo(a,h)anthracene	U	0.093	ug/L	1	.2	0.19	0.065	0.093
Benzo(g,h,i)perylene	U	0.093	ug/L	1	.2	0.19	0.061	0.093
2-Methylnaphthalene-D10		63.0	%					
Fluorene-D10		58.9	%					
Pyrene-D10		81.4	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-2
Client ID: DW-01-INF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: N3643.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 29-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 02-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.093	ug/L	1	.2	0.19	0.060	0.093
2-Methylnaphthalene	U	0.093	ug/L	1	.2	0.19	0.072	0.093
1-Methylnaphthalene	U	0.093	ug/L	1	.2	0.19	0.064	0.093
Acenaphthylene	U	0.093	ug/L	1	.2	0.19	0.050	0.093
Acenaphthene	U	0.093	ug/L	1	.2	0.19	0.060	0.093
Fluorene	U	0.093	ug/L	1	.2	0.19	0.057	0.093
Phenanthrene	U	0.093	ug/L	1	.2	0.19	0.048	0.093
Anthracene	U	0.093	ug/L	1	.2	0.19	0.041	0.093
Fluoranthene	U	0.093	ug/L	1	.2	0.19	0.068	0.093
Pyrene	U	0.093	ug/L	1	.2	0.19	0.055	0.093
Benzo(a)anthracene	U	0.093	ug/L	1	.2	0.19	0.043	0.093
Chrysene	U	0.093	ug/L	1	.2	0.19	0.034	0.093
Benzo(b)Fluoranthene	U	0.093	ug/L	1	.2	0.19	0.083	0.093
Benzo(k)fluoranthene	U	0.093	ug/L	1	.2	0.19	0.046	0.093
Benzo(a)pyrene	U	0.093	ug/L	1	.2	0.19	0.062	0.093
Indeno(1,2,3-cd)pyrene	U	0.093	ug/L	1	.2	0.19	0.048	0.093
Dibenzo(a,h)anthracene	U	0.093	ug/L	1	.2	0.19	0.065	0.093
Benzo(g,h,i)perylene	U	0.093	ug/L	1	.2	0.19	0.061	0.093
2-Methylnaphthalene-D10		72.4	%					
Fluorene-D10		73.5	%					
Pyrene-D10		87.2	%					

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-3
Client ID: DW-01-MID-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: N3637.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 29-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 02-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.093	ug/L	1	.2	0.19	0.060	0.093
2-Methylnaphthalene	U	0.093	ug/L	1	.2	0.19	0.072	0.093
1-Methylnaphthalene	U	0.093	ug/L	1	.2	0.19	0.064	0.093
Acenaphthylene	U	0.093	ug/L	1	.2	0.19	0.050	0.093
Acenaphthene	U	0.093	ug/L	1	.2	0.19	0.060	0.093
Fluorene	U	0.093	ug/L	1	.2	0.19	0.057	0.093
Phenanthrene	U	0.093	ug/L	1	.2	0.19	0.048	0.093
Anthracene	U	0.093	ug/L	1	.2	0.19	0.041	0.093
Fluoranthene	U	0.093	ug/L	1	.2	0.19	0.068	0.093
Pyrene	U	0.093	ug/L	1	.2	0.19	0.055	0.093
Benzo(a)anthracene	U	0.093	ug/L	1	.2	0.19	0.043	0.093
Chrysene	U	0.093	ug/L	1	.2	0.19	0.034	0.093
Benzo(b)Fluoranthene	U	0.093	ug/L	1	.2	0.19	0.083	0.093
Benzo(k)fluoranthene	U	0.093	ug/L	1	.2	0.19	0.046	0.093
Benzo(a)pyrene	U	0.093	ug/L	1	.2	0.19	0.062	0.093
Indeno(1,2,3-cd)pyrene	U	0.093	ug/L	1	.2	0.19	0.048	0.093
Dibenzo(a,h)anthracene	U	0.093	ug/L	1	.2	0.19	0.065	0.093
Benzo(g,h,i)perylene	U	0.093	ug/L	1	.2	0.19	0.061	0.093
2-Methylnaphthalene-D10		64.1	%					
Fluorene-D10		61.1	%					
Pyrene-D10		87.7	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-4
Client ID: DW-02R-EFF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: N3646.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 29-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 02-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.096	ug/L	1	.2	0.19	0.062	0.096
2-Methylnaphthalene	U	0.096	ug/L	1	.2	0.19	0.074	0.096
1-Methylnaphthalene	U	0.096	ug/L	1	.2	0.19	0.065	0.096
Acenaphthylene	U	0.096	ug/L	1	.2	0.19	0.052	0.096
Acenaphthene	U	0.096	ug/L	1	.2	0.19	0.062	0.096
Fluorene	U	0.096	ug/L	1	.2	0.19	0.059	0.096
Phenanthrene	U	0.096	ug/L	1	.2	0.19	0.049	0.096
Anthracene	U	0.096	ug/L	1	.2	0.19	0.042	0.096
Fluoranthene	U	0.096	ug/L	1	.2	0.19	0.070	0.096
Pyrene	U	0.096	ug/L	1	.2	0.19	0.057	0.096
Benzo(a)anthracene	U	0.096	ug/L	1	.2	0.19	0.044	0.096
Chrysene	U	0.096	ug/L	1	.2	0.19	0.035	0.096
Benzo(b)Fluoranthene	U	0.096	ug/L	1	.2	0.19	0.086	0.096
Benzo(k)fluoranthene	U	0.096	ug/L	1	.2	0.19	0.047	0.096
Benzo(a)pyrene	U	0.096	ug/L	1	.2	0.19	0.063	0.096
Indeno(1,2,3-cd)pyrene	U	0.096	ug/L	1	.2	0.19	0.050	0.096
Dibenzo(a,h)anthracene	U	0.096	ug/L	1	.2	0.19	0.067	0.096
Benzo(g,h,i)perylene	U	0.096	ug/L	1	.2	0.19	0.062	0.096
2-Methylnaphthalene-D10		70.6	%					
Fluorene-D10		71.1	%					
Pyrene-D10		83.4	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-5
Client ID: DW-02R-INF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: N3647.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 29-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 02-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.095	ug/L	1	.2	0.19	0.061	0.095
2-Methylnaphthalene	U	0.095	ug/L	1	.2	0.19	0.073	0.095
1-Methylnaphthalene	U	0.095	ug/L	1	.2	0.19	0.065	0.095
Acenaphthylene	U	0.095	ug/L	1	.2	0.19	0.051	0.095
Acenaphthene	U	0.095	ug/L	1	.2	0.19	0.061	0.095
Fluorene	U	0.095	ug/L	1	.2	0.19	0.058	0.095
Phenanthrene	U	0.095	ug/L	1	.2	0.19	0.048	0.095
Anthracene	U	0.095	ug/L	1	.2	0.19	0.042	0.095
Fluoranthene	U	0.095	ug/L	1	.2	0.19	0.070	0.095
Pyrene	U	0.095	ug/L	1	.2	0.19	0.056	0.095
Benzo(a)anthracene	U	0.095	ug/L	1	.2	0.19	0.044	0.095
Chrysene	U	0.095	ug/L	1	.2	0.19	0.034	0.095
Benzo(b)Fluoranthene	U	0.095	ug/L	1	.2	0.19	0.085	0.095
Benzo(k)fluoranthene	U	0.095	ug/L	1	.2	0.19	0.047	0.095
Benzo(a)pyrene	U	0.095	ug/L	1	.2	0.19	0.063	0.095
Indeno(1,2,3-cd)pyrene	U	0.095	ug/L	1	.2	0.19	0.050	0.095
Dibenzo(a,h)anthracene	U	0.095	ug/L	1	.2	0.19	0.067	0.095
Benzo(g,h,i)perylene	U	0.095	ug/L	1	.2	0.19	0.062	0.095
2-Methylnaphthalene-D10		76.1	%					
Fluorene-D10		75.8	%					
Pyrene-D10		87.2	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-6
Client ID: DW-FD-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: N3648.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 29-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 02-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.095	ug/L	1	.2	0.19	0.061	0.095
2-Methylnaphthalene	U	0.095	ug/L	1	.2	0.19	0.073	0.095
1-Methylnaphthalene	U	0.095	ug/L	1	.2	0.19	0.065	0.095
Acenaphthylene	U	0.095	ug/L	1	.2	0.19	0.051	0.095
Acenaphthene	U	0.095	ug/L	1	.2	0.19	0.061	0.095
Fluorene	U	0.095	ug/L	1	.2	0.19	0.058	0.095
Phenanthrene	U	0.095	ug/L	1	.2	0.19	0.048	0.095
Anthracene	U	0.095	ug/L	1	.2	0.19	0.042	0.095
Fluoranthene	U	0.095	ug/L	1	.2	0.19	0.070	0.095
Pyrene	U	0.095	ug/L	1	.2	0.19	0.056	0.095
Benzo(a)anthracene	U	0.095	ug/L	1	.2	0.19	0.044	0.095
Chrysene	U	0.095	ug/L	1	.2	0.19	0.034	0.095
Benzo(b)Fluoranthene	U	0.095	ug/L	1	.2	0.19	0.085	0.095
Benzo(k)fluoranthene	U	0.095	ug/L	1	.2	0.19	0.047	0.095
Benzo(a)pyrene	U	0.095	ug/L	1	.2	0.19	0.063	0.095
Indeno(1,2,3-cd)pyrene	U	0.095	ug/L	1	.2	0.19	0.050	0.095
Dibenzo(a,h)anthracene	U	0.095	ug/L	1	.2	0.19	0.067	0.095
Benzo(g,h,i)perylene	U	0.095	ug/L	1	.2	0.19	0.062	0.095
2-Methylnaphthalene-D10		68.3	%					
Fluorene-D10		66.1	%					
Pyrene-D10		68.4	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-1
Client ID: DW-01-EFF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: 2OG10075.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		94.3	%					
2,5-Dibromotoluene (PID)		84.7	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-2
Client ID: DW-01-INF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: 2OG10076.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		93.0	%					
2,5-Dibromotoluene (PID)		82.8	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-3
Client ID: DW-01-MID-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: 2OG10077.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		100.	%					
2,5-Dibromotoluene (PID)		88.5	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-4
Client ID: DW-02R-EFF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: 2OG10078.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		104.	%					
2,5-Dibromotoluene (PID)		92.1	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-5
Client ID: DW-02R-INF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: 2OG10079.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		98.7	%					
2,5-Dibromotoluene (PID)		87.2	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-6
Client ID: DW-FD-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: 2OG10080.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		96.8	%					
2,5-Dibromotoluene (PID)		86.6	%					

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-7
Client ID: DW-TB-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: 2OG10066.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		92.5	%					
2,5-Dibromotoluene (PID)		83.8	%					

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INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DW-01-EFF-SUMMER2021

Matrix: WATER **SDG Name:** SO4724

Percent Solids: 0.00 **Lab Sample ID:** SO4724-001

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-36-0	ANTIMONY, TOTAL	0.50	U		MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	2.3	4.0
7440-41-7	BERYLLIUM, TOTAL	0.037	J		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.039	J		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	83800			MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	0.82	J		MS	5	5.0	0.22	4.0
7440-50-8	COPPER, TOTAL	13.7		B	MS	5	3.0	0.19	2.0
7439-92-1	LEAD, TOTAL	0.72	J		MS	5	1.0	0.075	0.50
7439-96-5	MANGANESE, TOTAL	0.89	J		MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	4.64			MS	5	2.0	0.15	1.2
7782-49-2	SELENIUM, TOTAL	3.0	U		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	1.0	0.060	0.40
7440-66-6	ZINC, TOTAL	35			MS	5	10	3.9	8.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DW-01-INF-SUMMER2021

Matrix: WATER **SDG Name:** SO4724

Percent Solids: 0.00 **Lab Sample ID:** SO4724-002

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-36-0	ANTIMONY, TOTAL	0.063	J		MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	2.3	4.0
7440-41-7	BERYLLIUM, TOTAL	0.20	U		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.20	U		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	88500		NA	MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	1.3	J		MS	5	5.0	0.22	4.0
7440-50-8	COPPER, TOTAL	7.84		B	MS	5	3.0	0.19	2.0
7439-92-1	LEAD, TOTAL	0.34	J		MS	5	1.0	0.075	0.50
7439-96-5	MANGANESE, TOTAL	0.81	J		MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	1.2	J		MS	5	2.0	0.15	1.2
7782-49-2	SELENIUM, TOTAL	3.0	U		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	1.0	0.060	0.40
7440-66-6	ZINC, TOTAL	6.0	J		MS	5	10	3.9	8.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DW-01-MID-SUMMER2021

Matrix: WATER **SDG Name:** SO4724

Percent Solids: 0.00 **Lab Sample ID:** SO4724-003

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-36-0	ANTIMONY, TOTAL	0.17	J		MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	2.3	4.0
7440-41-7	BERYLLIUM, TOTAL	0.12	J		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.083	J		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	89300			MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	0.76	J		MS	5	5.0	0.22	4.0
7440-50-8	COPPER, TOTAL	11.8		B	MS	5	3.0	0.19	2.0
7439-92-1	LEAD, TOTAL	0.72	J		MS	5	1.0	0.075	0.50
7439-96-5	MANGANESE, TOTAL	0.71	J		MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	2.18			MS	5	2.0	0.15	1.2
7782-49-2	SELENIUM, TOTAL	0.30	J		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-28-0	THALLIUM, TOTAL	0.14	J		MS	5	1.0	0.060	0.40
7440-66-6	ZINC, TOTAL	35			MS	5	10	3.9	8.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DW-02R-EFF-SUMMER2021

Matrix: WATER **SDG Name:** SO4724

Percent Solids: 0.00 **Lab Sample ID:** SO4724-004

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-36-0	ANTIMONY, TOTAL	0.094	J		MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	2.3	4.0
7440-41-7	BERYLLIUM, TOTAL	0.20	U		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.20	U		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	59600			MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	0.81	J		MS	5	5.0	0.22	4.0
7440-50-8	COPPER, TOTAL	21.4		B	MS	5	3.0	0.19	2.0
7439-92-1	LEAD, TOTAL	0.43	J		MS	5	1.0	0.075	0.50
7439-96-5	MANGANESE, TOTAL	0.70	J		MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	0.95	J		MS	5	2.0	0.15	1.2
7782-49-2	SELENIUM, TOTAL	3.0	U		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	1.0	0.060	0.40
7440-66-6	ZINC, TOTAL	21			MS	5	10	3.9	8.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DW-02R-INF-SUMMER2021

Matrix: WATER **SDG Name:** SO4724

Percent Solids: 0.00 **Lab Sample ID:** SO4724-005

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-36-0	ANTIMONY, TOTAL	0.077	J		MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	2.3	4.0
7440-41-7	BERYLLIUM, TOTAL	0.038	J		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.037	J		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	59600			MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	0.89	J		MS	5	5.0	0.22	4.0
7440-50-8	COPPER, TOTAL	12.2		B	MS	5	3.0	0.19	2.0
7439-92-1	LEAD, TOTAL	0.60	J		MS	5	1.0	0.075	0.50
7439-96-5	MANGANESE, TOTAL	1.3	J		MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	1.3	J		MS	5	2.0	0.15	1.2
7782-49-2	SELENIUM, TOTAL	3.0	U		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	1.0	0.060	0.40
7440-66-6	ZINC, TOTAL	7.6	J		MS	5	10	3.9	8.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DW-FD-SUMMER2021

Matrix: WATER **SDG Name:** SO4724

Percent Solids: 0.00 **Lab Sample ID:** SO4724-006

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-36-0	ANTIMONY, TOTAL	0.076	J		MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	2.3	4.0
7440-41-7	BERYLLIUM, TOTAL	0.053	J		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.046	J		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	58400			MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	0.88	J		MS	5	5.0	0.22	4.0
7440-50-8	COPPER, TOTAL	18.5		B	MS	5	3.0	0.19	2.0
7439-92-1	LEAD, TOTAL	2.48			MS	5	1.0	0.075	0.50
7439-96-5	MANGANESE, TOTAL	1.0	J		MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	2.98			MS	5	2.0	0.15	1.2
7782-49-2	SELENIUM, TOTAL	0.22	J		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	1.0	0.060	0.40
7440-66-6	ZINC, TOTAL	19			MS	5	10	3.9	8.0

Comments:

VOLATILES DATA
BY EPA METHOD 524.2

QC Summary Section

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** LO-58 Nike Missile Battery Launch Site **Matrix:** AQ
Lab Code: KAS **SDG:** SO4724

Client Sample ID	Lab Sample ID	Col. ID	BFB	#	DCZ	#
DW-01-EFF-SUMMER202	SO4724-1		67.6		78.0	
DW-01-INF-SUMMER202	SO4724-2		68.2		78.7	
DW-01-MID-SUMMER202	SO4724-3		66.1		76.6	
DW-02R-EFF-SUMMER20	SO4724-4		65.6		77.1	
DW-02R-INF-SUMMER20	SO4724-5		66.4		74.3	
DW-FD-SUMMER2021	SO4724-6		65.2		74.3	
DW-TB-SUMMER2021	SO4724-7		70.4		76.4	
Laboratory Control S	WG303440-1		99.9		100.	
Method Blank	WG303440-2		69.2		77.3	
Laboratory Control S	WG303440-5		98.7		99.8	
Matrix Spike	WG303440-6		102.		106.	
Matrix Spike Duplica	WG303440-7		101.		103.	

		QC Limits
BFB	P-BROMOFLUOROBENZENE	60-121
DCZ	1,2-DICHLOROBENZENE-D4	51-133

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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Form 4
Method Blank Summary - VOA

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site
Lab File ID : D3326.D
Instrument ID : GCMS-D
Heated Purge : No

SDG : SO4724
Lab Sample ID : WG303440-2
Date Analyzed : 30-JUL-21
Time Analyzed : 11:04

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG303440-1	D3323.D	07/30/21	09:07
Laboratory Control S	WG303440-5	D3324.D	07/30/21	09:46
DW-TB-SUMMER2021	SO4724-7	D3327.D	07/30/21	11:43
DW-01-EFF-SUMMER2021	SO4724-1	D3328.D	07/30/21	12:22
DW-01-MID-SUMMER2021	SO4724-3	D3329.D	07/30/21	13:01
DW-02R-EFF-SUMMER2021	SO4724-4	D3330.D	07/30/21	13:41
DW-02R-INF-SUMMER2021	SO4724-5	D3331.D	07/30/21	14:20
DW-FD-SUMMER2021	SO4724-6	D3332.D	07/30/21	14:59
DW-01-INF-SUMMER2021	SO4724-2	D3333.D	07/30/21	15:38
Matrix Spike	WG303440-6	D3334.D	07/30/21	16:17
Matrix Spike Duplica	WG303440-7	D3335.D	07/30/21	16:56

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Form 5
Volatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site
Lab File ID : DB911A.D
Instrument ID : GCMS-D

SDG : SO4724
Date Analyzed : 29-JUL-21
Time Analyzed : 07:23
Heated Purge : No

m/e	Ion Abundance Criteria	% Relative Abundance		
50	15.0 - 40.0% of mass 95	17.1		
75	30.0 - 60.0% of mass 95	47.5		
95	Base Peak, 100% relative abundance	100		
96	5.0 - 9.0% of mass 95	7.4		
173	Less than 2.0% of mass 174	0.5	0.67	1
174	Greater than 50.0% of mass 95	81.9		
175	5.0 - 9.0% of mass 174	6.3	7.65	1
176	95.0 - 101.0% of mass 174	78.9	96.32	1
177	5.0 - 9.0% of mass 176	5.4	6.78	2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Initial Calibration	WG303293-3	D3306.D	07/29/21	08:32
Initial Calibration	WG303293-7	D3309.D	07/29/21	10:29
Initial Calibration	WG303293-6	D3310.D	07/29/21	11:08
Initial Calibration	WG303293-5	D3311.D	07/29/21	11:48
Initial Calibration	WG303293-2	D3313.D	07/29/21	13:06
Initial Calibration	WG303293-1	D3314.D	07/29/21	13:45
Initial Calibration	WG303293-4	D3315.D	07/29/21	14:24

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Form 5
Volatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site
Lab File ID : DB912A.D
Instrument ID : GCMS-D

SDG : SO4724
Date Analyzed : 30-JUL-21
Time Analyzed : 07:15
Heated Purge : No

m/e	Ion Abundance Criteria	% Relative Abundance		
50	15.0 - 40.0% of mass 95	17.0		
75	30.0 - 60.0% of mass 95	48.5		
95	Base Peak, 100% relative abundance	100		
96	5.0 - 9.0% of mass 95	8.0		
173	Less than 2.0% of mass 174	0.5	0.63	1
174	Greater than 50.0% of mass 95	80.8		
175	5.0 - 9.0% of mass 174	5.7	7.02	1
176	95.0 - 101.0% of mass 174	77.7	96.16	1
177	5.0 - 9.0% of mass 176	5.1	6.51	2

1-Value is % mass 174 2-Value is % mass 176

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Continuing Calibrati	WG303440-4	D3322.D	07/30/21	08:28
Laboratory Control S	WG303440-1	D3323.D	07/30/21	09:07
Independent Source	WG303440-8	D3323A.D	07/30/21	09:07
Laboratory Control S	WG303440-5	D3324.D	07/30/21	09:46
Method Blank	WG303440-2	D3326.D	07/30/21	11:04
DW-TB-SUMMER2021	SO4724-7	D3327.D	07/30/21	11:43
DW-01-EFF-SUMMER2021	SO4724-1	D3328.D	07/30/21	12:22
DW-01-MID-SUMMER2021	SO4724-3	D3329.D	07/30/21	13:01
DW-02R-EFF-SUMMER2021	SO4724-4	D3330.D	07/30/21	13:41
DW-02R-INF-SUMMER2021	SO4724-5	D3331.D	07/30/21	14:20
DW-FD-SUMMER2021	SO4724-6	D3332.D	07/30/21	14:59
DW-01-INF-SUMMER2021	SO4724-2	D3333.D	07/30/21	15:38
Matrix Spike	WG303440-6	D3334.D	07/30/21	16:17
Matrix Spike Duplica	WG303440-7	D3335.D	07/30/21	16:56
Continuing Calibrati	WG303440-9	D3336.D	07/30/21	17:35

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Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Lau
Lab ID : WG303293-4
Lab File ID : D3315.d

SDG: SO4724
Analytical Date: 07/29/21 14:24
Instrument ID: GCMS-D

		FLUOROBENZENE			
		Area	#	RT	#
	Std .	633772		6.10	
	Upper Limit	1267544		6.27	
	Lower Limit	316886		5.94	
Client Sample ID	Lab Sample ID				
Continuing Calibrati	WG303440-4	621571		6.10	
Laboratory Control S	WG303440-1	662270		6.10	
Laboratory Control S	WG303440-5	663500		6.10	
Method Blank	WG303440-2	523543		6.10	
DW-TB-SUMMER202	SO4724-7	530166		6.11	
DW-01-EFF-SUMMEF	SO4724-1	484112		6.10	
DW-01-MID-SUMMEI	SO4724-3	466882		6.10	
DW-02R-EFF-SUMMI	SO4724-4	462271		6.10	
DW-02R-INF-SUMME	SO4724-5	469099		6.10	
DW-FD-SUMMER202	SO4724-6	459257		6.10	
DW-01-INF-SUMMER	SO4724-2	465622		6.10	
Matrix Spike	WG303440-6	590445		6.10	
Matrix Spike Duplica	WG303440-7	623727		6.10	
Continuing Calibrati	WG303440-9	615049		6.10	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Sample Data Section

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

* Compound recovery or percent RPD (relative percent difference) was outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

C Indicates that the flagged compound did not meet DoD criteria in the corresponding daily calibration verification (CV).

L Indicates that the flagged compound did not meet DoD criteria in the corresponding Laboratory Control Sample (LCS) and/or Laboratory Control Sample Duplicate (LCSD) prepared and/or analyzed concurrently with the sample.

M Indicates that the flagged compound did not meet DoD criteria in the Matrix Spike and/or Matrix Spike Duplicate prepared and/or analyzed concurrently with the native sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

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Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-1
Client ID: DW-01-EFF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3328.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	0.50	ug/L	1	1	1.0	0.10	0.50
Chloromethane	J	0.18	ug/L	1	1	1.0	0.077	0.50
Vinyl Chloride	U	0.50	ug/L	1	1	1.0	0.083	0.50
Bromomethane	U	0.50	ug/L	1	1	1.0	0.13	0.50
Chloroethane	UL	0.50	ug/L	1	1	1.0	0.085	0.50
Trichlorofluoromethane	U	0.25	ug/L	1	.5	0.50	0.072	0.25
1,1-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.084	0.25
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	J	0.66	ug/L	1	2.5	2.5	0.62	1.2
Acetone	JL	2.4	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.076	0.25
1,1-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.049	0.25
cis-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
2,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.14	0.25
Chloroform	U	0.25	ug/L	1	.5	0.50	0.047	0.25
Bromochloromethane	U	0.25	ug/L	1	.5	0.50	0.087	0.25
1,1,1-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.058	0.25
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.10	0.25
1,1-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.054	0.25
Carbon Tetrachloride	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Benzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
1,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.066	0.25
Trichloroethene	U	0.25	ug/L	1	.5	0.50	0.044	0.25
Dibromomethane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Bromodichloromethane	U	0.25	ug/L	1	.5	0.50	0.061	0.25
cis-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
Toluene	U	0.25	ug/L	1	1	1.0	0.061	0.25
trans-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.12	0.25
1,1,2-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.13	0.25
1,3-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Dibromochloromethane	U	0.25	ug/L	1	.5	0.50	0.092	0.25
Tetrachloroethene	U	0.25	ug/L	1	.5	0.50	0.073	0.25
4-Methyl-2-Pentanone	UL	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dibromoethane	U	0.25	ug/L	1	.5	0.50	0.090	0.25

600 Technology Way
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http://www.katahdinlab.com

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-1
Client ID: DW-01-EFF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3328.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
2-Hexanone	ULL	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.25	ug/L	1	.5	0.50	0.057	0.25
1,1,1,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Ethylbenzene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
m+p-Xylenes	U	0.25	ug/L	1	1	1.0	0.098	0.25
Bromoform	U	0.25	ug/L	1	.5	0.50	0.055	0.25
o-Xylene	U	0.25	ug/L	1	.5	0.50	0.043	0.25
Styrene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,1,2,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.11	0.25
1,2,3-Trichloropropane	U	0.25	ug/L	1	.5	0.50	0.099	0.25
Isopropylbenzene	U	0.25	ug/L	1	.5	0.50	0.059	0.25
Bromobenzene	U	0.25	ug/L	1	.5	0.50	0.066	0.25
2-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
N-Propylbenzene	U	0.25	ug/L	1	.5	0.50	0.063	0.25
4-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.077	0.25
1,3,5-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
1,2,4-Trichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.10	0.25
sec-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.085	0.25
1,3-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.049	0.25
p-Isopropyltoluene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,4-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.065	0.25
N-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.083	0.25
1,2-Dibromo-3-Chloropropane	U	0.25	ug/L	1	.5	0.50	0.080	0.25
1,2,4-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
Naphthalene	ULL	0.50	ug/L	1	1	1.0	0.14	0.50
Hexachlorobutadiene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2,3-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.13	0.50
Methyl tert-butyl Ether	U	0.25	ug/L	1	1	1.0	0.097	0.25
p-Bromofluorobenzene		67.6	%					
1,2-Dichlorobenzene-D4		78.0	%					

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Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3328.d
Report Date: 07-Aug-2021 10:13

Katahdin Analytical Services

EPA 524.2

Data file : \\target_server\gg\chem\gcms-d.i\D073021.b\D3328.d
Lab Smp Id: SO4724-1 Client Smp ID: W-01-EFF-SUMMER2021
Inj Date : 30-JUL-2021 12:22
Operator : JSS Inst ID: gcms-d.i
Smp Info : SO4724-1
Misc Info : WG303440,WG303293-4
Comment :
Method : \\target_server\gg\chem\gcms-d.i\D073021.b\D5A25(70)D.m
Meth Date : 07-Aug-2021 10:01 hgould Quant Type: ISTD
Cal Date : 29-JUL-2021 13:45 Cal File: D3314.d
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: ORGANICS2

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

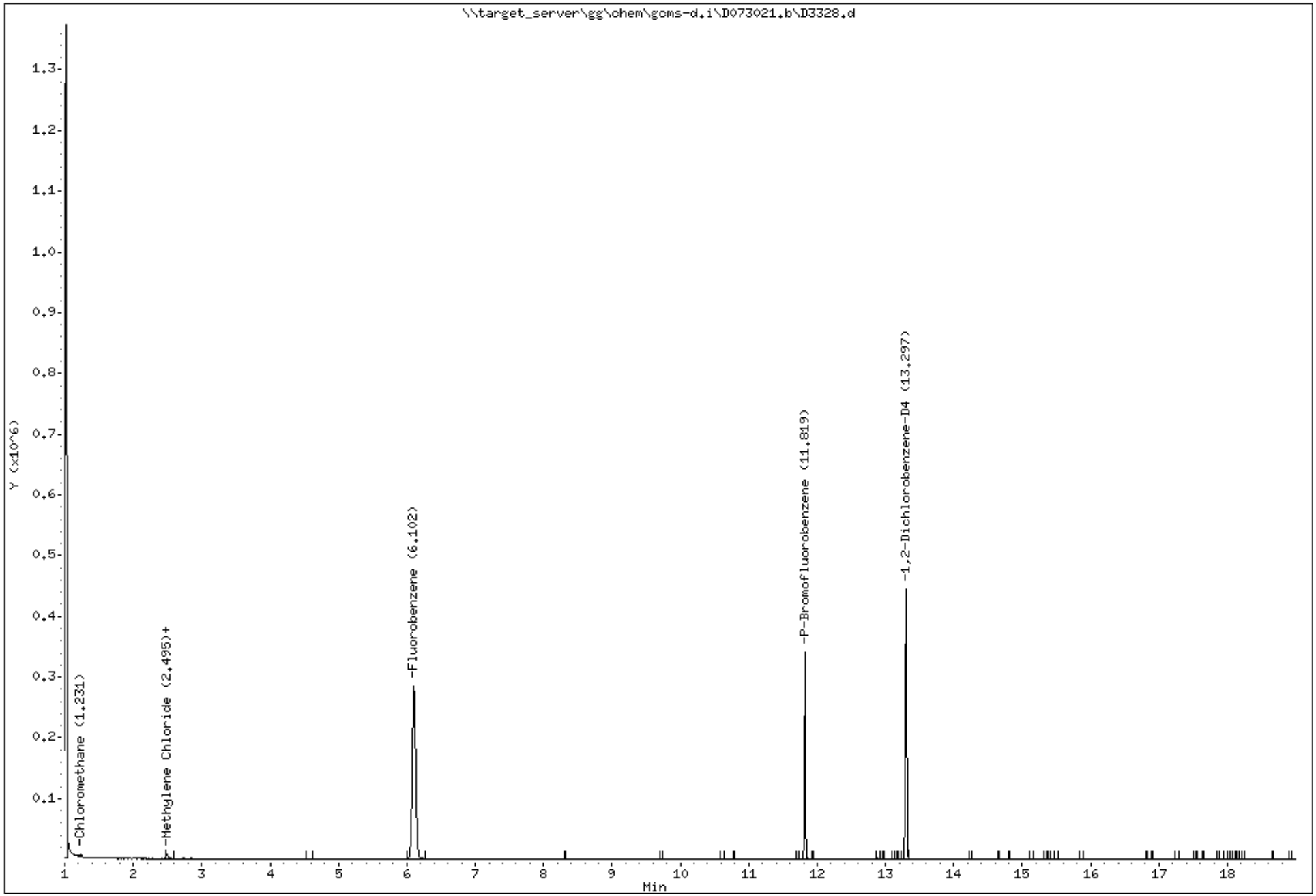
Name	Value	Description
DF	1.000	Dilution Factor
Vo	25.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/l)	REVIEW CODE
2	Chloromethane	50	1.230	1.231	(0.202)	3614	0.17723	0.18(a)	
10	Methylene Chloride	84	2.495	2.495	(0.409)	4595	0.66324	0.66(a)	
11	Acetone	43	2.550	2.551	(0.418)	1239	2.43462	2.4(a)	
* 29	Fluorobenzene	96	6.102	6.102	(1.000)	484112	10.0000		
$ 53	P-Bromofluorobenzene	95	11.819	11.819	(1.937)	95274	6.76461	6.8	
$ 68	1,2-Dichlorobenzene-D4	152	13.297	13.297	(2.179)	103897	7.79563	7.8	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3328.d
Date : 30-JUL-2021 12:22
Client ID: W-01-EFF-SUMMER2021 Instrument: gcms-d.i
Sample Info: S04724-1



Katahdin Analytical Services 1000014

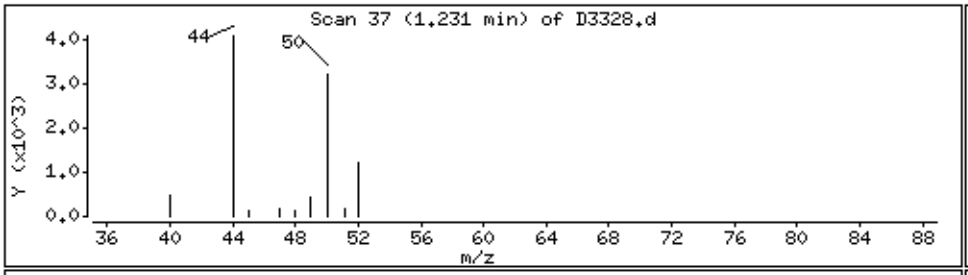
Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3328.d

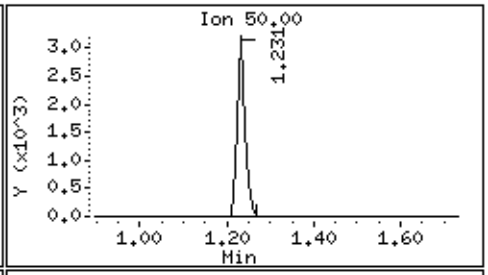
Date : 30-JUL-2021 12:22

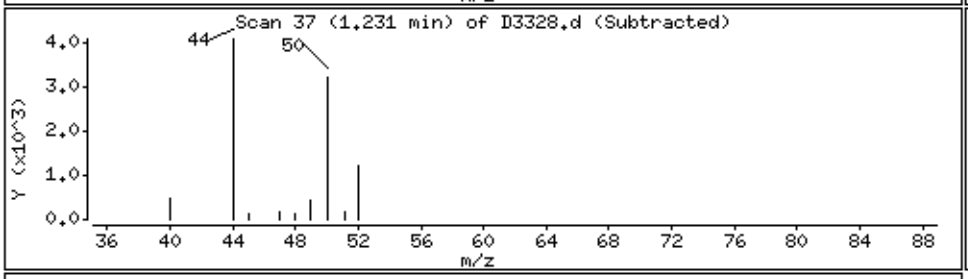
Client ID: W-01-EFF-SUMMER2021 Instrument: gcms-d.i

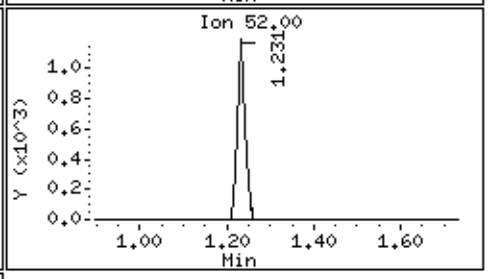
Sample Info: S04724-1

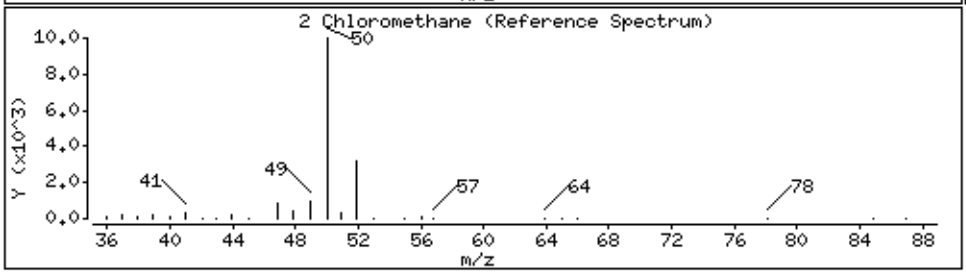
2 Chloromethane Concentration: 0.18 ug/l



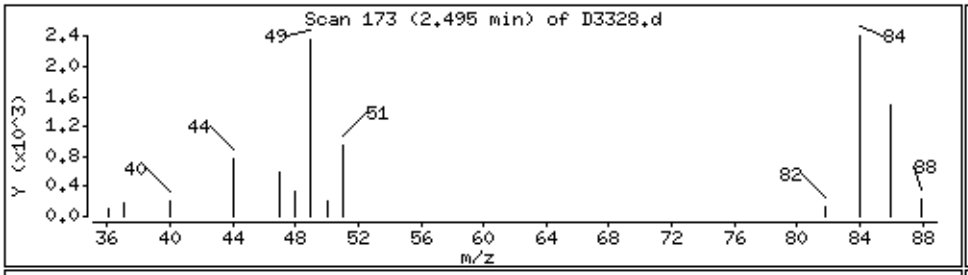


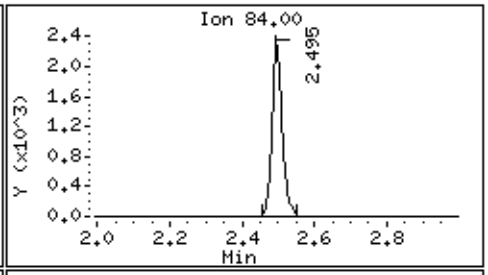


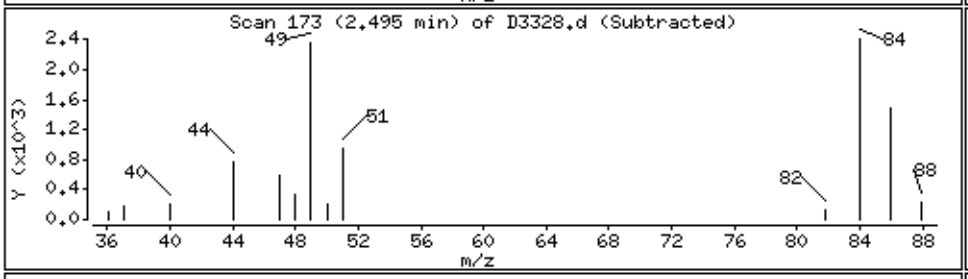


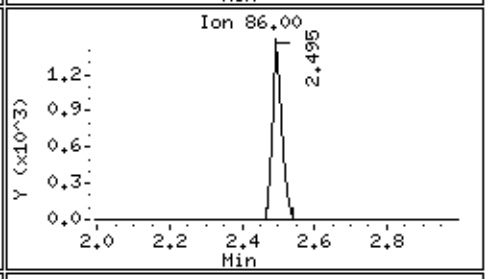


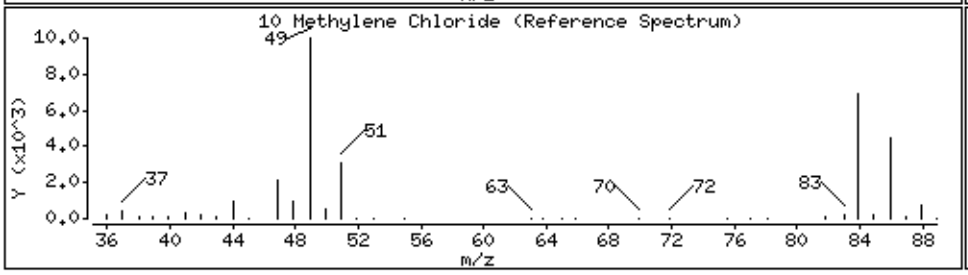
10 Methylene Chloride Concentration: 0.66 ug/l

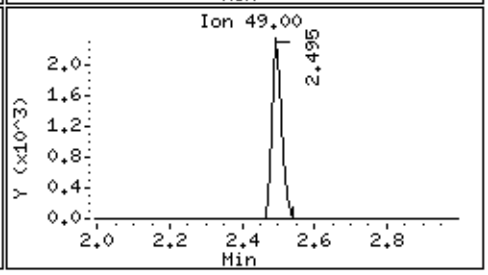












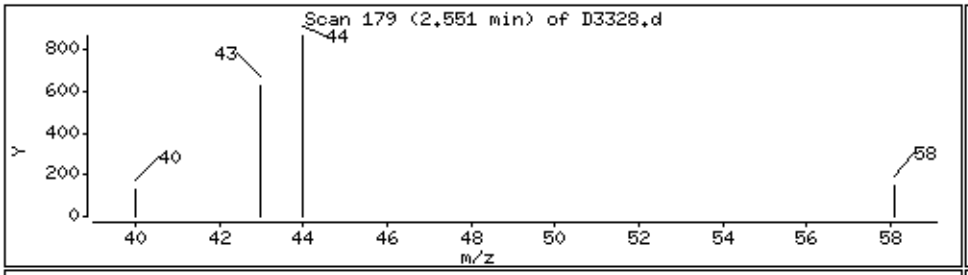
Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3328.d

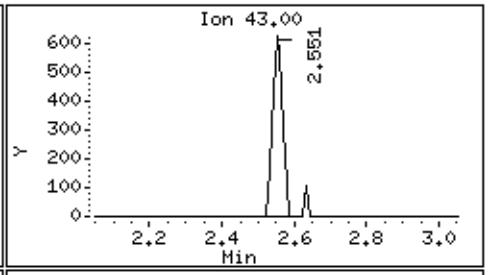
Date : 30-JUL-2021 12:22

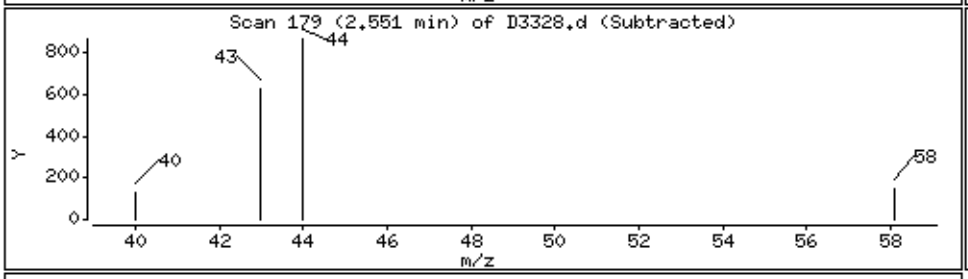
Client ID: W-01-EFF-SUMMER2021 Instrument: gcms-d.i

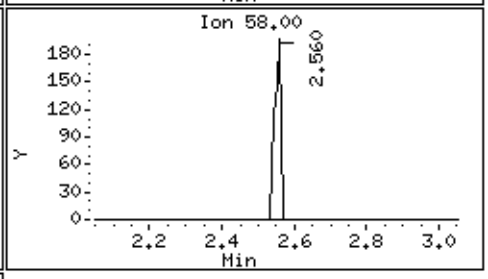
Sample Info: S04724-1

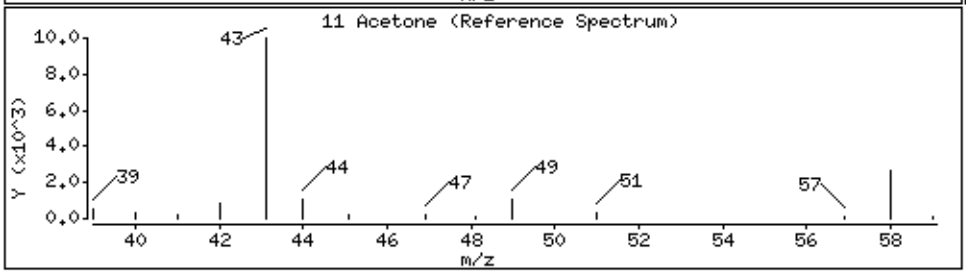
11 Acetone Concentration: 2.4 ug/l











Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-2
Client ID: DW-01-INF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3333.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	UM	0.50	ug/L	1	1	1.0	0.10	0.50
Chloromethane	J	0.096	ug/L	1	1	1.0	0.077	0.50
Vinyl Chloride	U	0.50	ug/L	1	1	1.0	0.083	0.50
Bromomethane	U	0.50	ug/L	1	1	1.0	0.13	0.50
Chloroethane	ULMM	0.50	ug/L	1	1	1.0	0.085	0.50
Trichlorofluoromethane	U	0.25	ug/L	1	.5	0.50	0.072	0.25
1,1-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.084	0.25
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	UMM	1.2	ug/L	1	2.5	2.5	0.62	1.2
Acetone	ULM	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.076	0.25
1,1-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.049	0.25
cis-1,2-Dichloroethene		0.74	ug/L	1	.5	0.50	0.053	0.25
2,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.14	0.25
Chloroform	J	0.053	ug/L	1	.5	0.50	0.047	0.25
Bromochloromethane	U	0.25	ug/L	1	.5	0.50	0.087	0.25
1,1,1-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.058	0.25
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.10	0.25
1,1-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.054	0.25
Carbon Tetrachloride	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Benzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
1,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.066	0.25
Trichloroethene		2.9	ug/L	1	.5	0.50	0.044	0.25
Dibromomethane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Bromodichloromethane	U	0.25	ug/L	1	.5	0.50	0.061	0.25
cis-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
Toluene	U	0.25	ug/L	1	1	1.0	0.061	0.25
trans-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.12	0.25
1,1,2-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.13	0.25
1,3-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Dibromochloromethane	U	0.25	ug/L	1	.5	0.50	0.092	0.25
Tetrachloroethene	U	0.25	ug/L	1	.5	0.50	0.073	0.25
4-Methyl-2-Pentanone	ULM	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dibromoethane	U	0.25	ug/L	1	.5	0.50	0.090	0.25

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Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-2
Client ID: DW-01-INF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3333.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
2-Hexanone	ULL	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.25	ug/L	1	.5	0.50	0.057	0.25
1,1,1,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Ethylbenzene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
m+p-Xylenes	U	0.25	ug/L	1	1	1.0	0.098	0.25
Bromoform	U	0.25	ug/L	1	.5	0.50	0.055	0.25
o-Xylene	U	0.25	ug/L	1	.5	0.50	0.043	0.25
Styrene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,1,2,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.11	0.25
1,2,3-Trichloropropane	U	0.25	ug/L	1	.5	0.50	0.099	0.25
Isopropylbenzene	U	0.25	ug/L	1	.5	0.50	0.059	0.25
Bromobenzene	U	0.25	ug/L	1	.5	0.50	0.066	0.25
2-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
N-Propylbenzene	U	0.25	ug/L	1	.5	0.50	0.063	0.25
4-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.077	0.25
1,3,5-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
1,2,4-Trichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.10	0.25
sec-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.085	0.25
1,3-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.049	0.25
p-Isopropyltoluene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,4-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.065	0.25
N-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.083	0.25
1,2-Dibromo-3-Chloropropane	U	0.25	ug/L	1	.5	0.50	0.080	0.25
1,2,4-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
Naphthalene	ULLMM	0.50	ug/L	1	1	1.0	0.14	0.50
Hexachlorobutadiene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2,3-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.13	0.50
Methyl tert-butyl Ether	U	0.25	ug/L	1	1	1.0	0.097	0.25
p-Bromofluorobenzene		68.2	%					
1,2-Dichlorobenzene-D4		78.7	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
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http://www.katahdinlab.com

Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3333.d
Report Date: 07-Aug-2021 10:13

Katahdin Analytical Services

EPA 524.2

Data file : \\target_server\gg\chem\gcms-d.i\D073021.b\D3333.d
Lab Smp Id: SO4724-2 Client Smp ID: W-01-INF-SUMMER2021
Inj Date : 30-JUL-2021 15:38
Operator : JSS Inst ID: gcms-d.i
Smp Info : SO4724-2
Misc Info : WG303440,WG303293-4
Comment :
Method : \\target_server\gg\chem\gcms-d.i\D073021.b\D5A25(70)D.m
Meth Date : 07-Aug-2021 10:01 hgould Quant Type: ISTD
Cal Date : 29-JUL-2021 13:45 Cal File: D3314.d
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: ORGANICS2

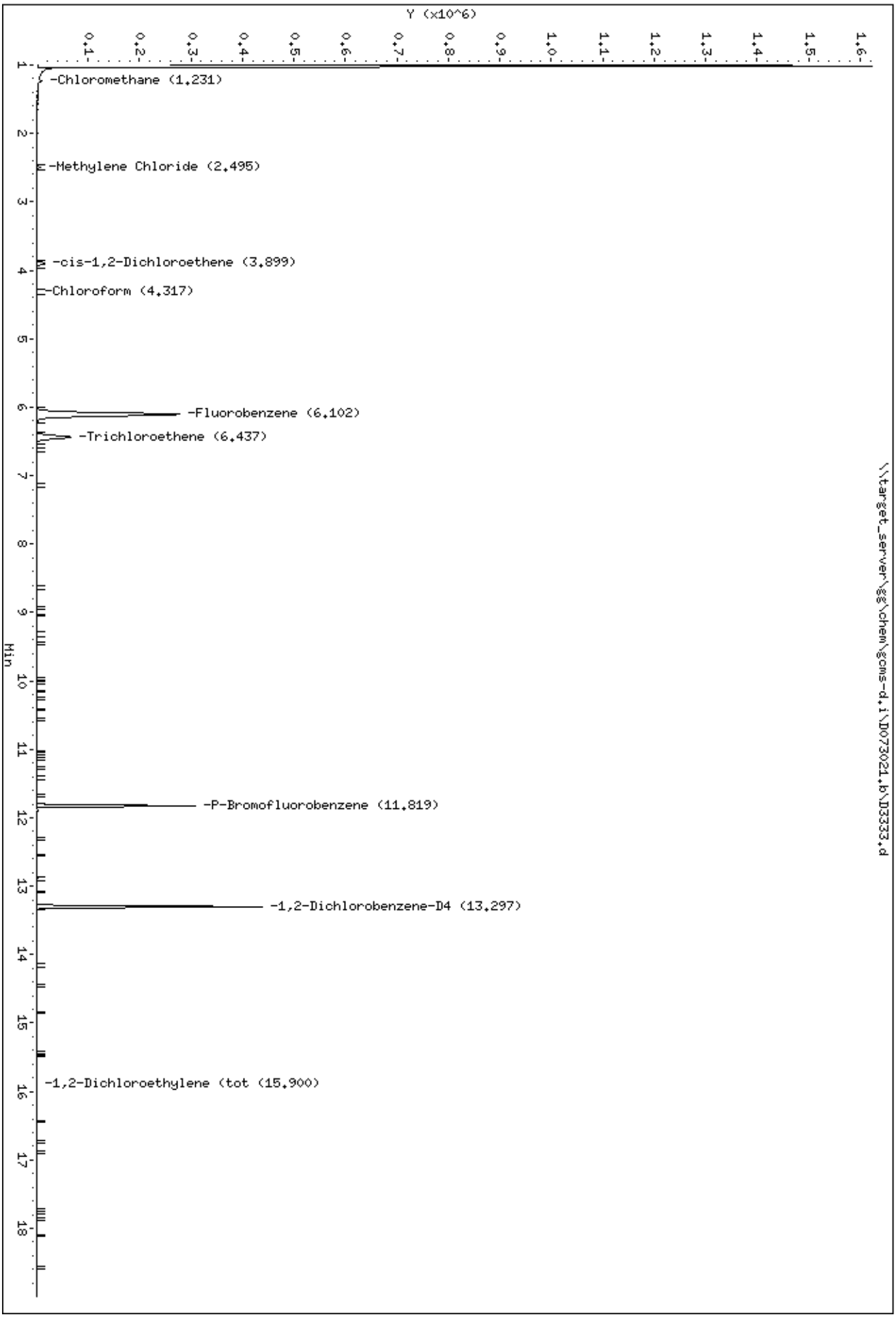
Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	25.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/l)	REVIEW CODE
	2 Chloromethane	50	1.230	1.231	(0.202)	1876	0.09565	0.096(a)	
	10 Methylene Chloride	84	2.495	2.495	(0.409)	3164	0.47483	0.47(a)	
	18 cis-1,2-Dichloroethene	96	3.898	3.908	(0.639)	9773	0.73505	0.74	
	21 Chloroform	83	4.317	4.308	(0.707)	1318	0.05262	0.053(a)	
*	29 Fluorobenzene	96	6.102	6.102	(1.000)	465622	10.0000		
	30 Trichloroethene	95	6.436	6.437	(1.055)	40125	2.87358	2.9	
$	53 P-Bromofluorobenzene	95	11.819	11.819	(1.937)	92393	6.82056	6.8	
$	68 1,2-Dichlorobenzene-D4	152	13.297	13.297	(2.179)	100879	7.86975	7.9	
M	76 1,2-Dichloroethylene (total)	96				9773	0.73505	0.74(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).


Y (x10^6)
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0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
-Chloromethane (1.231)
-Methylene Chloride (2.495)
-cis-1,2-Dichloroethene (3.899)
-Chloroform (4.317)
-Fluorobenzene (6.102)
-Trichloroethene (6.437)
-P-Bromofluorobenzene (11.819)
-1,2-Dichlorobenzene-D4 (13.297)
-1,2-Dichloroethylene (tot (15.900)
Min
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
\\target_server\gg\chem\gcms-d.i\D073021.b\D3333.d
Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3333.d
Date : 30-JUL-2021 15:38
Client ID: W-01-INF-SUMMER2021
Sample Info: SD4724-2
Instrument: gcms-d.i

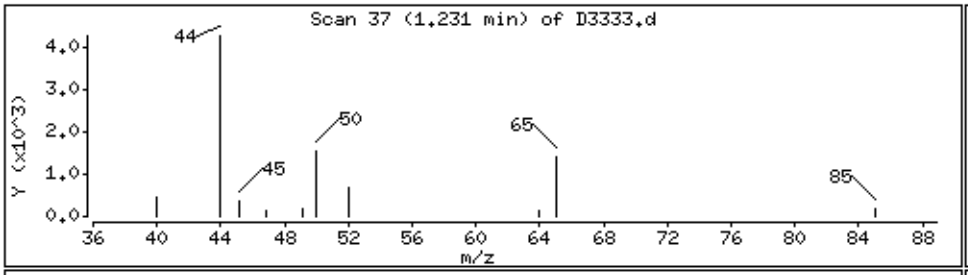
Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3333.d

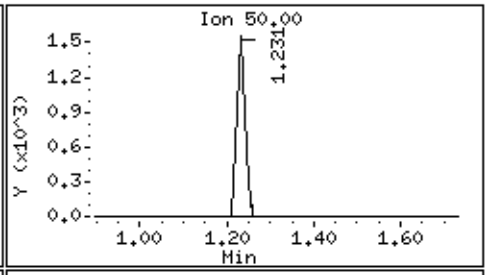
Date : 30-JUL-2021 15:38

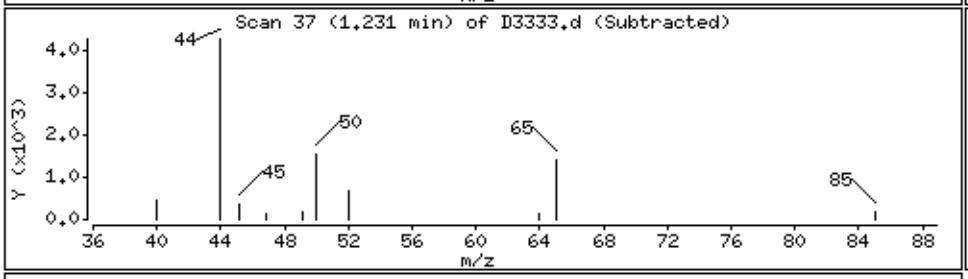
Client ID: W-01-INF-SUMMER2021 Instrument: gcms-d.i

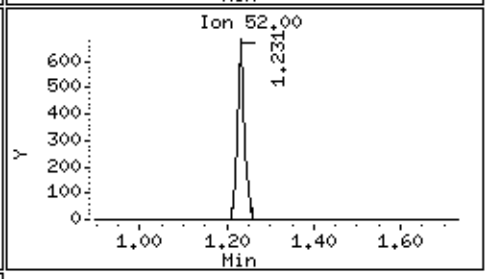
Sample Info: S04724-2

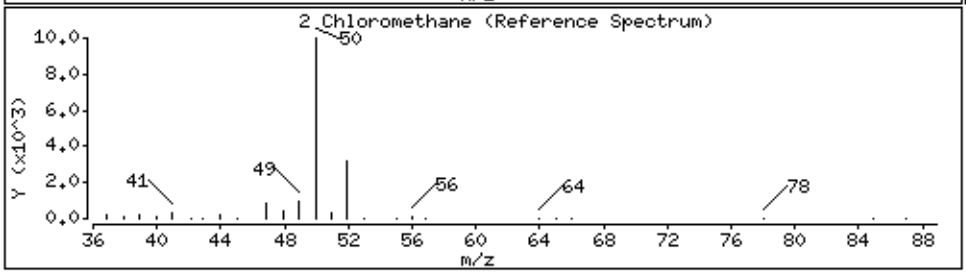
2 Chloromethane Concentration: 0.096 ug/l



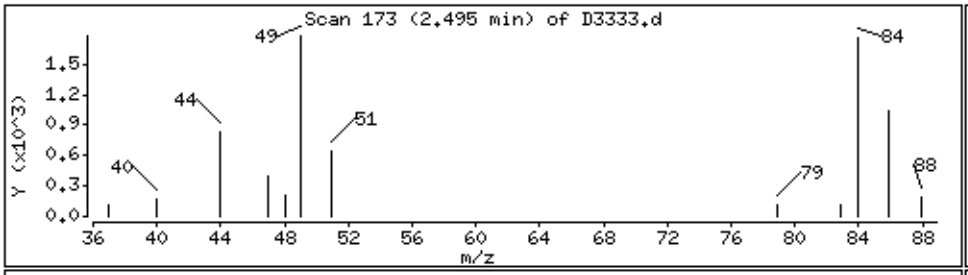


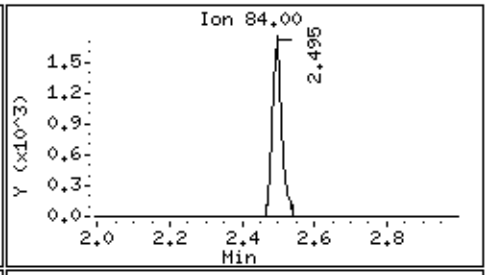


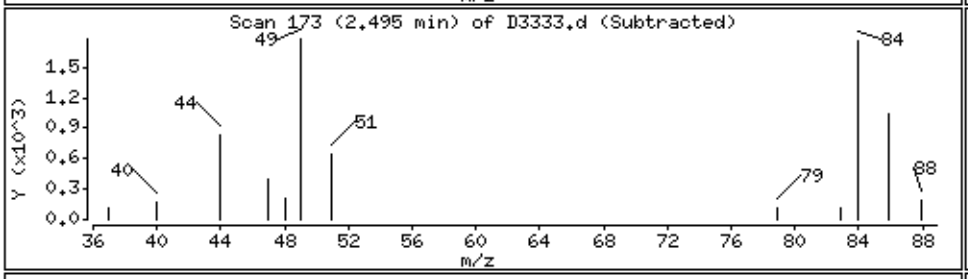


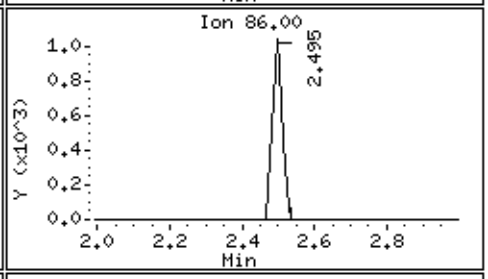


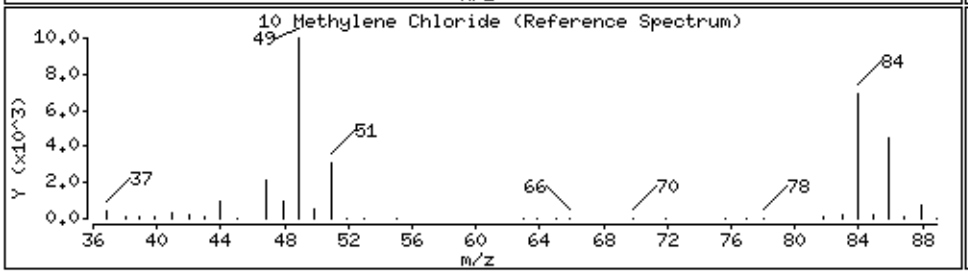
10 Methylene Chloride Concentration: 0.47 ug/l

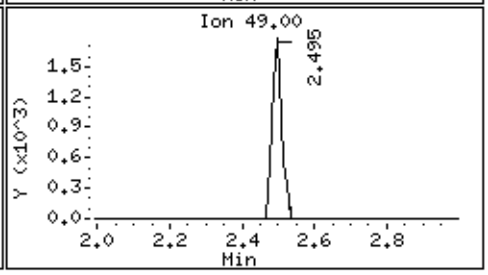












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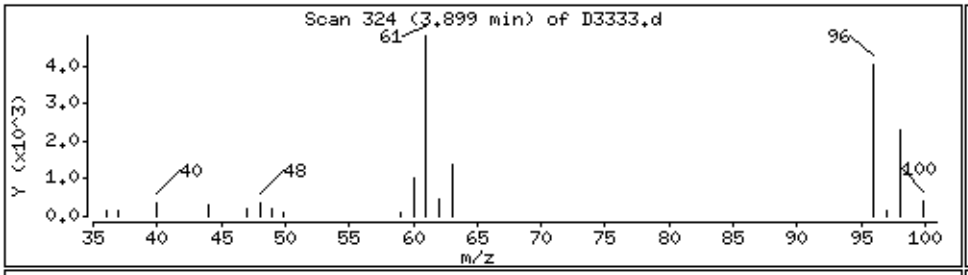
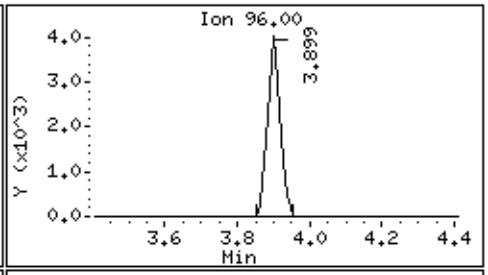
Date : 30-JUL-2021 15:38

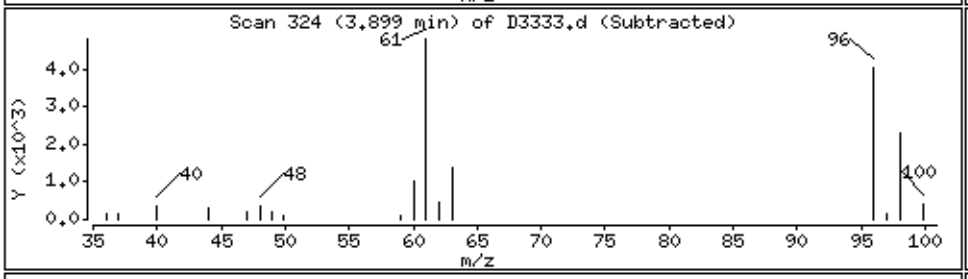
Client ID: W-01-INF-SUMMER2021 Instrument: gcms-d.i

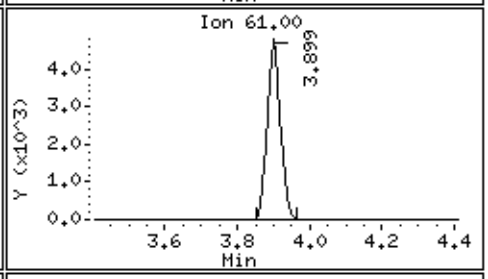
Sample Info: S04724-2

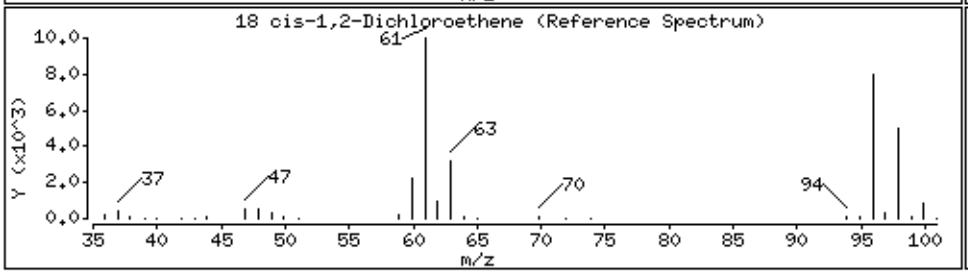
18 cis-1,2-Dichloroethene Concentration: 0.74 ug/l

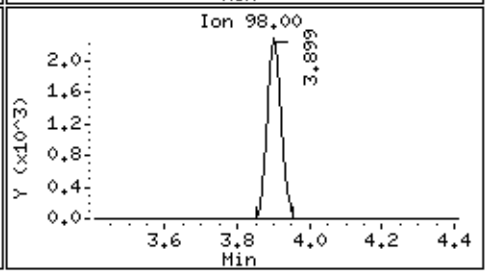




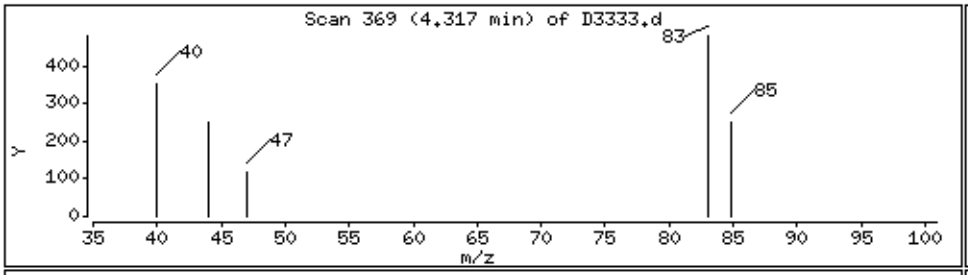


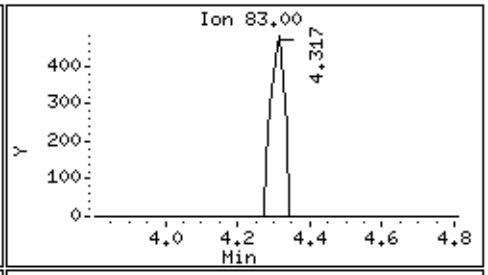


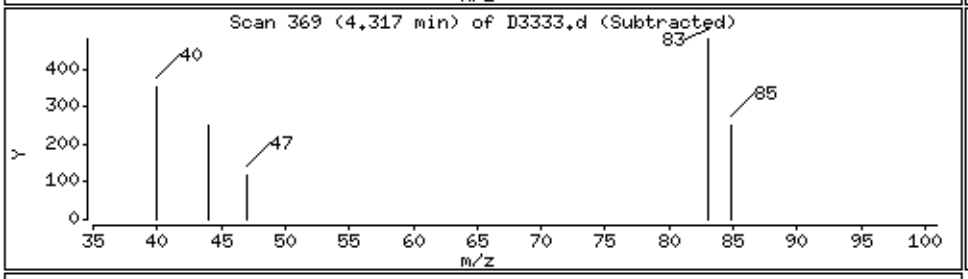


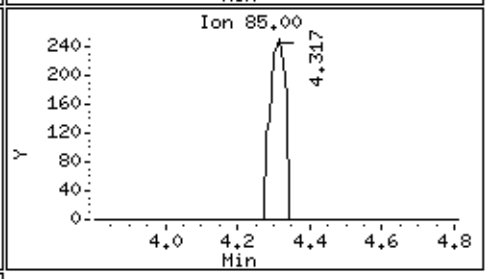


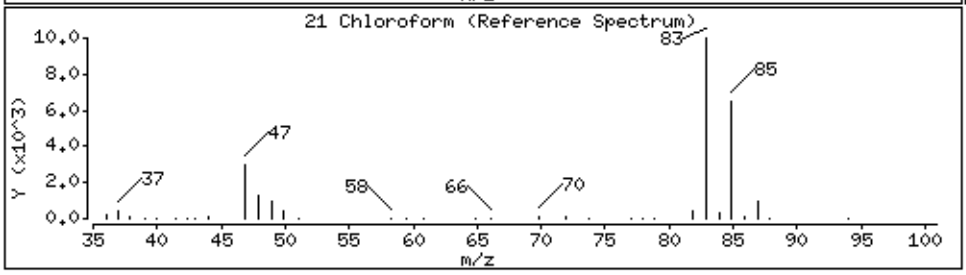
21 Chloroform Concentration: 0.053 ug/l











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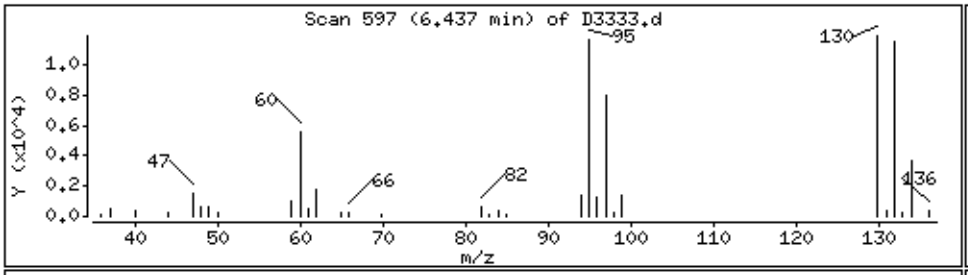
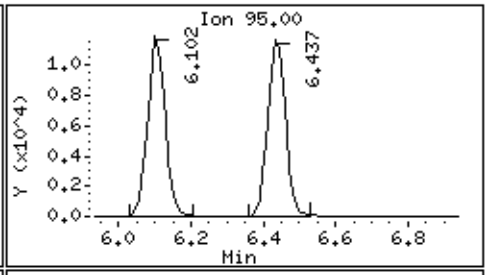
Date : 30-JUL-2021 15:38

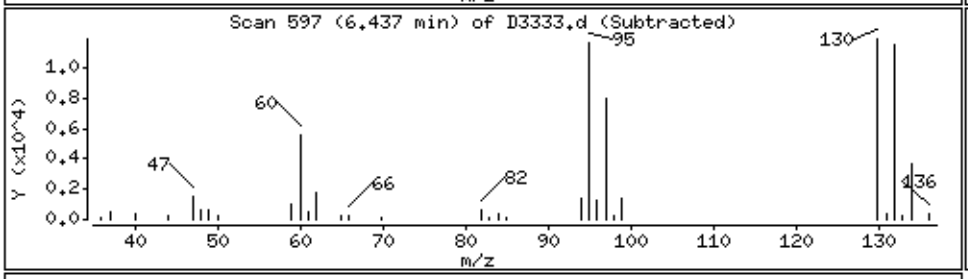
Client ID: W-01-INF-SUMMER2021 Instrument: gcms-d.i

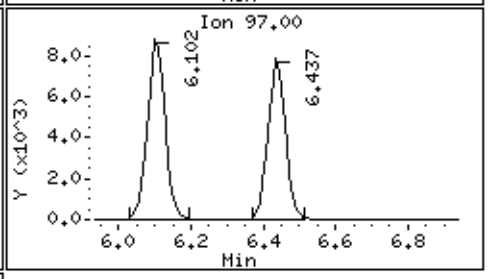
Sample Info: S04724-2

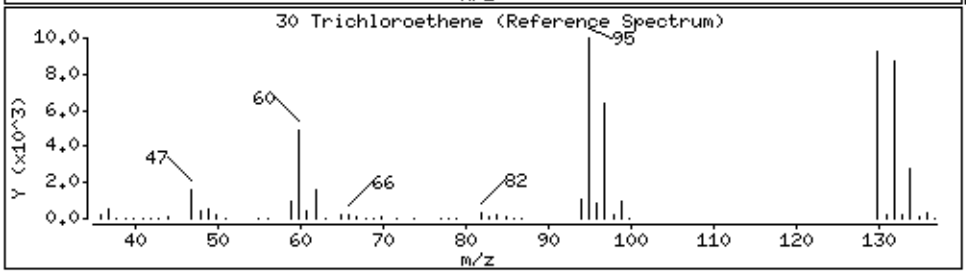
30 Trichloroethene Concentration: 2.9 ug/l











Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-3
Client ID: DW-01-MID-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3329.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	0.50	ug/L	1	1	1.0	0.10	0.50
Chloromethane	J	0.12	ug/L	1	1	1.0	0.077	0.50
Vinyl Chloride	U	0.50	ug/L	1	1	1.0	0.083	0.50
Bromomethane	U	0.50	ug/L	1	1	1.0	0.13	0.50
Chloroethane	UL	0.50	ug/L	1	1	1.0	0.085	0.50
Trichlorofluoromethane	U	0.25	ug/L	1	.5	0.50	0.072	0.25
1,1-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.084	0.25
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	U	1.2	ug/L	1	2.5	2.5	0.62	1.2
Acetone	UL	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.076	0.25
1,1-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.049	0.25
cis-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
2,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.14	0.25
Chloroform	U	0.25	ug/L	1	.5	0.50	0.047	0.25
Bromochloromethane	U	0.25	ug/L	1	.5	0.50	0.087	0.25
1,1,1-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.058	0.25
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.10	0.25
1,1-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.054	0.25
Carbon Tetrachloride	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Benzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
1,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.066	0.25
Trichloroethene	U	0.25	ug/L	1	.5	0.50	0.044	0.25
Dibromomethane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Bromodichloromethane	U	0.25	ug/L	1	.5	0.50	0.061	0.25
cis-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
Toluene	U	0.25	ug/L	1	1	1.0	0.061	0.25
trans-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.12	0.25
1,1,2-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.13	0.25
1,3-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Dibromochloromethane	U	0.25	ug/L	1	.5	0.50	0.092	0.25
Tetrachloroethene	U	0.25	ug/L	1	.5	0.50	0.073	0.25
4-Methyl-2-Pentanone	UL	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dibromoethane	U	0.25	ug/L	1	.5	0.50	0.090	0.25

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029
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Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-3
Client ID: DW-01-MID-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3329.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
2-Hexanone	ULL	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.25	ug/L	1	.5	0.50	0.057	0.25
1,1,1,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Ethylbenzene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
m+p-Xylenes	U	0.25	ug/L	1	1	1.0	0.098	0.25
Bromoform	U	0.25	ug/L	1	.5	0.50	0.055	0.25
o-Xylene	U	0.25	ug/L	1	.5	0.50	0.043	0.25
Styrene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,1,2,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.11	0.25
1,2,3-Trichloropropane	U	0.25	ug/L	1	.5	0.50	0.099	0.25
Isopropylbenzene	U	0.25	ug/L	1	.5	0.50	0.059	0.25
Bromobenzene	U	0.25	ug/L	1	.5	0.50	0.066	0.25
2-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
N-Propylbenzene	U	0.25	ug/L	1	.5	0.50	0.063	0.25
4-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.077	0.25
1,3,5-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
1,2,4-Trichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.10	0.25
sec-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.085	0.25
1,3-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.049	0.25
p-Isopropyltoluene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,4-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.065	0.25
N-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.083	0.25
1,2-Dibromo-3-Chloropropane	U	0.25	ug/L	1	.5	0.50	0.080	0.25
1,2,4-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
Naphthalene	ULL	0.50	ug/L	1	1	1.0	0.14	0.50
Hexachlorobutadiene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2,3-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.13	0.50
Methyl tert-butyl Ether	U	0.25	ug/L	1	1	1.0	0.097	0.25
p-Bromofluorobenzene		66.1	%					
1,2-Dichlorobenzene-D4		76.6	%					

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Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3329.d
Report Date: 07-Aug-2021 10:13

Katahdin Analytical Services

EPA 524.2

Data file : \\target_server\gg\chem\gcms-d.i\D073021.b\D3329.d
Lab Smp Id: SO4724-3 Client Smp ID: W-01-MID-SUMMER2021
Inj Date : 30-JUL-2021 13:01
Operator : JSS Inst ID: gcms-d.i
Smp Info : SO4724-3
Misc Info : WG303440,WG303293-4
Comment :
Method : \\target_server\gg\chem\gcms-d.i\D073021.b\D5A25(70)D.m
Meth Date : 07-Aug-2021 10:01 hgould Quant Type: ISTD
Cal Date : 29-JUL-2021 13:45 Cal File: D3314.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: ORGANICS2

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

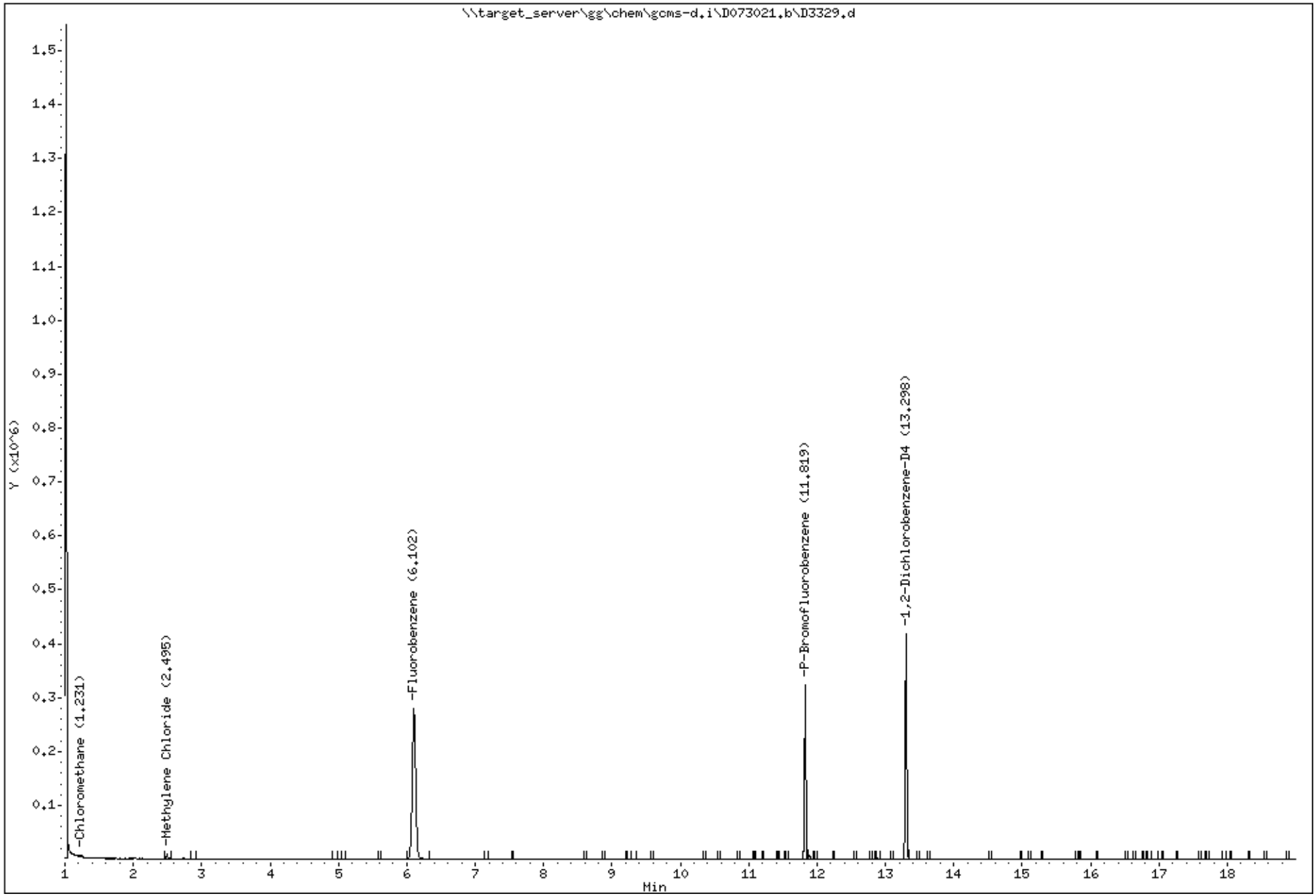
Name	Value	Description
DF	1.000	Dilution Factor
Vo	25.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/l)	REVIEW CODE
2	Chloromethane	50	1.230	1.231	(0.202)	2458	0.12499	0.12(a)	
10	Methylene Chloride	84	2.495	2.495	(0.409)	4055	0.60690	0.61(a)	
* 29	Fluorobenzene	96	6.102	6.102	(1.000)	466882	10.0000		
$ 53	P-Bromofluorobenzene	95	11.819	11.819	(1.937)	89768	6.60890	6.6	
$ 68	1,2-Dichlorobenzene-D4	152	13.297	13.297	(2.179)	98397	7.65541	7.6	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3329.d
Date : 30-JUL-2021 13:01
Client ID: W-01-MID-SUMMER2021 Instrument: gcms-d.i
Sample Info: S04724-3



Katahdin Analytical Services 1000027

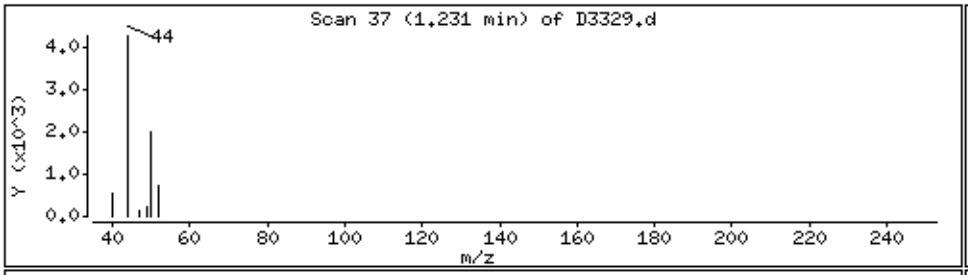
Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3329.d

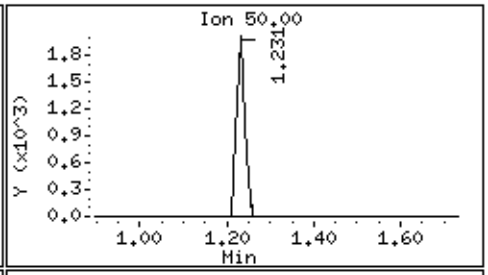
Date : 30-JUL-2021 13:01

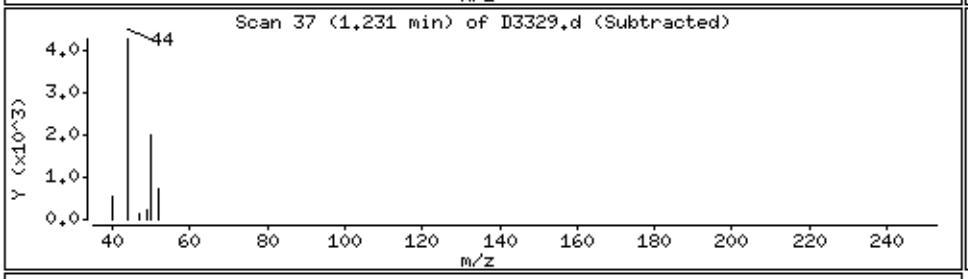
Client ID: W-01-MID-SUMMER2021 Instrument: gcms-d.i

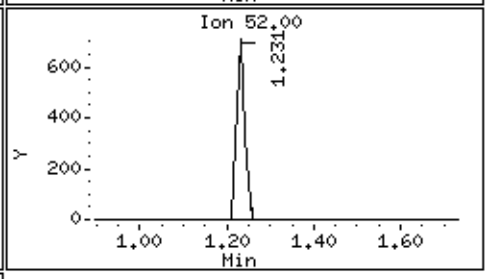
Sample Info: S04724-3

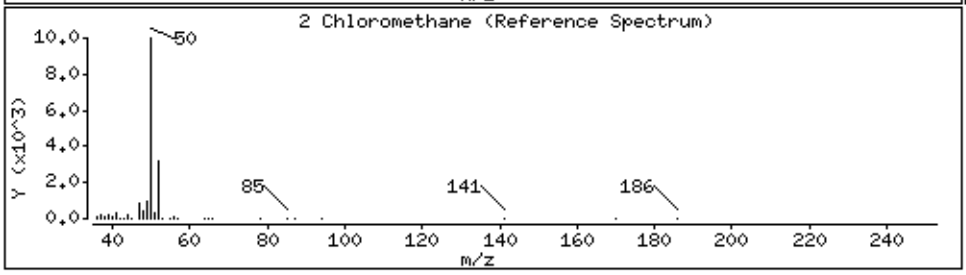
2 Chloromethane Concentration: 0.12 ug/l



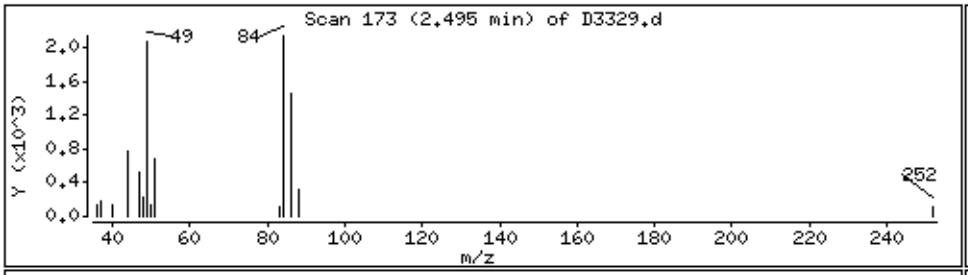


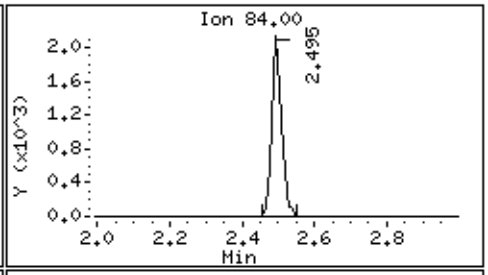


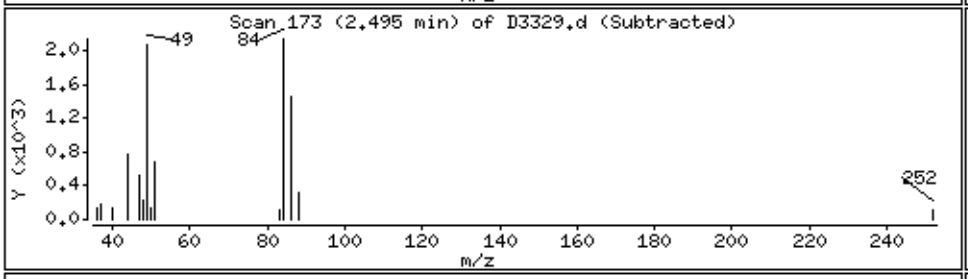


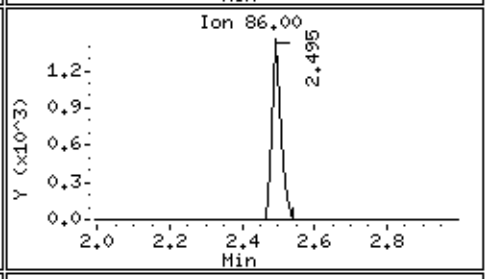


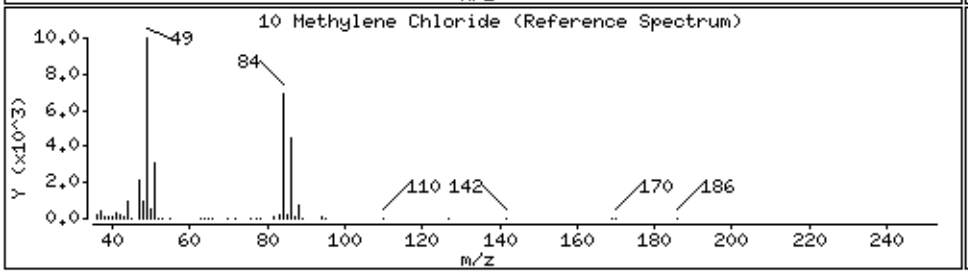
10 Methylene Chloride Concentration: 0.61 ug/l

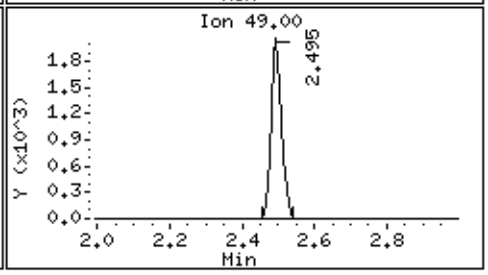












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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-4
Client ID: DW-02R-EFF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3330.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	0.50	ug/L	1	1	1.0	0.10	0.50
Chloromethane	J	0.12	ug/L	1	1	1.0	0.077	0.50
Vinyl Chloride	U	0.50	ug/L	1	1	1.0	0.083	0.50
Bromomethane	U	0.50	ug/L	1	1	1.0	0.13	0.50
Chloroethane	UL	0.50	ug/L	1	1	1.0	0.085	0.50
Trichlorofluoromethane	U	0.25	ug/L	1	.5	0.50	0.072	0.25
1,1-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.084	0.25
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	J	0.67	ug/L	1	2.5	2.5	0.62	1.2
Acetone	UL	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.076	0.25
1,1-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.049	0.25
cis-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
2,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.14	0.25
Chloroform	U	0.25	ug/L	1	.5	0.50	0.047	0.25
Bromochloromethane	U	0.25	ug/L	1	.5	0.50	0.087	0.25
1,1,1-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.058	0.25
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.10	0.25
1,1-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.054	0.25
Carbon Tetrachloride	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Benzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
1,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.066	0.25
Trichloroethene	U	0.25	ug/L	1	.5	0.50	0.044	0.25
Dibromomethane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Bromodichloromethane	U	0.25	ug/L	1	.5	0.50	0.061	0.25
cis-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
Toluene	U	0.25	ug/L	1	1	1.0	0.061	0.25
trans-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.12	0.25
1,1,2-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.13	0.25
1,3-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Dibromochloromethane	U	0.25	ug/L	1	.5	0.50	0.092	0.25
Tetrachloroethene	U	0.25	ug/L	1	.5	0.50	0.073	0.25
4-Methyl-2-Pentanone	UL	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dibromoethane	U	0.25	ug/L	1	.5	0.50	0.090	0.25

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Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-4
Client ID: DW-02R-EFF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3330.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
2-Hexanone	ULL	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.25	ug/L	1	.5	0.50	0.057	0.25
1,1,1,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Ethylbenzene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
m+p-Xylenes	U	0.25	ug/L	1	1	1.0	0.098	0.25
Bromoform	U	0.25	ug/L	1	.5	0.50	0.055	0.25
o-Xylene	U	0.25	ug/L	1	.5	0.50	0.043	0.25
Styrene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,1,2,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.11	0.25
1,2,3-Trichloropropane	U	0.25	ug/L	1	.5	0.50	0.099	0.25
Isopropylbenzene	U	0.25	ug/L	1	.5	0.50	0.059	0.25
Bromobenzene	U	0.25	ug/L	1	.5	0.50	0.066	0.25
2-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
N-Propylbenzene	U	0.25	ug/L	1	.5	0.50	0.063	0.25
4-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.077	0.25
1,3,5-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
1,2,4-Trichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.10	0.25
sec-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.085	0.25
1,3-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.049	0.25
p-Isopropyltoluene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,4-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.065	0.25
N-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.083	0.25
1,2-Dibromo-3-Chloropropane	U	0.25	ug/L	1	.5	0.50	0.080	0.25
1,2,4-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
Naphthalene	ULL	0.50	ug/L	1	1	1.0	0.14	0.50
Hexachlorobutadiene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2,3-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.13	0.50
Methyl tert-butyl Ether	U	0.25	ug/L	1	1	1.0	0.097	0.25
p-Bromofluorobenzene		65.6	%					
1,2-Dichlorobenzene-D4		77.1	%					

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Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3330.d
Report Date: 07-Aug-2021 10:13

Katahdin Analytical Services

EPA 524.2

Data file : \\target_server\gg\chem\gcms-d.i\D073021.b\D3330.d
Lab Smp Id: SO4724-4 Client Smp ID: W-02R-EFF-SUMMER202
Inj Date : 30-JUL-2021 13:41
Operator : JSS Inst ID: gcms-d.i
Smp Info : SO4724-4
Misc Info : WG303440,WG303293-4
Comment :
Method : \\target_server\gg\chem\gcms-d.i\D073021.b\D5A25(70)D.m
Meth Date : 07-Aug-2021 10:01 hgould Quant Type: ISTD
Cal Date : 29-JUL-2021 13:45 Cal File: D3314.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: ORGANICS2

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

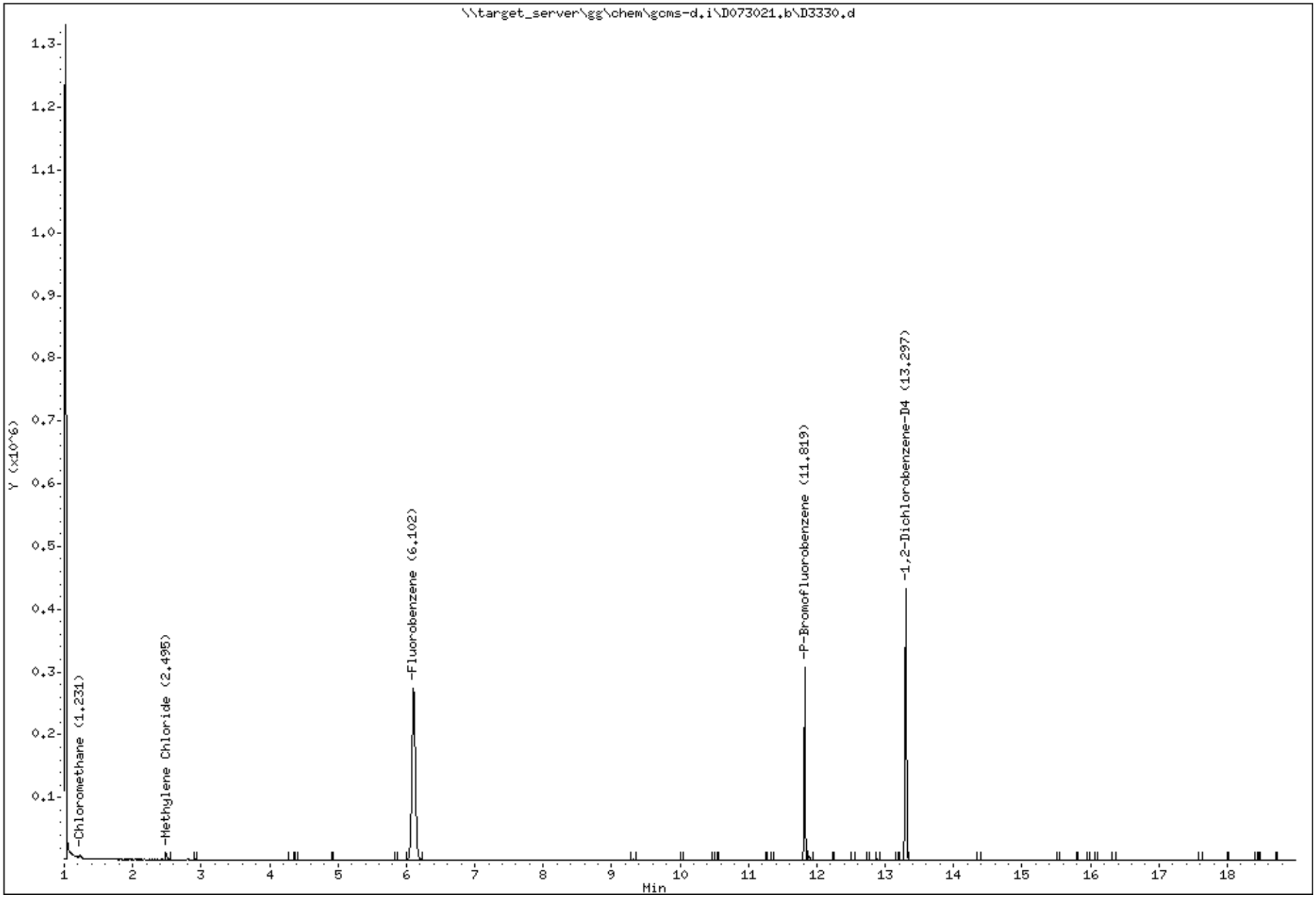
Name	Value	Description
DF	1.000	Dilution Factor
Vo	25.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/l)	REVIEW CODE
2	Chloromethane	50	1.230	1.231	(0.202)	2398	0.12315	0.12(a)	
10	Methylene Chloride	84	2.495	2.495	(0.409)	4429	0.66949	0.67(a)	
* 29	Fluorobenzene	96	6.102	6.102	(1.000)	462271	10.0000		
$ 53	P-Bromofluorobenzene	95	11.819	11.819	(1.937)	88207	6.55875	6.6	
$ 68	1,2-Dichlorobenzene-D4	152	13.297	13.297	(2.179)	98114	7.70953	7.7	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3330.d
Date : 30-JUL-2021 13:41
Client ID: W-02R-EFF-SUMMER202 Instrument: gcms-d.i
Sample Info: S04724-4



Katahdin Analytical Services 1000032

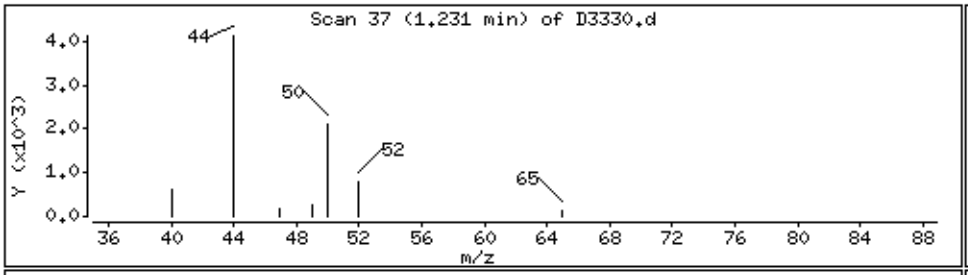
Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3330.d

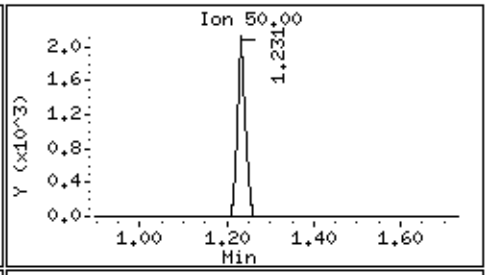
Date : 30-JUL-2021 13:41

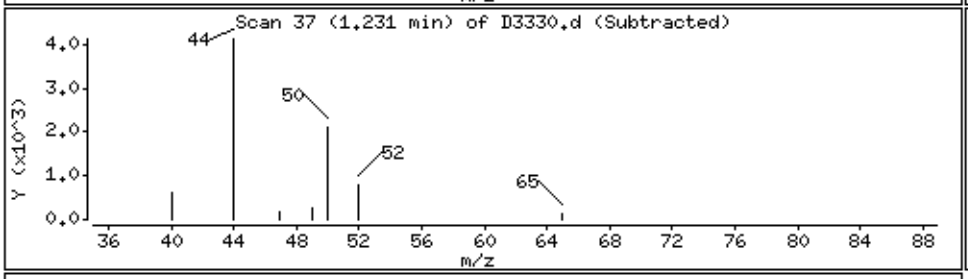
Client ID: W-02R-EFF-SUMMER202 Instrument: gcms-d.i

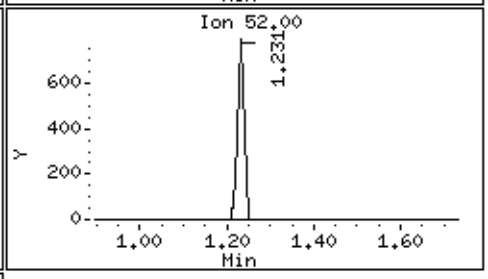
Sample Info: S04724-4

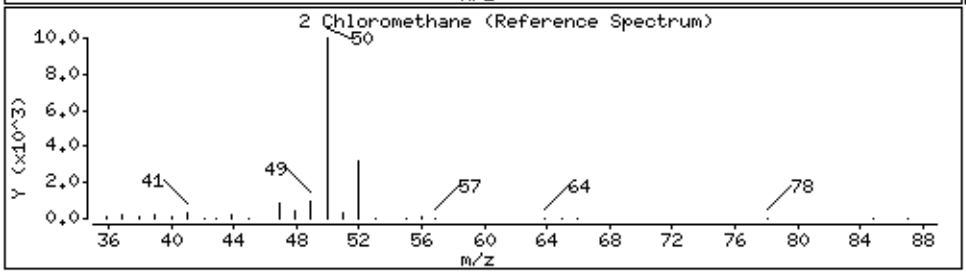
2 Chloromethane Concentration: 0.12 ug/l



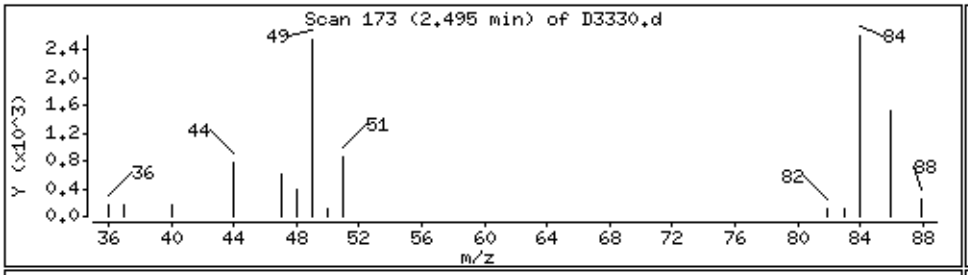


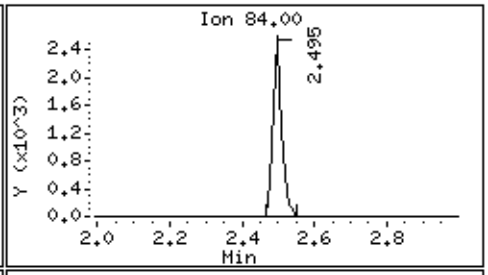


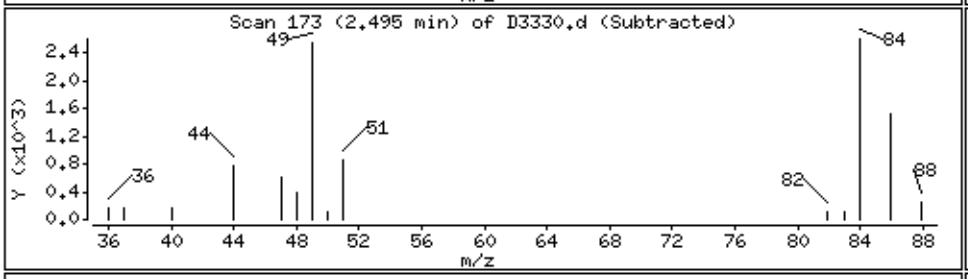


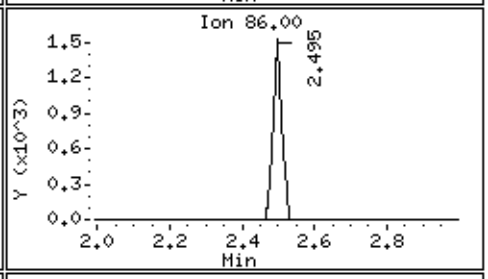


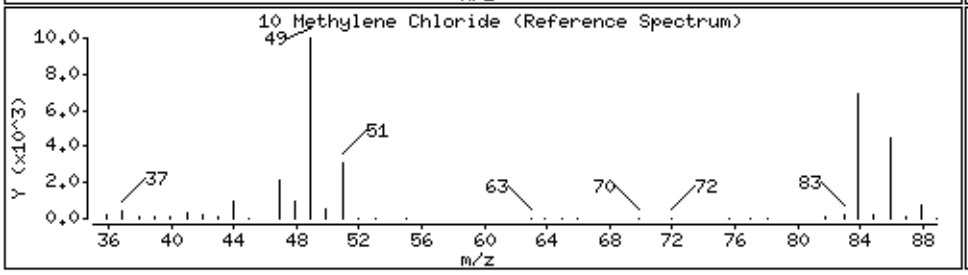
10 Methylene Chloride Concentration: 0.67 ug/l

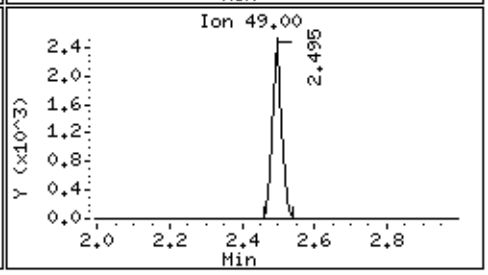












Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-5
Client ID: DW-02R-INF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3331.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	0.50	ug/L	1	1	1.0	0.10	0.50
Chloromethane	J	0.12	ug/L	1	1	1.0	0.077	0.50
Vinyl Chloride	U	0.50	ug/L	1	1	1.0	0.083	0.50
Bromomethane	U	0.50	ug/L	1	1	1.0	0.13	0.50
Chloroethane	UL	0.50	ug/L	1	1	1.0	0.085	0.50
Trichlorofluoromethane	U	0.25	ug/L	1	.5	0.50	0.072	0.25
1,1-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.084	0.25
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	J	0.64	ug/L	1	2.5	2.5	0.62	1.2
Acetone	UL	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.076	0.25
1,1-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.049	0.25
cis-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
2,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.14	0.25
Chloroform	U	0.25	ug/L	1	.5	0.50	0.047	0.25
Bromochloromethane	U	0.25	ug/L	1	.5	0.50	0.087	0.25
1,1,1-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.058	0.25
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.10	0.25
1,1-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.054	0.25
Carbon Tetrachloride	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Benzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
1,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.066	0.25
Trichloroethene	U	0.25	ug/L	1	.5	0.50	0.044	0.25
Dibromomethane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Bromodichloromethane	U	0.25	ug/L	1	.5	0.50	0.061	0.25
cis-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
Toluene	U	0.25	ug/L	1	1	1.0	0.061	0.25
trans-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.12	0.25
1,1,2-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.13	0.25
1,3-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Dibromochloromethane	U	0.25	ug/L	1	.5	0.50	0.092	0.25
Tetrachloroethene	U	0.25	ug/L	1	.5	0.50	0.073	0.25
4-Methyl-2-Pentanone	UL	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dibromoethane	U	0.25	ug/L	1	.5	0.50	0.090	0.25

600 Technology Way
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http://www.katahdinlab.com

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-5
Client ID: DW-02R-INF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3331.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
2-Hexanone	ULL	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.25	ug/L	1	.5	0.50	0.057	0.25
1,1,1,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Ethylbenzene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
m+p-Xylenes	U	0.25	ug/L	1	1	1.0	0.098	0.25
Bromoform	U	0.25	ug/L	1	.5	0.50	0.055	0.25
o-Xylene	U	0.25	ug/L	1	.5	0.50	0.043	0.25
Styrene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,1,2,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.11	0.25
1,2,3-Trichloropropane	U	0.25	ug/L	1	.5	0.50	0.099	0.25
Isopropylbenzene	U	0.25	ug/L	1	.5	0.50	0.059	0.25
Bromobenzene	U	0.25	ug/L	1	.5	0.50	0.066	0.25
2-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
N-Propylbenzene	U	0.25	ug/L	1	.5	0.50	0.063	0.25
4-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.077	0.25
1,3,5-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
1,2,4-Trichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.10	0.25
sec-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.085	0.25
1,3-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.049	0.25
p-Isopropyltoluene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,4-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.065	0.25
N-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.083	0.25
1,2-Dibromo-3-Chloropropane	U	0.25	ug/L	1	.5	0.50	0.080	0.25
1,2,4-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
Naphthalene	ULL	0.50	ug/L	1	1	1.0	0.14	0.50
Hexachlorobutadiene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2,3-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.13	0.50
Methyl tert-butyl Ether	U	0.25	ug/L	1	1	1.0	0.097	0.25
p-Bromofluorobenzene		66.4	%					
1,2-Dichlorobenzene-D4		74.3	%					

600 Technology Way
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Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3331.d
Report Date: 07-Aug-2021 10:13

Katahdin Analytical Services

EPA 524.2

Data file : \\target_server\gg\chem\gcms-d.i\D073021.b\D3331.d
Lab Smp Id: SO4724-5 Client Smp ID: W-02R-INF-SUMMER202
Inj Date : 30-JUL-2021 14:20
Operator : JSS Inst ID: gcms-d.i
Smp Info : SO4724-5
Misc Info : WG303440,WG303293-4
Comment :
Method : \\target_server\gg\chem\gcms-d.i\D073021.b\D5A25(70)D.m
Meth Date : 07-Aug-2021 10:01 hgould Quant Type: ISTD
Cal Date : 29-JUL-2021 13:45 Cal File: D3314.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: ORGANICS2

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

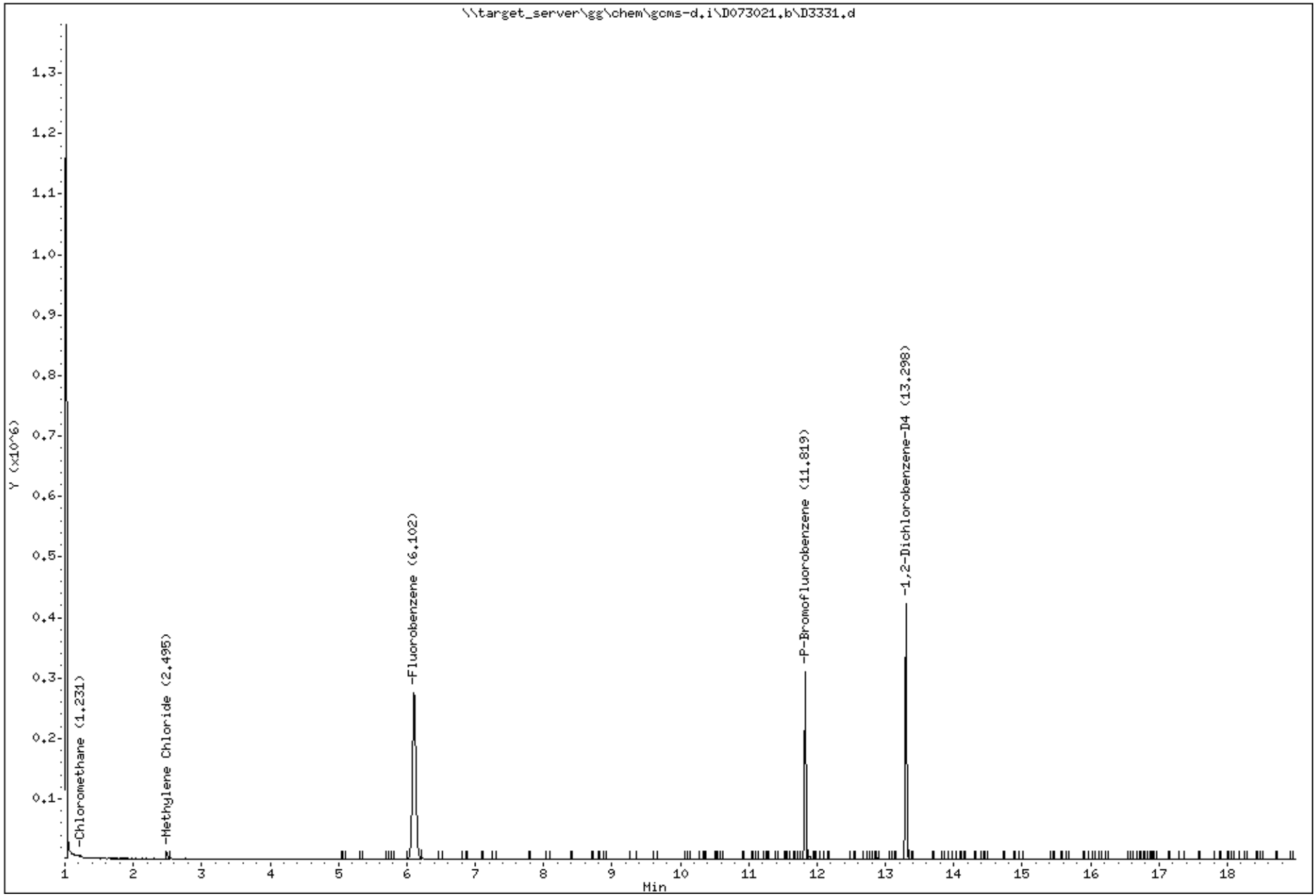
Name	Value	Description
DF	1.000	Dilution Factor
Vo	25.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/l)	REVIEW CODE
2	Chloromethane	50	1.230	1.231	(0.202)	2332	0.11802	0.12(a)	
10	Methylene Chloride	84	2.495	2.495	(0.409)	4264	0.63517	0.64(a)	
* 29	Fluorobenzene	96	6.102	6.102	(1.000)	469099	10.0000		
$ 53	P-Bromofluorobenzene	95	11.819	11.819	(1.937)	90669	6.64368	6.6	
$ 68	1,2-Dichlorobenzene-D4	152	13.297	13.297	(2.179)	95979	7.43200	7.4	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3331.d
Date : 30-JUL-2021 14:20
Client ID: W-02R-INF-SUMMER202 Instrument: gcms-d.i
Sample Info: S04724-5



Katahdin Analytical Services 1000037

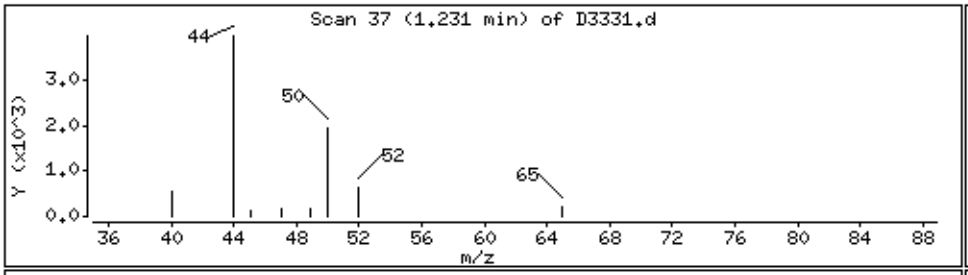
Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3331.d

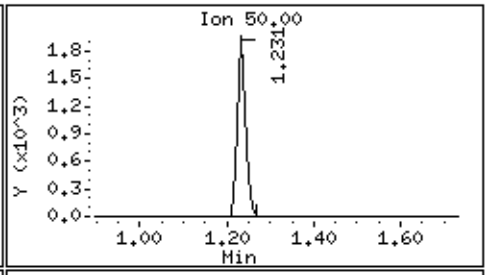
Date : 30-JUL-2021 14:20

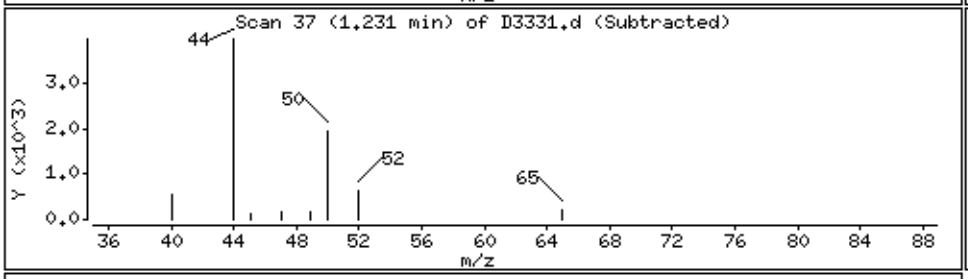
Client ID: W-02R-INF-SUMMER202 Instrument: gcms-d.i

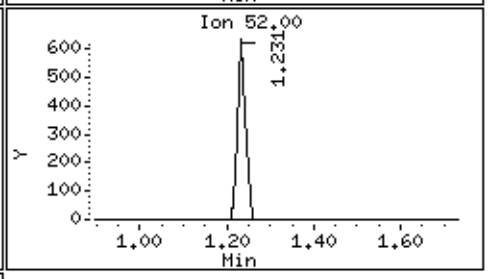
Sample Info: S04724-5

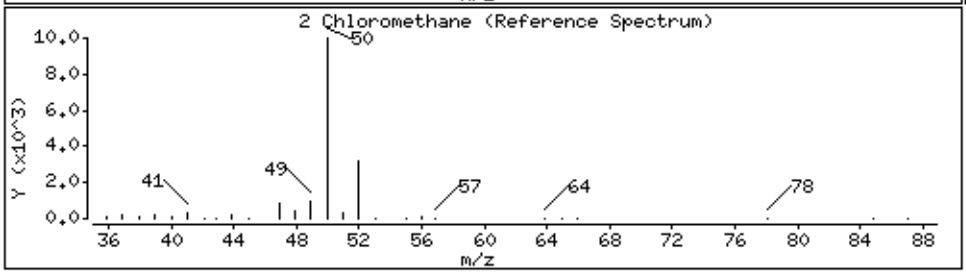
2 Chloromethane Concentration: 0.12 ug/l



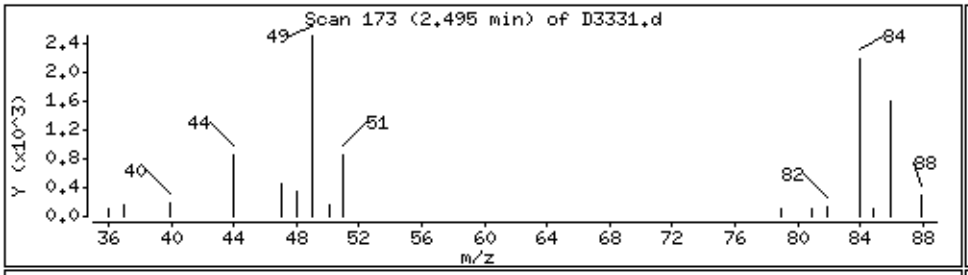


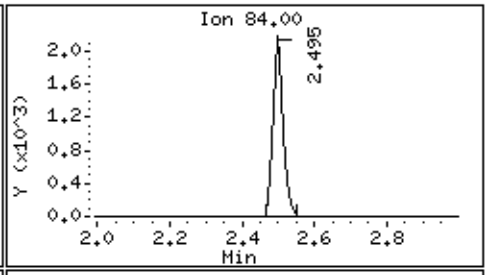


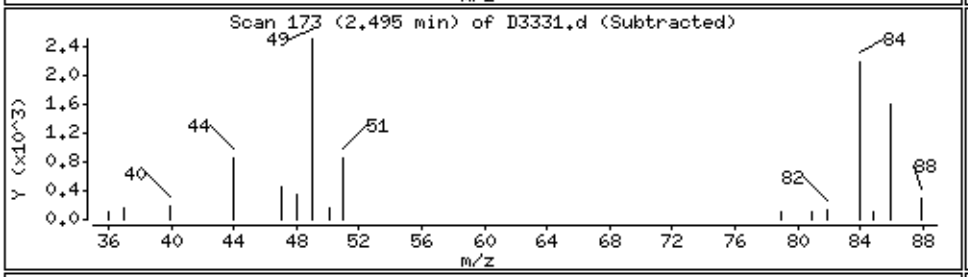


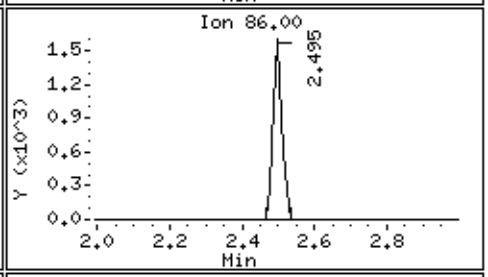


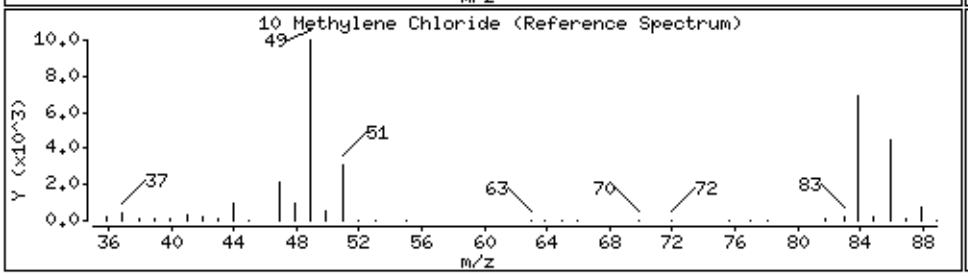
10 Methylene Chloride Concentration: 0.64 ug/l

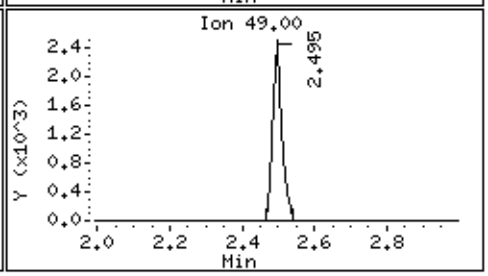












Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-6
Client ID: DW-FD-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3332.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	0.50	ug/L	1	1	1.0	0.10	0.50
Chloromethane	J	0.29	ug/L	1	1	1.0	0.077	0.50
Vinyl Chloride	U	0.50	ug/L	1	1	1.0	0.083	0.50
Bromomethane	U	0.50	ug/L	1	1	1.0	0.13	0.50
Chloroethane	UL	0.50	ug/L	1	1	1.0	0.085	0.50
Trichlorofluoromethane	U	0.25	ug/L	1	.5	0.50	0.072	0.25
1,1-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.084	0.25
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	J	1.1	ug/L	1	2.5	2.5	0.62	1.2
Acetone	UL	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.076	0.25
1,1-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.049	0.25
cis-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
2,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.14	0.25
Chloroform	U	0.25	ug/L	1	.5	0.50	0.047	0.25
Bromochloromethane	U	0.25	ug/L	1	.5	0.50	0.087	0.25
1,1,1-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.058	0.25
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.10	0.25
1,1-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.054	0.25
Carbon Tetrachloride	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Benzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
1,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.066	0.25
Trichloroethene	U	0.25	ug/L	1	.5	0.50	0.044	0.25
Dibromomethane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Bromodichloromethane	U	0.25	ug/L	1	.5	0.50	0.061	0.25
cis-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
Toluene	U	0.25	ug/L	1	1	1.0	0.061	0.25
trans-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.12	0.25
1,1,2-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.13	0.25
1,3-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Dibromochloromethane	U	0.25	ug/L	1	.5	0.50	0.092	0.25
Tetrachloroethene	U	0.25	ug/L	1	.5	0.50	0.073	0.25
4-Methyl-2-Pentanone	UL	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dibromoethane	U	0.25	ug/L	1	.5	0.50	0.090	0.25

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Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-6
Client ID: DW-FD-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3332.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
2-Hexanone	ULL	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.25	ug/L	1	.5	0.50	0.057	0.25
1,1,1,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Ethylbenzene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
m+p-Xylenes	U	0.25	ug/L	1	1	1.0	0.098	0.25
Bromoform	U	0.25	ug/L	1	.5	0.50	0.055	0.25
o-Xylene	U	0.25	ug/L	1	.5	0.50	0.043	0.25
Styrene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,1,2,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.11	0.25
1,2,3-Trichloropropane	U	0.25	ug/L	1	.5	0.50	0.099	0.25
Isopropylbenzene	U	0.25	ug/L	1	.5	0.50	0.059	0.25
Bromobenzene	U	0.25	ug/L	1	.5	0.50	0.066	0.25
2-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
N-Propylbenzene	U	0.25	ug/L	1	.5	0.50	0.063	0.25
4-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.077	0.25
1,3,5-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
1,2,4-Trichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.10	0.25
sec-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.085	0.25
1,3-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.049	0.25
p-Isopropyltoluene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,4-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.065	0.25
N-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.083	0.25
1,2-Dibromo-3-Chloropropane	U	0.25	ug/L	1	.5	0.50	0.080	0.25
1,2,4-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
Naphthalene	ULL	0.50	ug/L	1	1	1.0	0.14	0.50
Hexachlorobutadiene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2,3-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.13	0.50
Methyl tert-butyl Ether	U	0.25	ug/L	1	1	1.0	0.097	0.25
p-Bromofluorobenzene		65.2	%					
1,2-Dichlorobenzene-D4		74.3	%					

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Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3332.d
Report Date: 07-Aug-2021 10:13

Katahdin Analytical Services

EPA 524.2

Data file : \\target_server\gg\chem\gcms-d.i\D073021.b\D3332.d
Lab Smp Id: SO4724-6 Client Smp ID: DW-FD-SUMMER2021
Inj Date : 30-JUL-2021 14:59
Operator : JSS Inst ID: gcms-d.i
Smp Info : SO4724-6
Misc Info : WG303440,WG303293-4
Comment :
Method : \\target_server\gg\chem\gcms-d.i\D073021.b\D5A25(70)D.m
Meth Date : 07-Aug-2021 10:01 hgould Quant Type: ISTD
Cal Date : 29-JUL-2021 13:45 Cal File: D3314.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: ORGANICS2

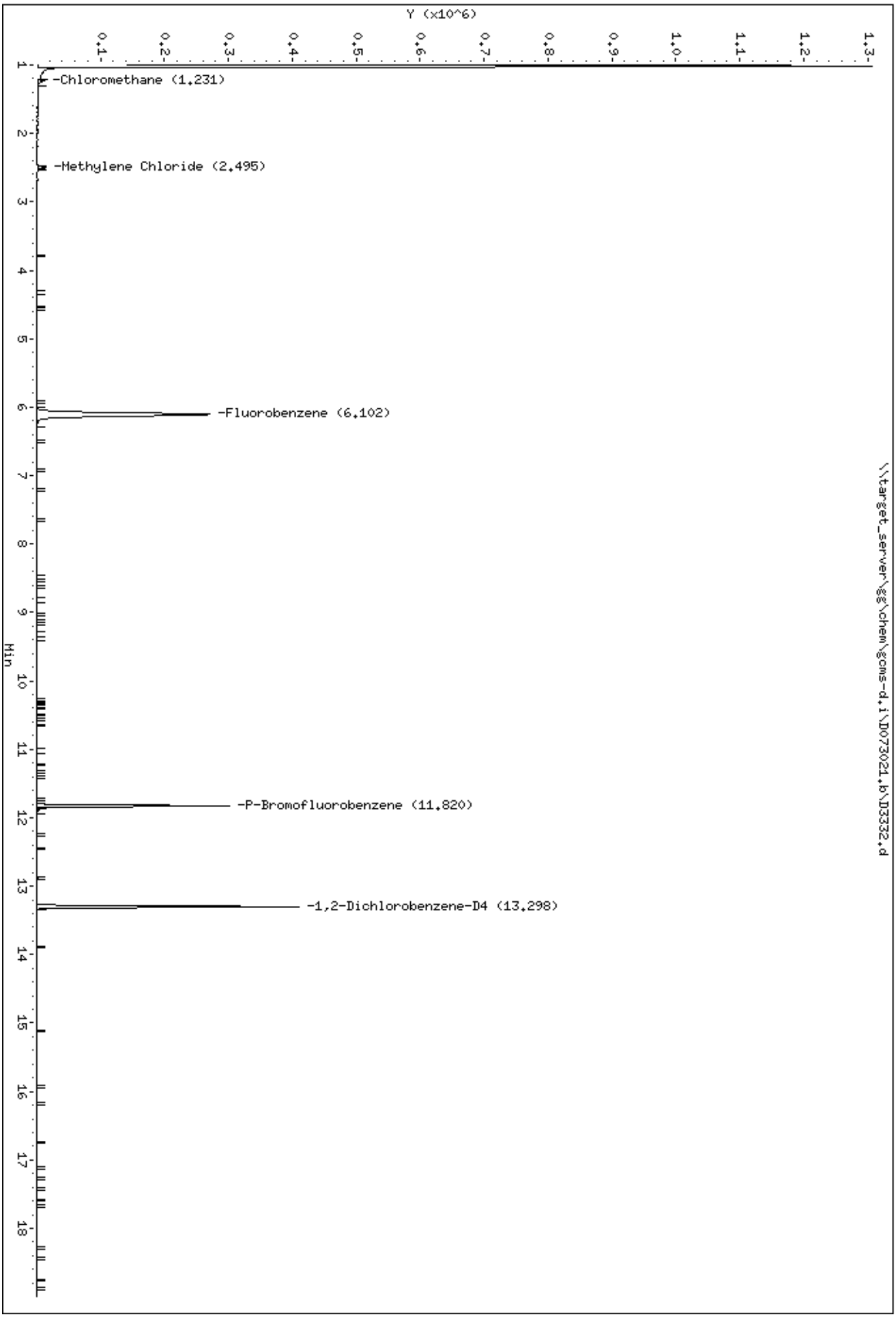
Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	25.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/l)	REVIEW CODE
2	Chloromethane	50	1.230	1.231	(0.202)	5550	0.28690	0.29(a)	
10	Methylene Chloride	84	2.495	2.495	(0.409)	7009	1.06644	1.1(a)	
* 29	Fluorobenzene	96	6.102	6.102	(1.000)	459257	10.0000		
$ 53	P-Bromofluorobenzene	95	11.819	11.819	(1.937)	87111	6.51976	6.5	
$ 68	1,2-Dichlorobenzene-D4	152	13.297	13.297	(2.179)	93933	7.42944	7.4	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).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Date : 30-JUL-2021 14:59
Client ID: DW-FD-SUMMER2021
Sample Info: SD4724-6
Instrument: gcms-d.i
\\target_server\gg\chem\gcms-d.i\D073021.b\D3332.d
Y (x10^6)
Min
-Chloromethane (1.231)
-Methylene Chloride (2.495)
-Fluorobenzene (6.102)
-P-Bromofluorobenzene (11.820)
-1,2-Dichlorobenzene-D4 (13.298)

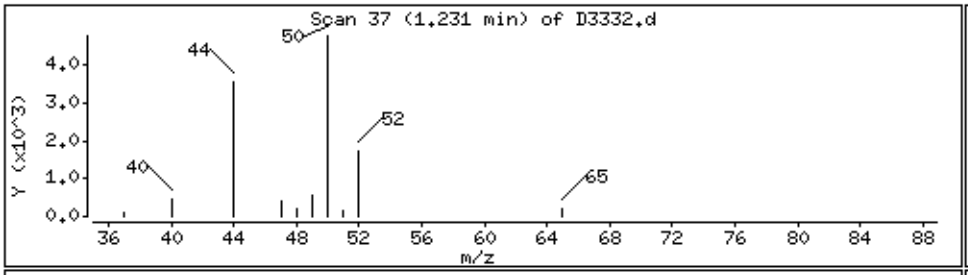
Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3332.d

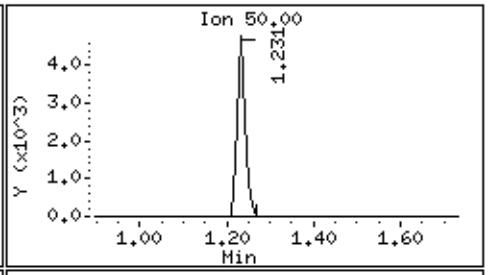
Date : 30-JUL-2021 14:59

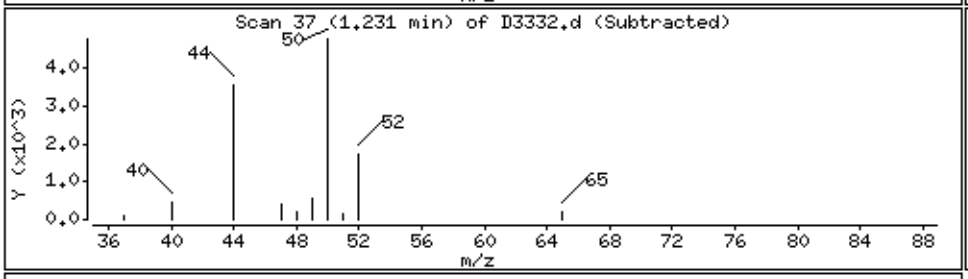
Client ID: DW-FD-SUMMER2021 Instrument: gcms-d.i

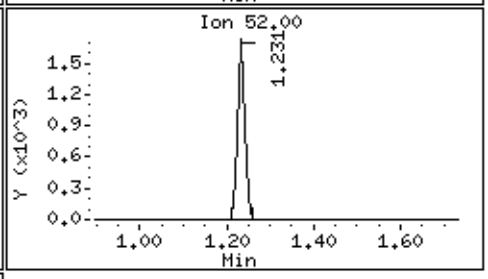
Sample Info: S04724-6

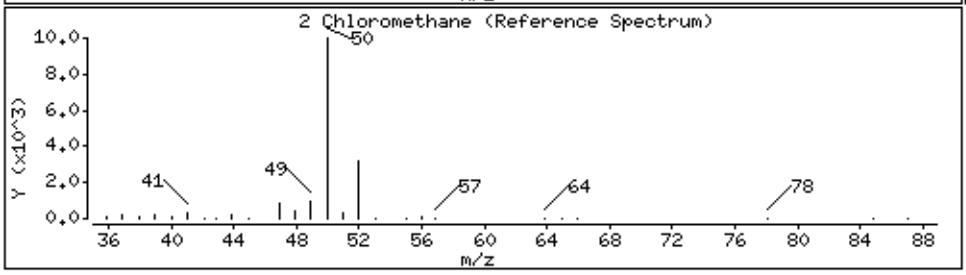
2 Chloromethane Concentration: 0.29 ug/l



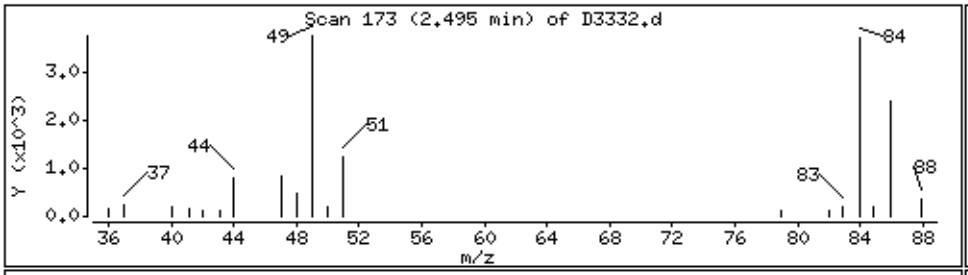


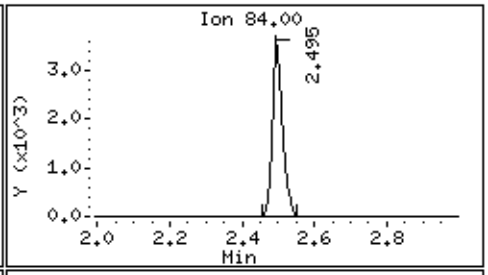


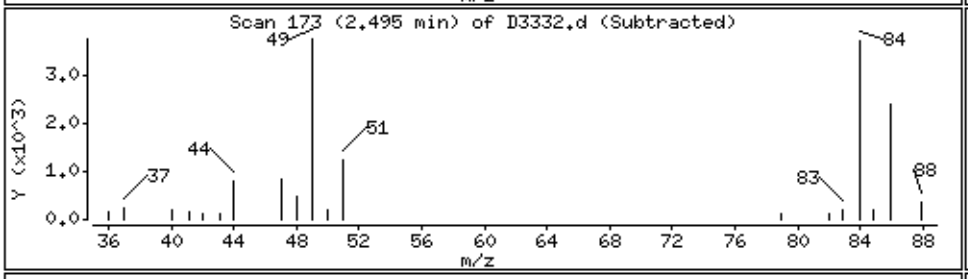


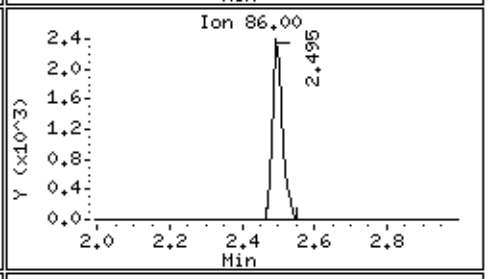


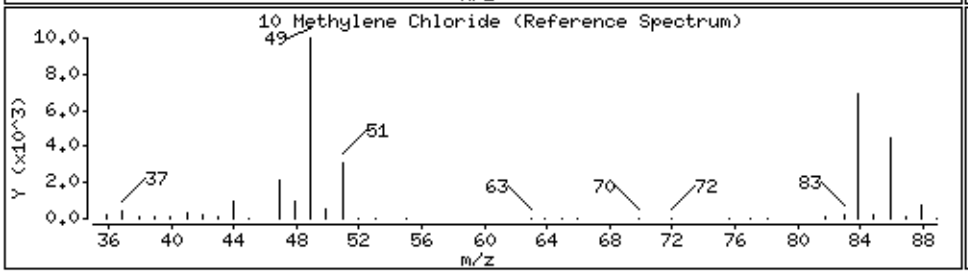
10 Methylene Chloride Concentration: 1.1 ug/l

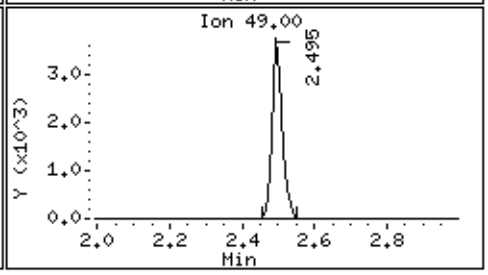












Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-7
Client ID: DW-TB-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3327.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	0.50	ug/L	1	1	1.0	0.10	0.50
Chloromethane	J	0.13	ug/L	1	1	1.0	0.077	0.50
Vinyl Chloride	U	0.50	ug/L	1	1	1.0	0.083	0.50
Bromomethane	U	0.50	ug/L	1	1	1.0	0.13	0.50
Chloroethane	UL	0.50	ug/L	1	1	1.0	0.085	0.50
Trichlorofluoromethane	U	0.25	ug/L	1	.5	0.50	0.072	0.25
1,1-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.084	0.25
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride		8.6	ug/L	1	2.5	2.5	0.62	1.2
Acetone	UL	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.076	0.25
1,1-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.049	0.25
cis-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
2,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.14	0.25
Chloroform	U	0.25	ug/L	1	.5	0.50	0.047	0.25
Bromochloromethane	U	0.25	ug/L	1	.5	0.50	0.087	0.25
1,1,1-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.058	0.25
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.10	0.25
1,1-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.054	0.25
Carbon Tetrachloride	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Benzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
1,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.066	0.25
Trichloroethene	U	0.25	ug/L	1	.5	0.50	0.044	0.25
Dibromomethane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Bromodichloromethane	U	0.25	ug/L	1	.5	0.50	0.061	0.25
cis-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
Toluene	U	0.25	ug/L	1	1	1.0	0.061	0.25
trans-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.12	0.25
1,1,2-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.13	0.25
1,3-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Dibromochloromethane	U	0.25	ug/L	1	.5	0.50	0.092	0.25
Tetrachloroethene	U	0.25	ug/L	1	.5	0.50	0.073	0.25
4-Methyl-2-Pentanone	UL	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dibromoethane	U	0.25	ug/L	1	.5	0.50	0.090	0.25

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-7
Client ID: DW-TB-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: D3327.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA
Report Date: 13-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
2-Hexanone	ULL	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.25	ug/L	1	.5	0.50	0.057	0.25
1,1,1,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Ethylbenzene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
m+p-Xylenes	U	0.25	ug/L	1	1	1.0	0.098	0.25
Bromoform	U	0.25	ug/L	1	.5	0.50	0.055	0.25
o-Xylene	U	0.25	ug/L	1	.5	0.50	0.043	0.25
Styrene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,1,2,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.11	0.25
1,2,3-Trichloropropane	U	0.25	ug/L	1	.5	0.50	0.099	0.25
Isopropylbenzene	U	0.25	ug/L	1	.5	0.50	0.059	0.25
Bromobenzene	U	0.25	ug/L	1	.5	0.50	0.066	0.25
2-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
N-Propylbenzene	U	0.25	ug/L	1	.5	0.50	0.063	0.25
4-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.077	0.25
1,3,5-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
1,2,4-Trichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.10	0.25
sec-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.085	0.25
1,3-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.049	0.25
p-Isopropyltoluene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,4-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.065	0.25
N-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.083	0.25
1,2-Dibromo-3-Chloropropane	U	0.25	ug/L	1	.5	0.50	0.080	0.25
1,2,4-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
Naphthalene	ULL	0.50	ug/L	1	1	1.0	0.14	0.50
Hexachlorobutadiene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2,3-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.13	0.50
Methyl tert-butyl Ether	U	0.25	ug/L	1	1	1.0	0.097	0.25
p-Bromofluorobenzene		70.4	%					
1,2-Dichlorobenzene-D4		76.4	%					

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Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3327.d
Report Date: 07-Aug-2021 10:12

Katahdin Analytical Services

EPA 524.2

Data file : \\target_server\gg\chem\gcms-d.i\D073021.b\D3327.d
Lab Smp Id: SO4724-7 Client Smp ID: DW-TB-SUMMER2021
Inj Date : 30-JUL-2021 11:43
Operator : JSS Inst ID: gcms-d.i
Smp Info : SO4724-7
Misc Info : WG303440,WG303293-4
Comment :
Method : \\target_server\gg\chem\gcms-d.i\D073021.b\D5A25(70)D.m
Meth Date : 07-Aug-2021 10:01 hgould Quant Type: ISTD
Cal Date : 29-JUL-2021 13:45 Cal File: D3314.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: ORGANICS2

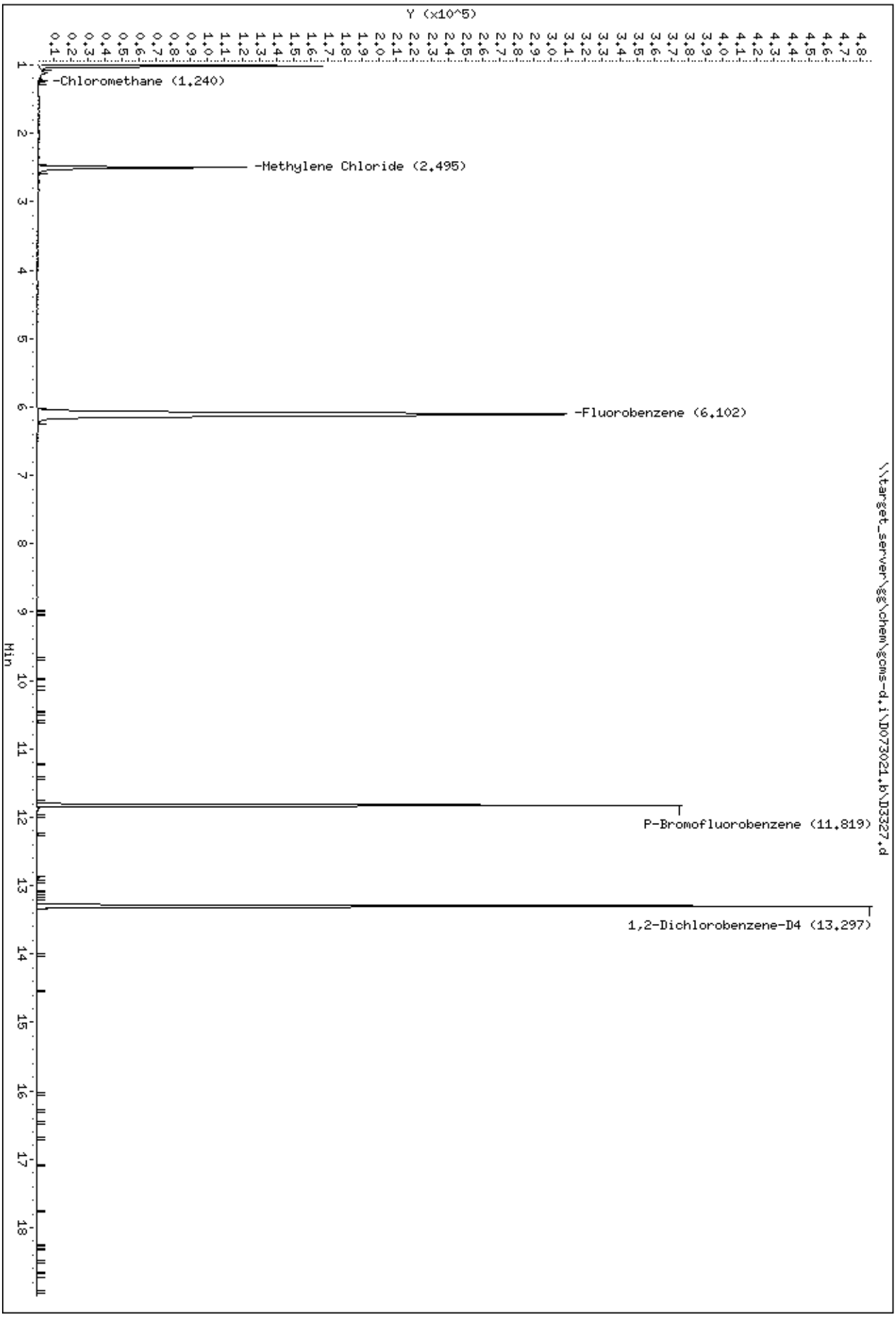
Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	25.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/l)	REVIEW CODE
2	Chloromethane	50	1.230	1.231	(0.201)	2870	0.12852	0.13(a)	
10	Methylene Chloride	84	2.495	2.495	(0.408)	65280	8.60404	8.6	
* 29	Fluorobenzene	96	6.111	6.102	(1.000)	530166	10.0000		
$ 53	P-Bromofluorobenzene	95	11.819	11.819	(1.934)	108571	7.03909	7.0	
$ 68	1,2-Dichlorobenzene-D4	152	13.297	13.297	(2.176)	111580	7.64484	7.6	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).


Y (x10^5)
-Chloromethane (1,240)
-Methylene Chloride (2,495)
-Fluorobenzene (6,102)
P-Bromofluorobenzene (11,819)
1,2-Dichlorobenzene-D4 (13,297)
Min
\\target_server\gg\chem\gcms-d,i\D073021,b\D3327,d
Data File: \\target_server\gg\chem\gcms-d,i\D073021,b\D3327,d
Date : 30-JUL-2021 11:43
Client ID: DW-TB-SUMMER2021
Sample Info: SD4724-7
Instrument: gcms-d,i

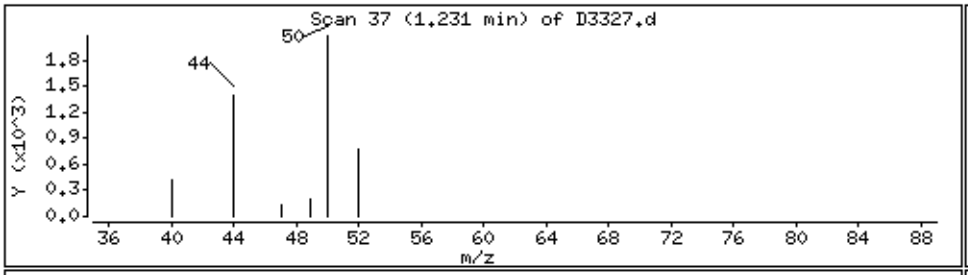
Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3327.d

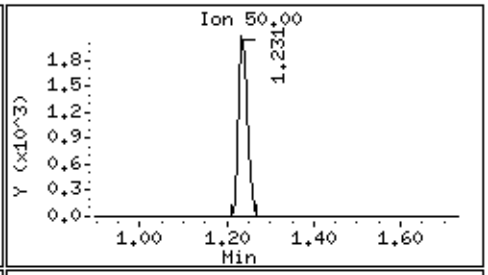
Date : 30-JUL-2021 11:43

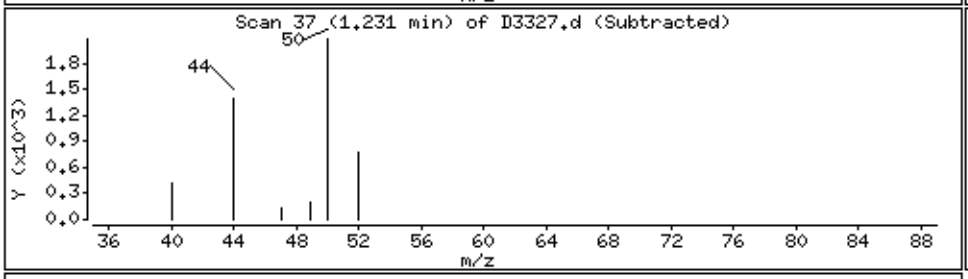
Client ID: DW-TB-SUMMER2021 Instrument: gcms-d.i

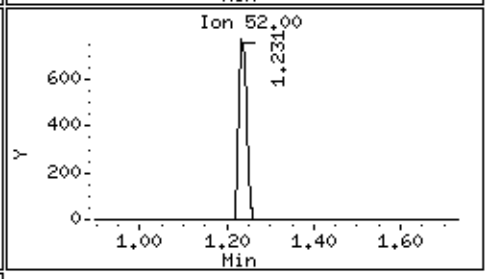
Sample Info: S04724-7

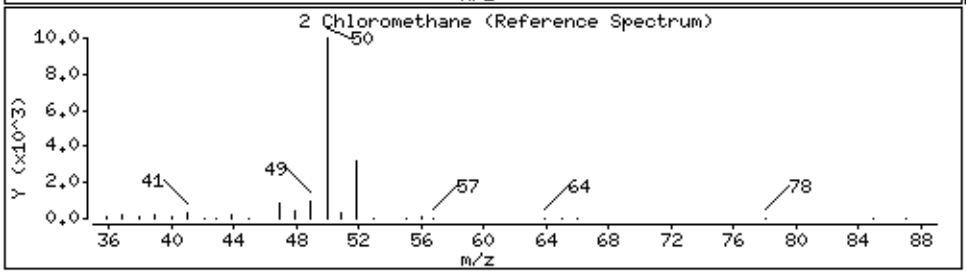
2 Chloromethane Concentration: 0.13 ug/l



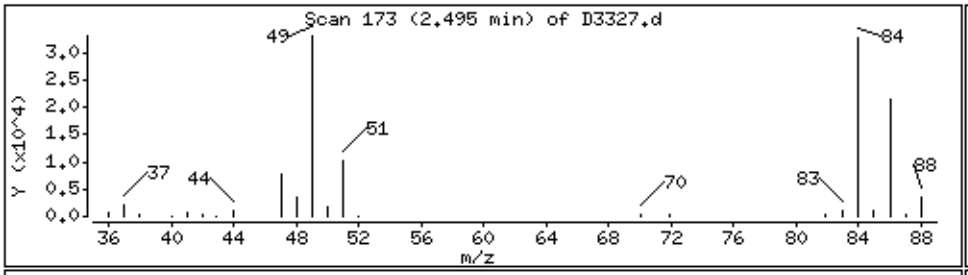


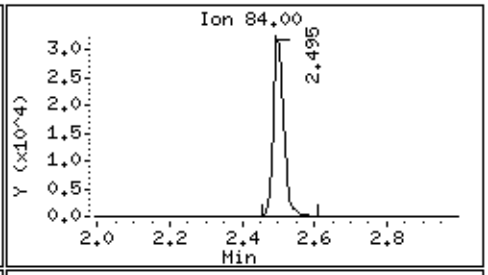


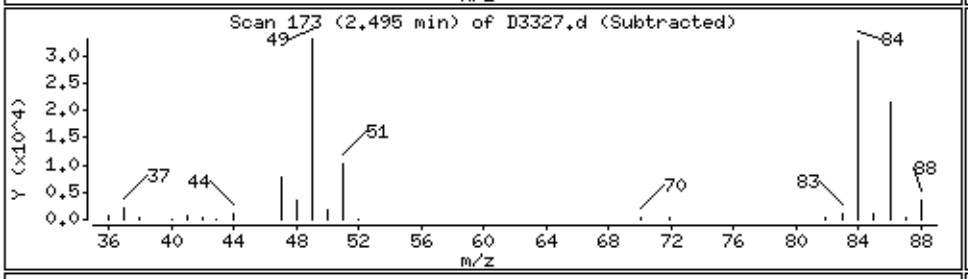


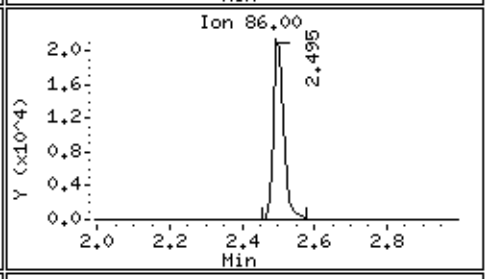


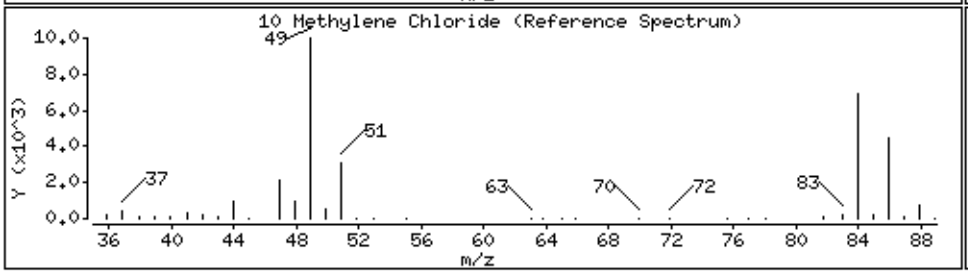
10 Methylene Chloride Concentration: 8.6 ug/l

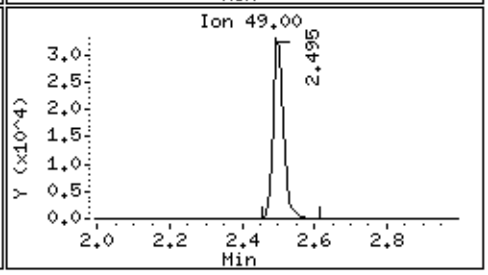












Standards Data Section

Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services **SDG:** SO4724
Project : LO-58 Nike Missile Battery Launch Site **Instrument ID:** GCMS-D
Lab File IDs : D3314.d D3313.d D3306.d **Calibration Date(s):** 29-JUL-21 08:32
D3315.d D3311.d D3310.d 29-JUL-21 14:24
D3309.d

	0.5000000	2.0000	5.0000	10.0000	20.0000	40.0000	60.0000		Curve	b	m1	m2	%RSD	MAX	
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7		Type					%RSD	
Dichlorodifluoromethane	0.35904	0.33470	0.37905	0.34641	0.34318	0.34957	0.35035		AVG		.3518		4.017	20	O
Chloromethane	0.54613	0.44955	0.41715	0.37751	0.38784	0.39725	0.37307		AVG		.4212		14.49	20	O
Vinyl chloride	0.23527	0.22761	0.23926	0.23189	0.22564	0.23194	0.22305		AVG		.2307		2.444	20	O
Bromomethane	0.09294	0.08361	0.09596	0.09413	0.08625	0.09250	0.09860		AVG		.092		5.758	20	O
Chloroethane	3521	13678	35344	62044	106058	185832	284931		QUA	0	13.27	.7012	.9925	.99	O
Trichlorofluoromethane	0.44040	0.41767	0.45416	0.44550	0.39191	0.39963	0.41247		AVG		.4231		5.652	20	O
1,1-Dichloroethene	0.21261	0.17244	0.20118	0.18912	0.17759	0.17835	0.18033		AVG		.1874		7.797	20	O
Carbon Disulfide	0.52748	0.47095	0.55696	0.52689	0.50447	0.51124	0.51070		AVG		.5155		5.095	20	O
Methylene Chloride	10536	22837	57968	99277	200176	389797	542725		LNR	0	.1431		.9989	.99	O
Acetone	2011	2033	4481	6943	15426	28354	39738		LNR	0	.01051		.9959	.99	O
trans-1,2-Dichloroethene	0.24941	0.19408	0.21904	0.20189	0.19075	0.19363	0.19492		AVG		.2062		10.33	20	O
1,1-Dichloroethane	0.50865	0.46125	0.50842	0.48214	0.48489	0.48980	0.48942		AVG		.4892		3.335	20	O
cis-1,2-Dichloroethene	0.25127	0.24416	0.28294	0.28622	0.30561	0.31334	0.31528		AVG		.2856		10.06	20	O
2,2-Dichloropropane	0.28807	0.27355	0.30756	0.29774	0.29365	0.31999	0.31807		AVG		.2998		5.566	20	O
Chloroform	0.62825	0.51396	0.53846	0.51985	0.51449	0.52107	0.52967		AVG		.538		7.574	20	O
Bromochloromethane	0.10636	0.09740	0.10681	0.10654	0.11148	0.10996	0.10091		AVG		.1056		4.666	20	O
1,1,1-Trichloroethane	0.43157	0.40677	0.47250	0.46133	0.47816	0.49391	0.49828		AVG		.4632		7.199	20	O
2-Butanone	+++++	0.01606	0.01708	0.01710	0.01955	0.01848	0.01784		AVG		.01768		6.916	20	O
1,2-Dichloroethane	0.19561	0.19210	0.20881	0.20303	0.20246	0.20632	0.20970		AVG		.2026		3.264	20	O
1,1-Dichloropropene	0.25555	0.25513	0.33940	0.35999	0.38138	0.39769	0.40002		AVG		.3413		18.28	20	O
Carbon Tetrachloride	0.40777	0.36782	0.43228	0.42760	0.43053	0.45319	0.46356		AVG		.4261		7.378	20	O
Benzene	0.84069	0.89614	1.04379	1.04802	1.07768	1.08259	1.08527		AVG		1.011		9.873	20	O
1,2-Dichloropropane	0.18551	0.18650	0.20999	0.21357	0.22195	0.22730	0.22825		AVG		.2104		8.542	20	O
Trichloroethene	0.29938	0.26197	0.29656	0.29702	0.30559	0.31556	0.32313		AVG		.2999		6.495	20	O
Dibromomethane	0.09008	0.09046	0.09653	0.09682	0.09805	0.10145	0.10320		AVG		.09666		5.166	20	O
Bromodichloromethane	0.24503	0.23231	0.27284	0.27487	0.28969	0.30314	0.31291		AVG		.2758		10.64	20	O
cis-1,3-dichloropropene	3913	19008	63377	141412	376984	804257	1160285		QUA	0	3.921	-.3637	.999	.99	O
Toluene	9686	55960	209254	425982	984941	1933188	2701417		LNR	0	.7075		.9996	.99	O
trans-1,3-Dichloropropene	2599	13847	48375	105427	270556	575556	837767		QUA	0	5.466	-.7207	.9993	.99	O
1,1,2-Trichloroethane	0.08570	0.09550	0.10279	0.10455	0.10601	0.10886	0.10851		AVG		.1017		8.226	20	O
1,3-Dichloropropane	0.14353	0.16245	0.18700	0.19532	0.20833	0.21278	0.21564		AVG		.1893		14.41	20	O
Dibromochloromethane	0.10705	0.11686	0.14164	0.14740	0.16411	0.17995	0.18740		AVG		.1492		20.31	20	WO
Tetrachloroethene	0.20544	0.20522	0.23974	0.24519	0.24975	0.26093	0.26901		AVG		.2393		10.52	20	O
4-methyl-2-pentanone	+++++	2680	7648	17723	54690	118251	166970		QUA	0	26.97	-16.87	.9972	.99	O
1,2-Dibromoethane	0.07701	0.08537	0.09836	0.10345	0.11021	0.11600	0.11877		AVG		.1013		15.39	20	O
2-Hexanone	+++++	1051	3450	7770	25682	63491	91562		QUA	0	54.91	-97.25	.9947	.99	O

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Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services **SDG:** SO4724
Project : LO-58 Nike Missile Battery Launch Site **Instrument ID:** GCMS-D
Lab File IDs : D3314.d D3313.d D3306.d D3315.d D3311.d D3310.d D3309.d **Calibration Date(s):** 29-JUL-21 08:32 29-JUL-21 14:24

Chlorobenzene	11877	63029	214822	437979	1038437	2037415	2820104		LNR	0	.7408		.9996	.99	O
1,1,1,2-Tetrachloroethane	0.17771	0.19313	0.22559	0.22408	0.22968	0.23882	0.24489		AVG		.2191		11.21	20	O
Ethylbenzene	16847	123371	444513	871885	1924203	3716210	5085165		LNR	0	1.346		.9997	.99	O
m+p-Xylenes	15000	114308	359584	694738	1476254	2713214	3554675		LNR	0	.4818		.9967	.99	O
Bromoform	1387	6418	20868	43054	106295	226800	334276		QUA	0	13.9	-4.87	.9996	.99	O
o-Xylene	6127	40704	150728	300422	695619	1357898	1885345		LNR	0	.4952		.9997	.99	O
Styrene	7553	62808	227560	447543	1025910	2007123	2786502		LNR	0	.7319		.9998	.99	O
1,1,2,2-Tetrachloroethane	0.11398	0.11363	0.11725	0.11662	0.11726	0.12198	0.12400		AVG		.1178		3.284	20	O
1,2,3-Trichloropropane	0.08884	0.09040	0.09527	0.09231	0.09327	0.09268	0.09151		AVG		.09204		2.247	20	O
Isopropylbenzene	17232	127668	440960	868958	1901906	3707953	5176718		LNR	0	1.359		.9999	.99	O
Bromobenzene	0.23630	0.23914	0.26056	0.25806	0.26335	0.27213	0.27842		AVG		.2583		6.075	20	O
2-Chlorotoluene	0.68484	0.80035	0.95575	0.93322	0.90845	0.92245	0.91710		AVG		.8746		11.12	20	O
N-Propylbenzene	1.17449	1.44265	1.73326	1.72104	1.63441	1.64425	1.61677		AVG		1.567		12.6	20	O
4-Chlorotoluene	0.67905	0.82863	0.95116	0.94691	0.91898	0.92984	0.92776		AVG		.8832		11.21	20	O
1,3,5-Trimethylbenzene	0.61990	0.92165	1.15215	1.14064	1.11222	1.11932	1.11304		AVG		1.026		19.03	20	O
1,2,4-Trichlorobenzene	3666	18301	65373	136967	374386	785347	1108473		LNR	0	.2872		.9958	.99	O
sec-Butylbenzene	0.96812	1.30804	1.57790	1.56003	1.48371	1.48171	1.47170		AVG		1.407		15.09	20	O
1,3-Dichlorobenzene	0.53672	0.57622	0.60616	0.58687	0.56254	0.56875	0.58214		AVG		.5742		3.775	20	O
P-Isopropyltoluene	0.55748	0.78721	0.99715	1.00228	0.98102	0.99422	0.99986		AVG		.9027		18.93	20	O
1,4-Dichlorobenzene	0.46292	0.49442	0.54433	0.53542	0.53154	0.54774	0.56073		AVG		.5253		6.552	20	O
1,2-Dichlorobenzene	0.49075	0.45471	0.46712	0.44433	0.44247	0.45259	0.46026		AVG		.4589		3.584	20	O
N-Butylbenzene	16922	118367	390856	769710	1641867	3291612	4571114		LNR	0	1.2		.9998	.99	O
1,2-Dibromo-3-Chloropropane	140	1038	2996	5850	16543	37799	56857		QUA	0	88.94	-252	.9983	.99	O
1,2,4-Trimethylbenzene	0.59752	0.94363	1.14562	1.15428	1.12069	1.13245	1.13053		AVG		1.032		19.86	20	O
Naphthalene	1855	9858	38941	93344	365483	822524	1142980		QUA	0	3.985	-.3937	.994	.99	O
Hexachlorobutadiene	0.19168	0.18427	0.21873	0.21965	0.22341	0.24122	0.25478		AVG		.2191		11.4	20	O
1,2,3-Trichlorobenzene	3175	13872	48047	92272	269602	552539	747850		LNR	0	.197		.9964	.99	O
Methyl tert-butyl ether	0.20413	0.18246	0.19034	0.17794	0.18903	0.19144	0.18655		AVG		.1888		4.364	20	O
P-Bromofluorobenzene	0.26473	0.29110	0.29389	0.29406	0.29344	0.29403	0.30525		AVG		.2909		4.27	20	
1,2-Dichlorobenzene-D4	0.26762	0.28052	0.27797	0.27591	0.26742	0.27279	0.28486		AVG		.2753		2.36	20	
1,2-Dichlorobenzene	0.49075	0.45471	0.46712	0.44433	0.44247	0.45259	0.46026		AVG		.4589		3.584	20	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3323a.d
Report Date: 09-Aug-2021 10:01

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: SDGa01600
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: WG303440-8
Level: LOW Operator: JSS
Data Type: MS DATA SampleType: LCS
SpikeList File: INDCHK524.spk Quant Type: ISTD
Sublist File: all.sub
Method File: \\target_server\gg\chem\gcms-d.i\D073021.b\D5A25(70)D.m
Misc Info: WG303440,WG303293-4,SO4724-1

	SPIKE	COMPOUND	CONC ADDED ug/l	CONC RECOVERED ug/l	% RECOVERED	LIMITS
	1	Dichlorodifluorome	5.0	5.7	113.76	80-120
	2	Chloromethane	5.0	4.8	95.99	80-120
	3	Vinyl chloride	5.0	5.2	104.06	80-120
	4	Bromomethane	5.0	4.9	98.67	80-120
	5	Chloroethane	5.0	6.9	137.26*	80-120
	6	Trichlorofluoromet	5.0	5.2	105.04	80-120
	9	Freon-113	5.0	4.1	81.84	80-120
	7	1,1-Dichloroethene	5.0	4.7	94.94	80-120
	11	Acetone	5.0	6.7	133.33*	80-120
	8	Carbon Disulfide	5.0	4.8	95.51	80-120
	10	Methylene Chloride	5.0	5.6	112.73	80-120
	12	trans-1,2-Dichloro	5.0	4.8	96.26	80-120
	13	Methyl tert-butyl	5.0	4.8	96.30	80-120
	16	1,1-Dichloroethane	5.0	5.1	102.68	80-120
	15	Di-isopropyl Ether	5.0	4.6	92.54	80-120
	17	Ethyl tertiary-but	5.0	3.8	76.95*	80-120
	14	Tertiary-butyl alc	25.0	23.8	95.38	80-120
	19	2,2-Dichloropropan	5.0	5.1	102.74	80-120
	18	cis-1,2-Dichloroet	5.0	4.7	94.48	80-120
M	76	1,2-Dichloroethyle	10.0	9.5	95.37	80-120
	25	2-Butanone	5.0	4.9	97.83	80-120
	20	Bromochloromethane	5.0	5.2	103.14	80-120
	21	Chloroform	5.0	4.9	98.29	80-120
	23	1,1,1-Trichloroeth	5.0	4.8	95.89	80-120
	22	Carbon Tetrachlori	5.0	4.6	93.07	80-120
	24	1,1-Dichloropropen	5.0	5.1	101.47	80-120
	26	Benzene	5.0	5.2	103.78	80-120
	28	1,2-Dichloroethane	5.0	5.2	103.68	80-120
	27	Tertiary-amyl meth	5.0	3.7	74.69*	80-120
	30	Trichloroethene	5.0	5.2	105.04	80-120
	32	1,2-Dichloropropan	5.0	5.0	99.24	80-120
	31	Dibromomethane	5.0	4.8	95.64	80-120
	33	Bromodichlorometha	5.0	4.8	95.93	80-120
	42	2-Chloroethylvinyl	5.0	4.9	98.97	80-120
	34	cis-1,3-dichloropr	5.0	4.0	81.01	80-120
M	77	Xylenes (total)	15.0	15.4	102.96	80-120
	37	4-methyl-2-pentano	5.0	3.4	68.81*	80-120
	35	Toluene	5.0	4.6	91.18	80-120
	38	trans-1,3-Dichloro	5.0	4.1	82.13	80-120
	39	1,1,2-Trichloroeth	5.0	5.0	100.60	80-120

Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3323a.d
Report Date: 09-Aug-2021 10:01

		SPIKE COMPOUND	CONC ADDED ug/l	CONC RECOVERED ug/l	% RECOVERED	LIMITS
	36	Tetrachloroethene	5.0	4.8	96.30	80-120
	41	1,3-Dichloropropan	5.0	5.1	102.08	80-120
	44	2-Hexanone	5.0	3.4	68.69*	80-120
	40	Dibromochlorometha	5.0	3.8	75.94*	80-120
	43	1,2-Dibromoethane	5.0	5.1	101.67	80-120
	45	Chlorobenzene	5.0	4.5	89.88	80-120
	46	Ethylbenzene	5.0	5.0	99.34	80-120
	47	1,1,1,2-Tetrachlor	5.0	4.9	98.33	80-120
	48	m+p-Xylenes	10.0	11.0	109.58	80-120
	49	o-Xylene	5.0	4.5	89.71	80-120
	50	Styrene	5.0	4.6	92.64	80-120
	51	Bromoform	5.0	4.2	84.26	80-120
	52	Isopropylbenzene	5.0	4.8	96.46	80-120
	54	Bromobenzene	5.0	5.0	99.64	80-120
	56	1,1,2,2-Tetrachlor	5.0	5.1	101.30	80-120
	55	N-Propylbenzene	5.0	5.4	107.68	80-120
	58	1,2,3-Trichloropro	5.0	5.1	101.77	80-120
	57	2-Chlorotoluene	5.0	5.2	104.96	80-120
	59	1,3,5-Trimethylben	5.0	5.4	108.23	80-120
	60	4-Chlorotoluene	5.0	5.3	106.75	80-120
	61	tert-Butylbenzene	5.0	5.6	111.59	80-120
	62	1,2,4-Trimethylben	5.0	5.4	107.41	80-120
	63	sec-Butylbenzene	5.0	5.5	109.83	80-120
	65	1,3-Dichlorobenzen	5.0	5.2	103.59	80-120
	64	P-Isopropyltoluene	5.0	5.3	105.40	80-120
	66	1,4-Dichlorobenzen	5.0	5.1	102.22	80-120
	67	N-Butylbenzene	5.0	5.1	101.27	80-120
	69	1,2-Dichlorobenzen	5.0	5.1	101.37	80-120
	70	1,2-Dibromo-3-Chlo	5.0	4.0	80.77	80-120
	71	1,3,5-Trichloroben	5.0	4.7	93.36	80-120
	73	1,2,4-Trichloroben	5.0	3.7	73.35*	80-120
	72	Hexachlorobutadien	5.0	5.0	100.31	80-120
	74	Naphthalene	5.0	2.6	51.95*	80-120
	75	1,2,3-Trichloroben	5.0	3.9	78.41*	80-120
M	78	Trihalomethanes, T	20.0	17.7	88.61	80-120

		SURROGATE COMPOUND	CONC ADDED ug/l	CONC RECOVERED ug/l	% RECOVERED	LIMITS
$	53	P-Bromofluorobenze	10.0	10	99.94	60-121
$	68	1,2-Dichlorobenzen	10.0	10.0	100.23	51-133

Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3323a.d
Report Date: 09-Aug-2021 10:01

Katahdin Analytical Services

EPA 524.2

Data file : \\target_server\gg\chem\gcms-d.i\D073021.b\D3323a.d
Lab Smp Id: WG303440-8
Inj Date : 30-JUL-2021 09:07
Operator : JSS Inst ID: gcms-d.i
Smp Info : WG303440-8,SO4724
Misc Info : WG303440,WG303293-4,SO4724-1
Comment   :
Method   : \\target_server\gg\chem\gcms-d.i\D073021.b\D5A25(70)D.m
Meth Date : 07-Aug-2021 10:18 hgould Quant Type: ISTD
Cal Date : 29-JUL-2021 13:45 Cal File: D3314.d
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: T7-O360

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	25.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.110	1.110	(0.182)	132505	5.68792	5.7	
2	Chloromethane	50	1.230	1.231	(0.202)	133886	4.79952	4.8	
3	Vinyl chloride	62	1.277	1.277	(0.209)	79486	5.20320	5.2	
4	Bromomethane	94	1.491	1.491	(0.244)	30059	4.93347	4.9	
5	Chloroethane	64	1.574	1.575	(0.258)	34163	6.86313	6.9(R)	
6	Trichlorofluoromethane	101	1.667	1.668	(0.273)	147173	5.25222	5.2	
7	1,1-Dichloroethene	96	2.021	2.021	(0.331)	58908	4.74709	4.7	
8	Carbon Disulfide	76	2.039	2.040	(0.334)	163049	4.77565	4.8	
9	Freon-113	151	2.058	2.057	(0.337)	41962	4.09182	4.1	
10	Methylene Chloride	84	2.495	2.495	(0.409)	53421	5.63652	5.6	
11	Acetone	43	2.550	2.551	(0.418)	4641	6.66627	6.7(R)	
12	trans-1,2-Dichloroethene	96	2.625	2.635	(0.430)	65744	4.81323	4.8	
13	Methyl tert-butyl ether	73	2.746	2.746	(0.450)	60217	4.81491	4.8	
14	Tertiary-butyl alcohol	59	2.885	2.886	(0.473)	4391	23.8455	23.8	
15	Di-isopropyl Ether	45	3.145	3.146	(0.516)	139996	4.62720	4.6	
16	1,1-Dichloroethane	63	3.248	3.248	(0.532)	166348	5.13421	5.1	
17	Ethyl tertiary-butyl ether	59	3.564	3.564	(0.584)	90579	3.84761	3.8(R)	
18	cis-1,2-Dichloroethene	96	3.898	3.908	(0.639)	89335	4.72402	4.7	
19	2,2-Dichloropropane	77	4.038	4.029	(0.662)	101991	5.13675	5.1	
20	Bromochloromethane	128	4.168	4.178	(0.683)	36078	5.15692	5.2	
21	Chloroform	83	4.308	4.308	(0.706)	175091	4.91446	4.9	
22	Carbon Tetrachloride	117	4.456	4.447	(0.730)	131315	4.65331	4.6	
23	1,1,1-Trichloroethane	97	4.577	4.577	(0.750)	147088	4.79465	4.8	

Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3323a.d
Report Date: 09-Aug-2021 10:01

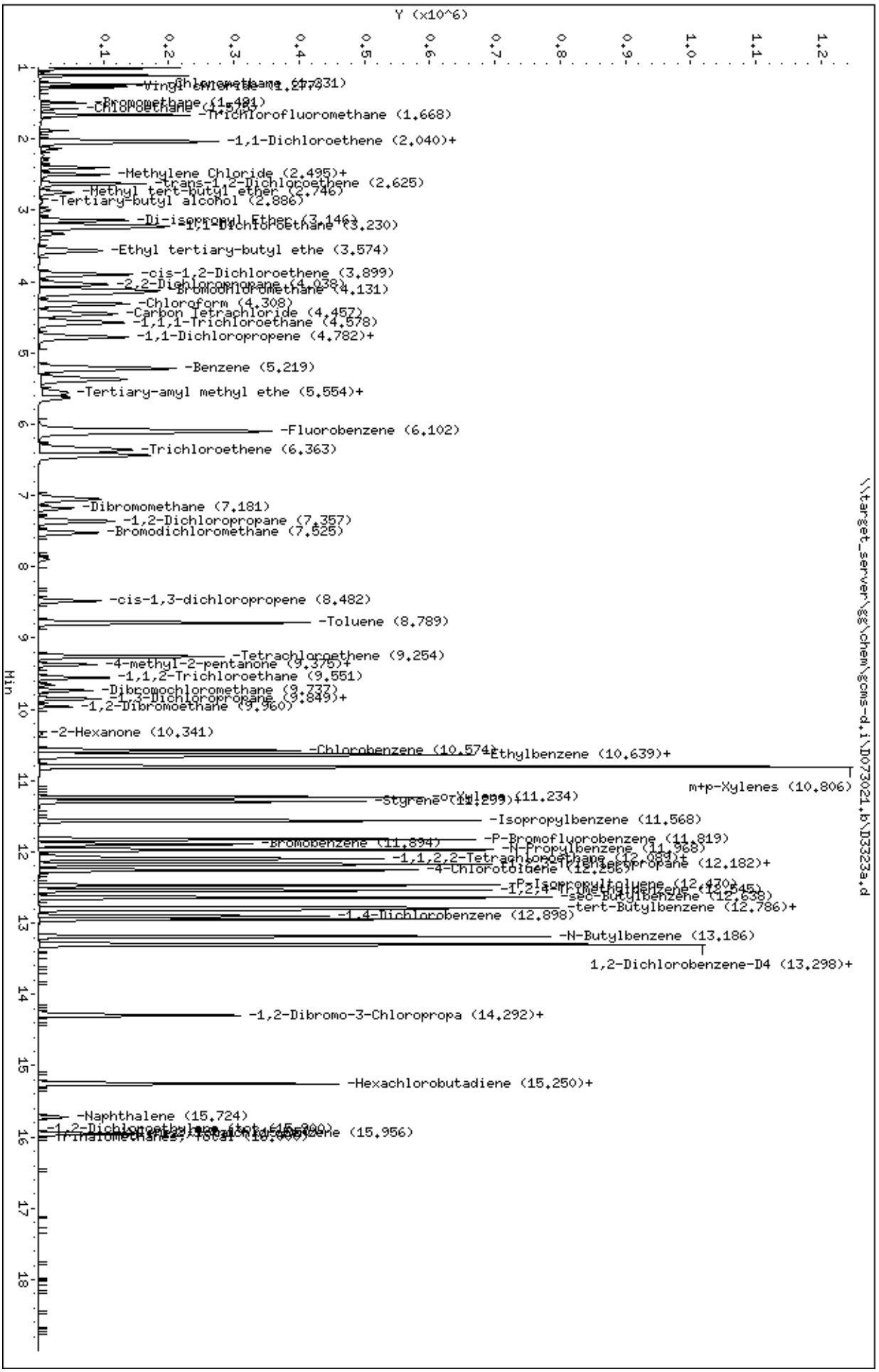
			QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
	24	1,1-Dichloropropene	75	4.782	4.782	(0.784)	114679	5.07345	5.1	
	25	2-Butanone	43	4.847	4.847	(0.794)	5729	4.89150	4.9	
	26	Benzene	78	5.219	5.219	(0.855)	347292	5.18898	5.2	
	27	Tertiary-amyl methyl ether	73	5.553	5.554	(0.910)	52686	3.73461	3.7(R)	
	28	1,2-Dichloroethane	62	5.637	5.637	(0.924)	69546	5.18382	5.2	
*	29	Fluorobenzene	96	6.102	6.102	(1.000)	662270	10.0000		
	30	Trichloroethene	95	6.436	6.437	(1.055)	104307	5.25195	5.2	
	31	Dibromomethane	93	7.180	7.180	(1.177)	30612	4.78220	4.8	
	32	1,2-Dichloropropane	63	7.357	7.357	(1.206)	69154	4.96206	5.0	
	33	Bromodichloromethane	83	7.524	7.534	(1.233)	87617	4.79638	4.8	
	34	cis-1,3-dichloropropene	75	8.482	8.481	(1.390)	69088	4.05043	4.0	
	35	Toluene	92	8.788	8.789	(1.440)	213595	4.55877	4.6	
	36	Tetrachloroethene	164	9.262	9.263	(1.518)	76315	4.81487	4.8	
	37	4-methyl-2-pentanone	43	9.365	9.365	(1.535)	8516	3.44050	3.4(R)	
	38	trans-1,3-Dichloropropene	75	9.374	9.374	(1.536)	50256	4.10654	4.1	
	39	1,1,2-Trichloroethane	83	9.551	9.560	(1.565)	33879	5.03001	5.0	
	40	Dibromochloromethane	129	9.737	9.737	(1.596)	46054	3.79709	3.8(R)	
	41	1,3-Dichloropropane	76	9.857	9.858	(1.615)	63986	5.10405	5.1	
	42	2-Chloroethylvinylether	63	9.857	9.858	(1.615)	6699	4.94837	4.9	
	43	1,2-Dibromoethane	107	9.960	9.960	(1.632)	34108	5.08368	5.1	
	44	2-Hexanone	43	10.341	10.341	(1.695)	4189	3.43436	3.4(R)	
	45	Chlorobenzene	112	10.573	10.574	(1.733)	220501	4.49421	4.5	
	46	Ethylbenzene	91	10.638	10.639	(1.743)	442685	4.96722	5.0	
	47	1,1,1,2-Tetrachloroethane	131	10.666	10.667	(1.748)	71346	4.91627	4.9	
	48	m+p-Xylenes	106	10.806	10.806	(1.771)	349672	10.9579	11.0	
	49	o-Xylene	106	11.233	11.234	(1.841)	147097	4.48551	4.5	
	50	Styrene	104	11.298	11.299	(1.852)	224527	4.63203	4.6	
	51	Bromoform	173	11.289	11.289	(1.850)	20299	4.21324	4.2	
	52	Isopropylbenzene	105	11.568	11.568	(1.896)	433994	4.82317	4.8	
$	53	P-Bromofluorobenzene	95	11.819	11.819	(1.937)	192561	9.99419	10	
	54	Bromobenzene	156	11.893	11.894	(1.949)	85217	4.98198	5.0	
	55	N-Propylbenzene	91	11.968	11.977	(1.961)	558638	5.38407	5.4	
	56	1,1,2,2-Tetrachloroethane	83	12.061	12.061	(1.977)	39519	5.06482	5.1	
	57	2-Chlorotoluene	91	12.098	12.098	(1.983)	303961	5.24779	5.2	
	58	1,2,3-Trichloropropane	75	12.163	12.163	(1.993)	31018	5.08862	5.1	
	59	1,3,5-Trimethylbenzene	105	12.182	12.182	(1.996)	367546	5.41146	5.4	
	60	4-Chlorotoluene	91	12.256	12.256	(2.009)	312204	5.33763	5.3	
	61	tert-Butylbenzene	119	12.786	12.786	(2.095)	413142	5.57970	5.6	
	62	1,2,4-Trimethylbenzene	105	12.544	12.544	(2.056)	367094	5.37055	5.4	
	63	sec-Butylbenzene	105	12.637	12.637	(2.071)	511838	5.49169	5.5	
	64	P-Isopropyltoluene	119	12.470	12.470	(2.044)	315059	5.26977	5.3	
	65	1,3-Dichlorobenzene	146	12.814	12.814	(2.100)	196955	5.17926	5.2	
	66	1,4-Dichlorobenzene	146	12.907	12.907	(2.115)	177814	5.11121	5.1	
	67	N-Butylbenzene	91	13.186	13.186	(2.161)	402357	5.06353	5.1	
$	68	1,2-Dichlorobenzene-D4	152	13.297	13.297	(2.179)	182748	10.0233	10.0	
	69	1,2-Dichlorobenzene	146	13.306	13.307	(2.181)	154036	5.06848	5.1	
	70	1,2-Dibromo-3-Chloropropane	157	14.245	14.255	(2.335)	3047	4.03855	4.0	
	71	1,3,5-Trichlorobenzene	180	14.292	14.292	(2.342)	116565	4.66798	4.7	
	72	Hexachlorobutadiene	225	15.249	15.250	(2.499)	72777	5.01541	5.0	
	73	1,2,4-Trichlorobenzene	180	15.259	15.259	(2.501)	69768	3.66741	3.7(R)	
	74	Naphthalene	128	15.723	15.724	(2.577)	43449	2.59762	2.6(R)	
	75	1,2,3-Trichlorobenzene	180	15.956	15.956	(2.615)	51136	3.92031	3.9(R)	
M	76	1,2-Dichloroethylene (total)	96				155079	9.53725	9.5	
M	77	Xylenes (total)	106				496769	15.4435	15.4	

Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3323a.d
Report Date: 09-Aug-2021 10:01

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
M 78 Trihalomethanes, Total	100				329061	17.7212	17.7	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.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Date : 30-JUL-2021 09:07
Client ID:
Sample Info: WG303440-8,SD4724
Purge Volume: 25.0
Column phase: RTX-VMS
Instrument: gcms-d.i
Operator: JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-d.i\D073021.b\D3323a.d
Y (x10^6)
Min
Chloromethane (1.831)
Vinyl chloride (1.977)
Bromomethane (1.491)
Chloroethane
Trichlorofluoromethane (1.668)
1,1-Dichloroethene (2.040)+
Methylene Chloride (2.495)+
trans-1,2-Dichloroethene (2.625)
Methyl tert-butyl ether (2.746)
Tertiary-butyl alcohol (2.886)
Di-isopropyl Ether (3.146)
1,1-Dichloroethane (3.230)
Ethyl tertiary-butyl ethe (3.574)
cis-1,2-Dichloroethene (3.899)
2,2-Dichloropropane (4.038)+
Bromochloromethane (4.131)
Chloroform (4.308)
Carbon Tetrachloride (4.457)
1,1,1-Trichloroethane (4.578)
1,1-Dichloropropene (4.782)+
Benzene (5.219)
Tertiary-amyl methyl ethe (5.554)+
Fluorobenzene (6.102)
Trichloroethene (6.363)
Dibromomethane (7.181)
1,2-Dichloropropane (7.357)
Bromodichloromethane (7.525)
cis-1,3-dichloropropene (8.482)
Toluene (8.789)
Tetrachloroethene (9.254)
4-methyl-2-pentanone (9.375)+
1,1,2-Trichloroethene (9.551)
Dibromochloromethane (9.737)
1,3-Dichloropropane (9.849)+
1,2-Dibromoethane (9.960)
2-Hexanone (10.341)
Chlorobenzene (10.574)
Ethylbenzene (10.639)+
m+p-Xylenes (10.806)
o-Xylene (11.234)
Styrene (11.299)+
Isopropylbenzene (11.568)
P-Bromofluorobenzene (11.819)
Bromobenzene (11.894)
N-Propylbenzene (11.968)
1,1,2,2-Tetrachloroethane (12.084)+
1,3,5-Trimethylbenzene (12.182)+
4-Chlorotoluene (12.256)
P-Isopropyltoluene (12.470)
1,2,4-Trimethylbenzene (12.545)
sec-Butylbenzene (12.638)
tert-Butylbenzene (12.786)+
1,4-Dichlorobenzene (12.898)
N-Butylbenzene (13.186)
1,2-Dichlorobenzene-D4 (13.298)+
1,2-Dibromo-3-Chloropropa (14.292)+
Hexachlorobutadiene (15.250)+
Naphthalene (15.724)
1,2-Dichloroethylene, total (15.900)
1,2,3-Trichlorobenzene (15.956)
Trihalomethanes, total (16.000)

Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\D3306.d
Report Date: 07-Aug-2021 08:11

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EPA 524.2

Data file : \\target_server\gg\chem\gcms-d.i\D072921.b\D3306.d
Lab Smp Id: WG303293-3
Inj Date : 29-JUL-2021 08:32
Operator : JSS Inst ID: gcms-d.i
Smp Info : WG303293-3
Misc Info :
Comment :
Method : \\target_server\gg\chem\gcms-d.i\D072921.b\D5A25(70)D.m
Meth Date : 01-Aug-2021 11:28 hgould Quant Type: ISTD
Cal Date : 29-JUL-2021 08:32 Cal File: D3306.d
Als bottle: 2 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	25.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.110	1.110	(0.182)	124315	5.00000	5.5	
2	Chloromethane	50	1.230	1.231	(0.202)	136810	5.00000	5.5	
3	Vinyl chloride	62	1.286	1.277	(0.211)	78468	5.00000	5.2	
4	Bromomethane	94	1.491	1.491	(0.244)	31472	5.00000	5.1	
5	Chloroethane	64	1.574	1.575	(0.258)	35344	5.00000	5.5	
6	Trichlorofluoromethane	101	1.667	1.668	(0.273)	148948	5.00000	5.1	
7	1,1-Dichloroethene	96	2.021	2.021	(0.331)	65981	5.00000	5.3	
8	Carbon Disulfide	76	2.039	2.040	(0.334)	182662	5.00000	5.3	
9	Freon-113	151	2.058	2.057	(0.337)	52910	5.00000	5.0	
10	Methylene Chloride	84	2.495	2.495	(0.409)	57968	5.00000	5.6	
11	Acetone	43	2.560	2.551	(0.420)	4481	5.00000	6.2	
12	trans-1,2-Dichloroethene	96	2.634	2.634	(0.432)	71838	5.00000	5.4	
13	Methyl tert-butyl ether	73	2.746	2.746	(0.450)	62425	5.00000	5.3	
14	Tertiary-butyl alcohol	59	2.885	2.876	(0.473)	4243	25.0000	30.3	
15	Di-isopropyl Ether	45	3.145	3.146	(0.516)	149668	5.00000	5.1	
16	1,1-Dichloroethane	63	3.248	3.248	(0.532)	166744	5.00000	5.3	
17	Ethyl tertiary-butyl ether	59	3.573	3.564	(0.586)	88197	5.00000	4.8	
18	cis-1,2-Dichloroethene	96	3.908	3.899	(0.640)	92793	5.00000	4.9	
19	2,2-Dichloropropane	77	4.038	4.038	(0.662)	100870	5.00000	5.2	
20	Bromochloromethane	128	4.168	4.168	(0.683)	35030	5.00000	5.0	
21	Chloroform	83	4.317	4.317	(0.707)	176596	5.00000	5.2	
22	Carbon Tetrachloride	117	4.456	4.457	(0.730)	141771	5.00000	5.0	
23	1,1,1-Trichloroethane	97	4.577	4.577	(0.750)	154964	5.00000	5.1	
24	1,1-Dichloropropene	75	4.791	4.782	(0.785)	111311	5.00000	4.7	

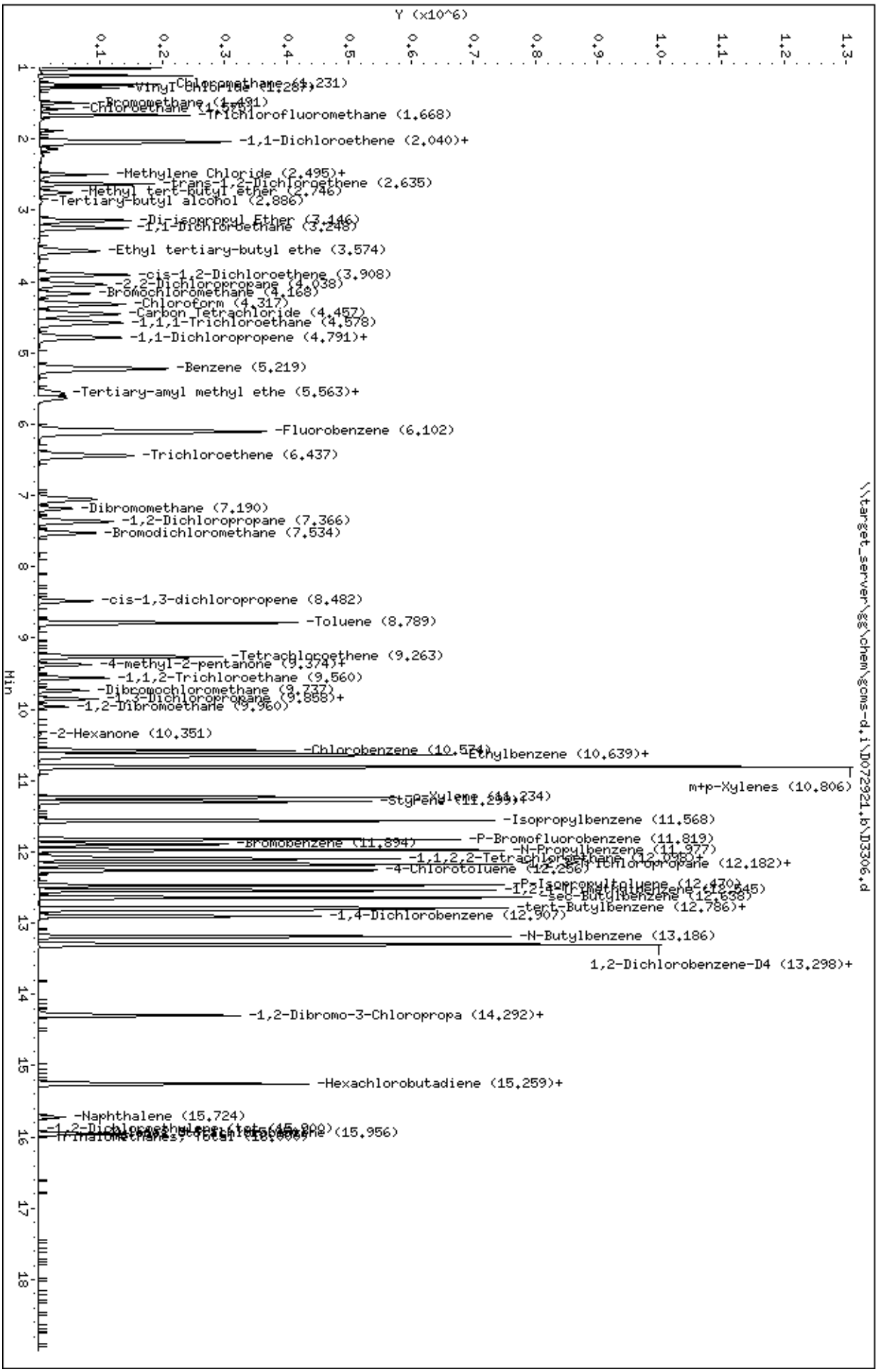
Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\D3306.d
Report Date: 07-Aug-2021 08:11

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
	25	2-Butanone	43	4.847	4.847	(0.794)	5603	5.00000	5.0	
	26	Benzene	78	5.219	5.219	(0.855)	342324	5.00000	5.0	
	27	Tertiary-amyl methyl ether	73	5.562	5.554	(0.912)	47270	5.00000	4.7	
	28	1,2-Dichloroethane	62	5.637	5.637	(0.924)	68482	5.00000	5.1	
*	29	Fluorobenzene	96	6.102	6.102	(1.000)	655927	10.0000		
	30	Trichloroethene	95	6.446	6.437	(1.056)	97262	5.00000	5.0	
	31	Dibromomethane	93	7.189	7.180	(1.178)	31657	5.00000	5.0	
	32	1,2-Dichloropropane	63	7.366	7.366	(1.207)	68870	5.00000	4.9	
	33	Bromodichloromethane	83	7.524	7.534	(1.233)	89483	5.00000	5.0	
	34	cis-1,3-dichloropropene	75	8.482	8.481	(1.390)	63377	5.00000	4.3	
	35	Toluene	92	8.788	8.789	(1.440)	209254	5.00000	4.7	
	36	Tetrachloroethene	164	9.262	9.263	(1.518)	78627	5.00000	4.9	
	37	4-methyl-2-pentanone	43	9.374	9.365	(1.536)	7648	5.00000	4.2	
	38	trans-1,3-Dichloropropene	75	9.383	9.374	(1.538)	48375	5.00000	4.4	
	39	1,1,2-Trichloroethane	83	9.560	9.560	(1.567)	33712	5.00000	4.9	
	40	Dibromochloromethane	129	9.737	9.737	(1.596)	46454	5.00000	4.8	
	41	1,3-Dichloropropane	76	9.857	9.858	(1.615)	61330	5.00000	4.8	
	42	2-Chloroethylvinylether	63	9.857	9.858	(1.615)	6700	5.00000	5.1	
	43	1,2-Dibromoethane	107	9.960	9.960	(1.632)	32257	5.00000	4.8	
	44	2-Hexanone	43	10.350	10.341	(1.696)	3450	5.00000	4.3	
	45	Chlorobenzene	112	10.573	10.574	(1.733)	214822	5.00000	4.7	
	46	Ethylbenzene	91	10.638	10.639	(1.743)	444513	5.00000	4.9	
	47	1,1,1,2-Tetrachloroethane	131	10.666	10.667	(1.748)	73986	5.00000	5.0	
	48	m+p-Xylenes	106	10.806	10.806	(1.771)	359584	10.0000	10.0	
	49	o-Xylene	106	11.233	11.234	(1.841)	150728	5.00000	4.8	
	50	Styrene	104	11.298	11.299	(1.852)	227560	5.00000	4.9	
	51	Bromoform	173	11.289	11.289	(1.850)	20868	5.00000	4.7	
	52	Isopropylbenzene	105	11.568	11.568	(1.896)	440960	5.00000	4.9	
$	53	P-Bromofluorobenzene	95	11.819	11.819	(1.937)	192772	10.0000	10	
	54	Bromobenzene	156	11.903	11.903	(1.951)	85454	5.00000	5.0	
	55	N-Propylbenzene	91	11.977	11.977	(1.963)	568446	5.00000	5.0	
	56	1,1,2,2-Tetrachloroethane	83	12.061	12.061	(1.977)	38455	5.00000	5.0	
	57	2-Chlorotoluene	91	12.098	12.098	(1.983)	313450	5.00000	5.1	
	58	1,2,3-Trichloropropane	75	12.163	12.163	(1.993)	31246	5.00000	5.2	
	59	1,3,5-Trimethylbenzene	105	12.181	12.182	(1.996)	377864	5.00000	5.0	
	60	4-Chlorotoluene	91	12.256	12.256	(2.009)	311946	5.00000	5.0	
	61	tert-Butylbenzene	119	12.786	12.786	(2.095)	405802	5.00000	4.9	
	62	1,2,4-Trimethylbenzene	105	12.544	12.544	(2.056)	375723	5.00000	5.0	
	63	sec-Butylbenzene	105	12.637	12.637	(2.071)	517495	5.00000	5.0	
	64	P-Isopropyltoluene	119	12.470	12.470	(2.044)	327028	5.00000	5.0	
	65	1,3-Dichlorobenzene	146	12.814	12.814	(2.100)	198799	5.00000	5.2	
	66	1,4-Dichlorobenzene	146	12.907	12.907	(2.115)	178519	5.00000	5.1	
	67	N-Butylbenzene	91	13.185	13.186	(2.161)	390856	5.00000	4.9	
$	68	1,2-Dichlorobenzene-D4	152	13.297	13.297	(2.179)	182331	10.0000	10.1	
	69	1,2-Dichlorobenzene	146	13.306	13.307	(2.181)	153199	5.00000	5.2	
	70	1,2-Dibromo-3-Chloropropane	157	14.255	14.255	(2.336)	2996	5.00000	4.9	
	71	1,3,5-Trichlorobenzene	180	14.292	14.292	(2.342)	121490	5.00000	4.9	
	72	Hexachlorobutadiene	225	15.249	15.250	(2.499)	71735	5.00000	5.0	
	73	1,2,4-Trichlorobenzene	180	15.259	15.259	(2.501)	65373	5.00000	4.6	
	74	Naphthalene	128	15.723	15.724	(2.577)	38941	5.00000	4.0	
	75	1,2,3-Trichlorobenzene	180	15.956	15.956	(2.615)	48047	5.00000	5.0	
M	76	1,2-Dichloroethylene (total)	96				164631	10.0000		(a)
M	77	Xylenes (total)	106				510312	15.0000		(a)
M	78	Trihalomethanes, Total	100				333401	5.00000		(a)

Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\D3306.d
Report Date: 07-Aug-2021 08:11

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).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Date : 29-JUL-2021 08:32
Client ID:
Sample Info: WG303293-3
Purge Volume: 25.0
Column phase: RTX-VMS
Instrument: gcms-d.i
Operator: JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-d.i\D072921.b\D3306.d
Y (x10^6)
Min
Chloromethane (1.231)
Vinyl Chloride (1.267)
Bromomethane (1.491)
Chloroethane (1.571)
Trichlorofluoromethane (1.668)
-1,1-Dichloroethene (2.040)+
Methylene Chloride (2.495)+
trans-1,2-Dichloroethene (2.635)
Methyl tert-butyl ether (2.746)
Tertiary-butyl alcohol (2.886)
Diisopropyl Ether (3.146)
1,1-Dichloroethane (3.248)
Ethyl tertiary-butyl ethe (3.574)
cis-1,2-Dichloroethene (3.908)
2,2-Dichloropropane (4.038)
Bromochloromethane (4.168)
Chloroform (4.317)
Carbon Tetrachloride (4.457)
1,1,1-Trichloroethane (4.578)
1,1-Dichloropropene (4.791)+
Benzene (5.219)
Tertiary-amyl methyl ethe (5.563)+
Fluorobenzene (6.102)
Trichloroethene (6.437)
Dibromomethane (7.190)
1,2-Dichloropropane (7.366)
Bromodichloromethane (7.534)
cis-1,3-dichloropropene (8.482)
Toluene (8.789)
Tetrachloroethene (9.263)
4-methyl-2-pentanone (9.374)+
1,1,2-Trichloroethene (9.560)
Dibromochloromethane (9.727)
1,3-Dichloropropane (9.858)+
1,2-Dibromoethane (9.960)
2-Hexanone (10.351)
Chlorobenzene (10.574)
Ethylbenzene (10.639)+
m+p-Xylenes (10.806)
Styrene (11.299)+
o-Xylene (11.234)
Isopropylbenzene (11.568)
P-Bromofluorobenzene (11.819)
Bromobenzene (11.894)
N-Propylbenzene (11.977)
1,1,2,2-Tetrachloroethane (12.105)+
4-Chlorotoluene (12.256)
1,3,5-Trichloropropane (12.182)+
Isopropyltoluene (12.420)+
1,2,4-Trimethylbenzene (12.445)
sec-Butylbenzene (12.638)
tert-Butylbenzene (12.786)+
1,4-Dichlorobenzene (12.907)
N-Butylbenzene (13.186)
1,2-Dichlorobenzene-D4 (13.298)+
1,2-Dibromo-3-Chloropropa (14.292)+
Hexachlorobutadiene (15.259)+
Naphthalene (15.724)
1,2-Dichlorobenzene (tot (15.800)
Trihalomethanes, total (15.956)

Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\D3309.d
Report Date: 07-Aug-2021 08:11

Katahdin Analytical Services

EPA 524.2

Data file : \\target_server\gg\chem\gcms-d.i\D072921.b\D3309.d
Lab Smp Id: WG303293-7
Inj Date : 29-JUL-2021 10:29
Operator : JSS Inst ID: gcms-d.i
Smp Info : WG303293-7
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gcms-d.i\D072921.b\D5A25(70)D.m
Meth Date : 01-Aug-2021 11:28 hgould Quant Type: ISTD
Cal Date : 29-JUL-2021 10:29 Cal File: D3309.d
Als bottle: 5 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	25.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.109	1.110	(0.182)	1332511	60.0000	58.0	
2	Chloromethane	50	1.230	1.231	(0.202)	1418904	60.0000	56.3	
3	Vinyl chloride	62	1.277	1.277	(0.209)	848331	60.0000	56.8	
4	Bromomethane	94	1.491	1.491	(0.244)	375011	60.0000	62.2(A)	
5	Chloroethane	64	1.565	1.575	(0.257)	284931	60.0000	44.9	
6	Trichlorofluoromethane	101	1.667	1.668	(0.273)	1568781	60.0000	55.0	
7	1,1-Dichloroethene	96	2.021	2.021	(0.331)	685865	60.0000	55.4(A)	
8	Carbon Disulfide	76	2.039	2.040	(0.334)	1942355	60.0000	56.5	
9	Freon-113	151	2.058	2.057	(0.337)	574079	60.0000	56.1	
10	Methylene Chloride	84	2.495	2.495	(0.409)	542725	60.0000	53.2	
11	Acetone	43	2.550	2.551	(0.418)	39738	60.0000	54.0	
12	trans-1,2-Dichloroethene	96	2.625	2.634	(0.430)	741342	60.0000	55.6	
13	Methyl tert-butyl ether	73	2.746	2.746	(0.450)	709507	60.0000	60.8(A)	
14	Tertiary-butyl alcohol	59	2.885	2.876	(0.473)	37443	300.000	250	
15	Di-isopropyl Ether	45	3.145	3.146	(0.516)	1908515	60.0000	66.6(A)	
16	1,1-Dichloroethane	63	3.248	3.248	(0.532)	1861440	60.0000	59.3	
17	Ethyl tertiary-butyl ether	59	3.564	3.564	(0.584)	1344101	60.0000	76.1(A)	
18	cis-1,2-Dichloroethene	96	3.898	3.899	(0.639)	1199120	60.0000	66.5(A)	
19	2,2-Dichloropropane	77	4.038	4.038	(0.662)	1209740	60.0000	63.0(A)	
20	Bromochloromethane	128	4.168	4.168	(0.683)	383797	60.0000	56.8	
21	Chloroform	83	4.307	4.317	(0.706)	2014504	60.0000	60.0(A)	
22	Carbon Tetrachloride	117	4.456	4.457	(0.730)	1763058	60.0000	64.7(A)	
23	1,1,1-Trichloroethane	97	4.577	4.577	(0.750)	1895111	60.0000	64.0(A)	
24	1,1-Dichloropropene	75	4.782	4.782	(0.784)	1521409	60.0000	68.6(A)	

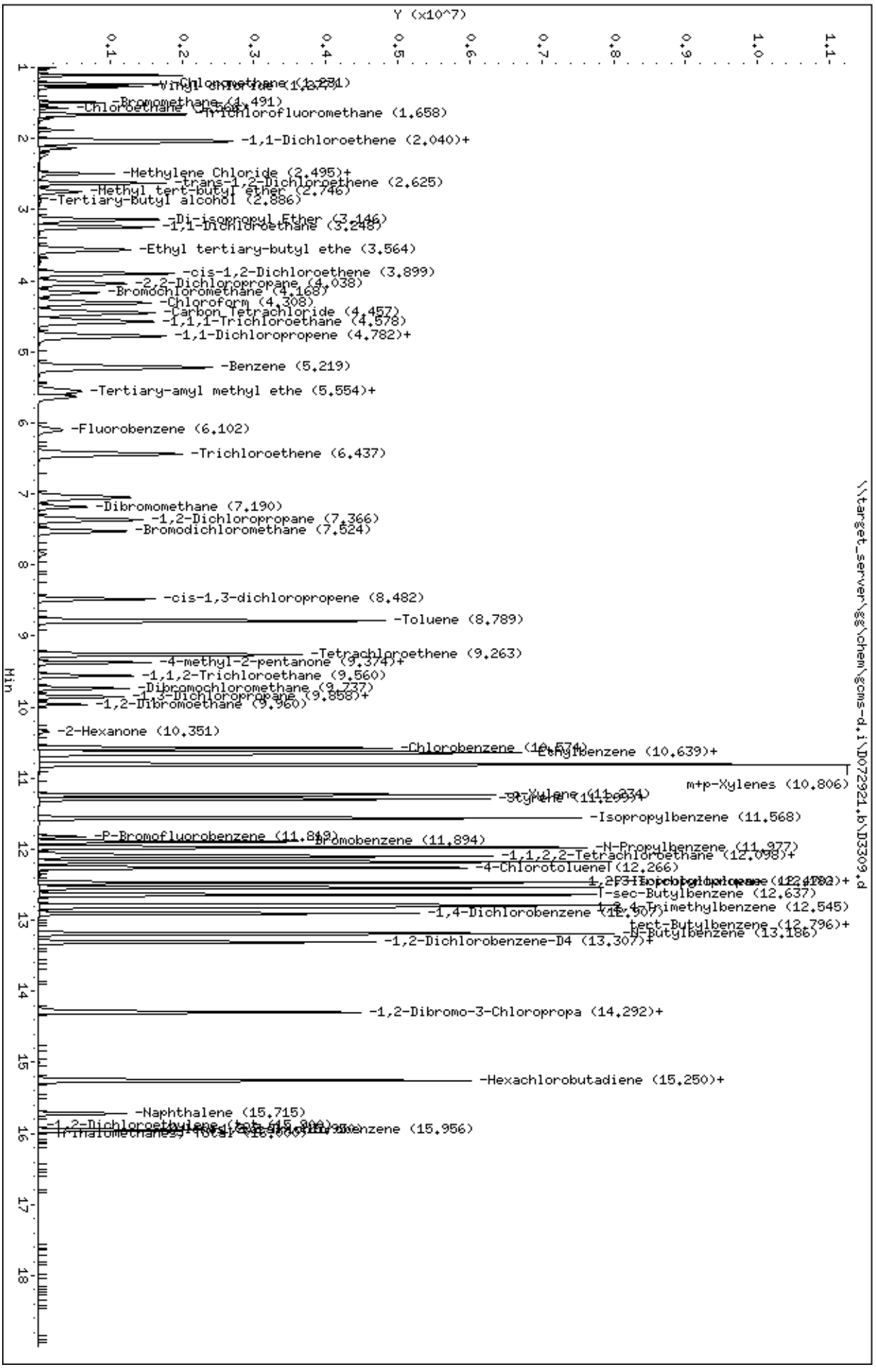
Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\D3309.d
Report Date: 07-Aug-2021 08:11

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
	25	2-Butanone	43	4.837	4.847	(0.793)	67841	60.0000	62.6(A)	
	26	Benzene	78	5.218	5.219	(0.855)	4127633	60.0000	62.2(A)	
	27	Tertiary-amyl methyl ether	73	5.553	5.554	(0.910)	812614	60.0000	84.5(A)	
	28	1,2-Dichloroethane	62	5.637	5.637	(0.924)	797579	60.0000	61.1(A)	
*	29	Fluorobenzene	96	6.102	6.102	(1.000)	633890	10.0000		
	30	Trichloroethene	95	6.436	6.437	(1.055)	1228989	60.0000	65.3(A)	
	31	Dibromomethane	93	7.180	7.180	(1.177)	392521	60.0000	64.0(A)	
	32	1,2-Dichloropropane	63	7.366	7.366	(1.207)	868101	60.0000	64.7(A)	
	33	Bromodichloromethane	83	7.524	7.534	(1.233)	1190118	60.0000	68.6(A)	
	34	cis-1,3-dichloropropene	75	8.482	8.481	(1.390)	1160285	60.0000	84.0(A)	
	35	Toluene	92	8.788	8.789	(1.440)	2701417	60.0000	64.0(A)	
	36	Tetrachloroethene	164	9.262	9.263	(1.518)	1023137	60.0000	66.6(A)	
	37	4-methyl-2-pentanone	43	9.365	9.365	(1.535)	166970	60.0000	97.0(A)	
	38	trans-1,3-Dichloropropene	75	9.374	9.374	(1.536)	837767	60.0000	81.1(A)	
	39	1,1,2-Trichloroethane	83	9.560	9.560	(1.567)	412700	60.0000	62.8(A)	
	40	Dibromochloromethane	129	9.737	9.737	(1.596)	712753	60.0000	76.9(A)	
	41	1,3-Dichloropropane	76	9.857	9.858	(1.615)	820145	60.0000	67.7(A)	
	42	2-Chloroethylvinylether	63	9.848	9.858	(1.614)	85088	60.0000	66.3(A)	
	43	1,2-Dibromoethane	107	9.960	9.960	(1.632)	451728	60.0000	70.6(A)	
	44	2-Hexanone	43	10.350	10.341	(1.696)	91562	60.0000	121(A)	
	45	Chlorobenzene	112	10.573	10.574	(1.733)	2820104	60.0000	65.0(A)	
	46	Ethylbenzene	91	10.638	10.639	(1.743)	5085165	60.0000	58.5	
	47	1,1,1,2-Tetrachloroethane	131	10.666	10.667	(1.748)	931382	60.0000	65.4(A)	
	48	m+p-Xylenes	106	10.806	10.806	(1.771)	3554675	120.000	102	
	49	o-Xylene	106	11.233	11.234	(1.841)	1885345	60.0000	63.1(A)	
	50	Styrene	104	11.298	11.299	(1.852)	2786502	60.0000	62.5(A)	
	51	Bromoform	173	11.289	11.289	(1.850)	334276	60.0000	78.6(A)	
	52	Isopropylbenzene	105	11.568	11.568	(1.896)	5176718	60.0000	59.8	
$	53	P-Bromofluorobenzene	95	11.819	11.819	(1.937)	193492	10.0000	10.4	
	54	Bromobenzene	156	11.903	11.903	(1.951)	1058912	60.0000	64.4(A)	
	55	N-Propylbenzene	91	11.977	11.977	(1.963)	6149138	60.0000	56.2	
	56	1,1,2,2-Tetrachloroethane	83	12.061	12.061	(1.977)	471605	60.0000	63.6(A)	
	57	2-Chlorotoluene	91	12.098	12.098	(1.983)	3488036	60.0000	58.3	
	58	1,2,3-Trichloropropane	75	12.163	12.163	(1.993)	348051	60.0000	58.5	
	59	1,3,5-Trimethylbenzene	105	12.181	12.182	(1.996)	4233278	60.0000	58.2	
	60	4-Chlorotoluene	91	12.265	12.256	(2.010)	3528603	60.0000	58.6	
	61	tert-Butylbenzene	119	12.786	12.786	(2.095)	4661576	60.0000	58.9	
	62	1,2,4-Trimethylbenzene	105	12.544	12.544	(2.056)	4299797	60.0000	59.0	
	63	sec-Butylbenzene	105	12.637	12.637	(2.071)	5597366	60.0000	56.3	
	64	P-Isopropyltoluene	119	12.470	12.470	(2.044)	3802817	60.0000	60.0(A)	
	65	1,3-Dichlorobenzene	146	12.814	12.814	(2.100)	2214091	60.0000	58.6	
	66	1,4-Dichlorobenzene	146	12.907	12.907	(2.115)	2132662	60.0000	62.3(A)	
	67	N-Butylbenzene	91	13.185	13.186	(2.161)	4571114	60.0000	59.6	
$	68	1,2-Dichlorobenzene-D4	152	13.297	13.297	(2.179)	180568	10.0000	10.3	
	69	1,2-Dichlorobenzene	146	13.306	13.307	(2.181)	1750522	60.0000	60.6(A)	
	70	1,2-Dibromo-3-Chloropropane	157	14.255	14.255	(2.336)	56857	60.0000	97.4(A)	
	71	1,3,5-Trichlorobenzene	180	14.292	14.292	(2.342)	1743969	60.0000	73.4(A)	
	72	Hexachlorobutadiene	225	15.249	15.250	(2.499)	969033	60.0000	69.7(A)	
	73	1,2,4-Trichlorobenzene	180	15.259	15.259	(2.501)	1108473	60.0000	82.1(A)	
	74	Naphthalene	128	15.723	15.724	(2.577)	1142980	60.0000	126(A)	
	75	1,2,3-Trichlorobenzene	180	15.956	15.956	(2.615)	747850	60.0000	80.9(A)	
M	76	1,2-Dichloroethylene (total)	96				1940462	120.000	(a)	
M	77	Xylenes (total)	106				5440020	180.000	(a)	
M	78	Trihalomethanes, Total	100				4251651	60.0000	(a)	

Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\D3309.d
Report Date: 07-Aug-2021 08:11

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount
    exceeded maximum amount.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Instrument: gcms-d.i
Operator: JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-d.i\D072921.b\D3309.d
Y (x10^7)
Min
-Chloromethane (1.231)
-Vinyl chloride (1.277)
-Bromomethane (1.491)
-Chloroethane (1.564)
-Trichlorofluoromethane (1.658)
-1,1-Dichloroethene (2.040)+
-Methylene Chloride (2.495)+
-trans-1,2-Dichloroethene (2.625)
-Methyl tert-butyl ether (2.746)
-Tertiary-butyl alcohol (2.886)
-Di-isopropyl Ether (3.146)
-1,1-Dichloroethane (3.248)
-Ethyl tertiary-butyl ethe (3.564)
-cis-1,2-Dichloroethene (3.899)
-2,2-Dichloropropane (4.038)
-Bromochloromethane (4.168)
-Chloroform (4.308)
-Carbon Tetrachloride (4.457)
-1,1,1-Trichloroethane (4.578)
-1,1-Dichloropropene (4.782)+
-Benzene (5.219)
-Tertiary-amyl methyl ethe (5.554)+
-Fluorobenzene (6.102)
-Trichloroethene (6.437)
-Dibromomethane (7.190)
-1,2-Dichloropropane (7.366)
-Bromodichloromethane (7.524)
-cis-1,3-dichloropropene (8.482)
-Toluene (8.789)
-Tetrachloroethene (9.263)
-4-methyl-2-pentanone (9.374)+
-1,1,2-Trichloroethane (9.560)
-Dibromochloromethane (9.737)
-1,3-Dichloropropane (9.858)+
-1,2-Dibromoethane (9.960)
-2-Hexanone (10.351)
-Chlorobenzene (10.574)
-Ethylbenzene (10.639)+
m+p-Xylenes (10.806)
-o-Xylene (11.234)
-Styrene (11.269)+
-Isopropylbenzene (11.568)
-P-Bromofluorobenzene (11.849)
-Bromobenzene (11.894)
-N-Propylbenzene (11.977)
-1,1,2,2-Tetrachloroethane (12.098)+
-4-Chlorotoluene (12.266)
-1,3,5-Trimethylbenzene (12.478)+
-sec-Butylbenzene (12.637)
-1,4-Dichlorobenzene (12.707)
-1,2,4-Trimethylbenzene (12.545)
-tert-Butylbenzene (12.796)+
-n-Butylbenzene (13.186)
-1,2-Dichlorobenzene-D4 (13.307)+
-1,2-Dibromo-3-Chloropropa (14.292)+
-Hexachlorobutadiene (15.250)+
-Naphthalene (15.715)
-1,2,3-Trichlorobenzene (15.956)

Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\D3310.d
Report Date: 07-Aug-2021 08:11

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EPA 524.2

Data file : \\target_server\gg\chem\gcms-d.i\D072921.b\D3310.d
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Inj Date : 29-JUL-2021 11:08
Operator : JSS Inst ID: gcms-d.i
Smp Info : WG303293-6
Misc Info :
Comment   :
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Meth Date : 01-Aug-2021 11:28 hgould Quant Type: ISTD
Cal Date : 29-JUL-2021 11:08 Cal File: D3310.d
Als bottle: 6 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	25.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.109	1.110	(0.182)	955582	40.0000	39.0	
2	Chloromethane	50	1.230	1.231	(0.202)	1085914	40.0000	40.8	
3	Vinyl chloride	62	1.277	1.277	(0.209)	634038	40.0000	40.1	
4	Bromomethane	94	1.491	1.491	(0.244)	252866	40.0000	38.4	
5	Chloroethane	64	1.565	1.575	(0.257)	185832	40.0000	31.8	
6	Trichlorofluoromethane	101	1.658	1.668	(0.272)	1092418	40.0000	36.5	
7	1,1-Dichloroethene	96	2.021	2.021	(0.331)	487526	40.0000	37.5	
8	Carbon Disulfide	76	2.039	2.040	(0.334)	1397530	40.0000	38.5	
9	Freon-113	151	2.058	2.057	(0.337)	409442	40.0000	37.9	
10	Methylene Chloride	84	2.495	2.495	(0.409)	389797	40.0000	39.8	
11	Acetone	43	2.550	2.551	(0.418)	28354	40.0000	39.5	
12	trans-1,2-Dichloroethene	96	2.625	2.634	(0.430)	529305	40.0000	37.7	
13	Methyl tert-butyl ether	73	2.746	2.746	(0.450)	523310	40.0000	41.4	
14	Tertiary-butyl alcohol	59	2.885	2.876	(0.473)	44147	200.000	273	
15	Di-isopropyl Ether	45	3.145	3.146	(0.516)	1406357	40.0000	43.9	
16	1,1-Dichloroethane	63	3.248	3.248	(0.532)	1338905	40.0000	39.7	
17	Ethyl tertiary-butyl ether	59	3.564	3.564	(0.584)	1002037	40.0000	41.7	
18	cis-1,2-Dichloroethene	96	3.898	3.899	(0.639)	856553	40.0000	42.5	
19	2,2-Dichloropropane	77	4.038	4.038	(0.662)	874722	40.0000	41.6	
20	Bromochloromethane	128	4.168	4.168	(0.683)	300594	40.0000	42.0	
21	Chloroform	83	4.307	4.317	(0.706)	1424396	40.0000	39.4	
22	Carbon Tetrachloride	117	4.456	4.457	(0.730)	1238837	40.0000	41.1	
23	1,1,1-Trichloroethane	97	4.577	4.577	(0.750)	1350146	40.0000	41.4	
24	1,1-Dichloropropene	75	4.782	4.782	(0.784)	1087115	40.0000	43.4	

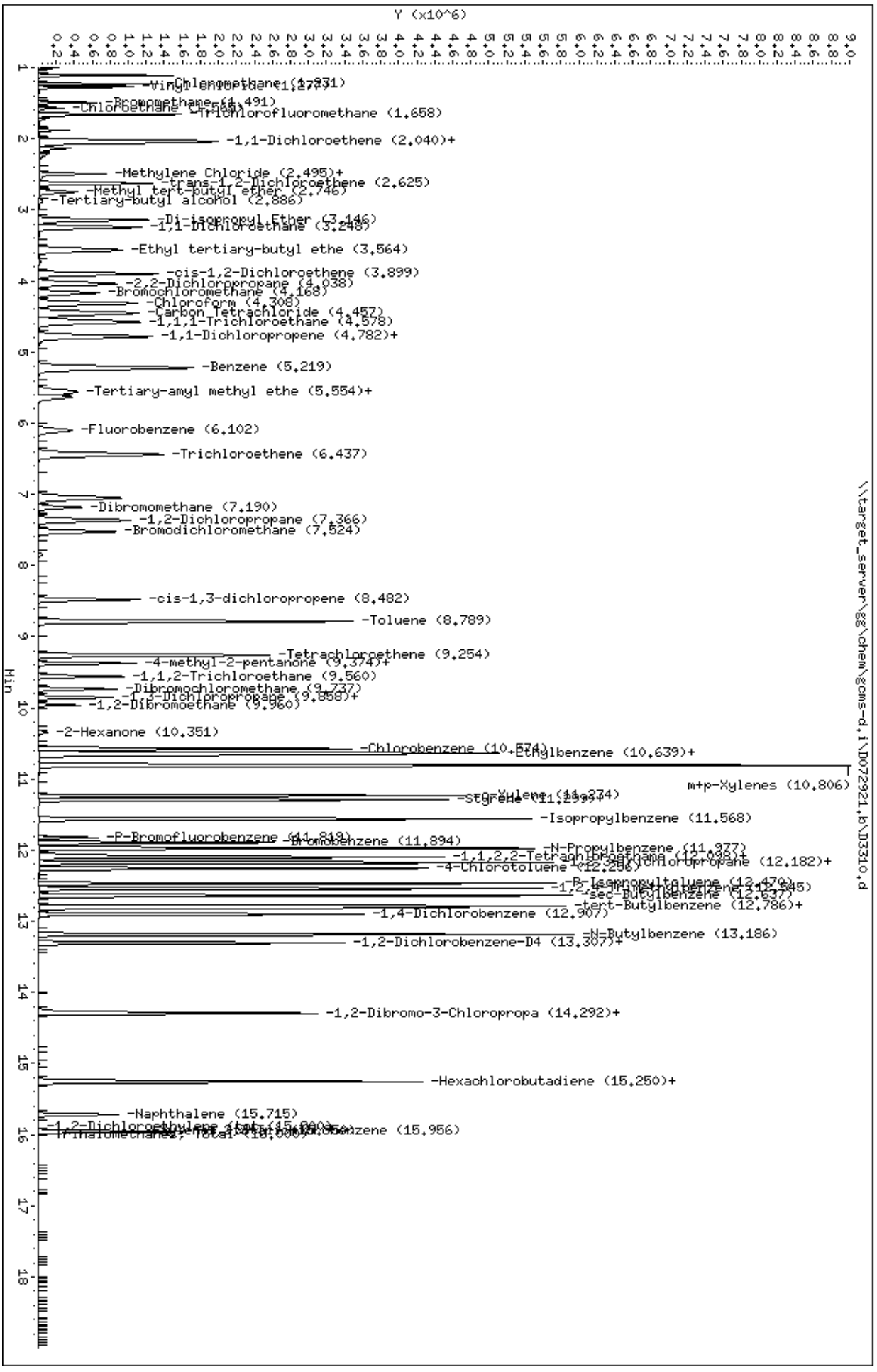
Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\D3310.d
Report Date: 07-Aug-2021 08:11

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
	25	2-Butanone	43	4.837	4.847	(0.793)	50522	40.0000	42.6	
	26	Benzene	78	5.218	5.219	(0.855)	2959361	40.0000	40.9	
	27	Tertiary-amyl methyl ether	73	5.553	5.554	(0.910)	596154	40.0000	41.1	
	28	1,2-Dichloroethane	62	5.637	5.637	(0.924)	563991	40.0000	39.8	
*	29	Fluorobenzene	96	6.102	6.102	(1.000)	683397	10.0000		
	30	Trichloroethene	95	6.436	6.437	(1.055)	862611	40.0000	41.3	
	31	Dibromomethane	93	7.180	7.180	(1.177)	277336	40.0000	41.0	
	32	1,2-Dichloropropane	63	7.366	7.366	(1.207)	621336	40.0000	41.8	
	33	Bromodichloromethane	83	7.524	7.534	(1.233)	828662	40.0000	42.3	
	34	cis-1,3-dichloropropene	75	8.481	8.481	(1.390)	804257	40.0000	44.8	
	35	Toluene	92	8.788	8.789	(1.440)	1933188	40.0000	39.9	
	36	Tetrachloroethene	164	9.262	9.263	(1.518)	713273	40.0000	41.5	
	37	4-methyl-2-pentanone	43	9.365	9.365	(1.535)	118251	40.0000	48.7	
	38	trans-1,3-Dichloropropene	75	9.374	9.374	(1.536)	575556	40.0000	43.8	
	39	1,1,2-Trichloroethane	83	9.560	9.560	(1.567)	297570	40.0000	41.4	
	40	Dibromochloromethane	129	9.737	9.737	(1.596)	491898	40.0000	38.6	
	41	1,3-Dichloropropane	76	9.857	9.858	(1.615)	581644	40.0000	42.7	
	42	2-Chloroethylvinylether	63	9.857	9.858	(1.615)	59335	40.0000	41.4	
	43	1,2-Dibromoethane	107	9.960	9.960	(1.632)	317089	40.0000	43.4	
	44	2-Hexanone	43	10.350	10.341	(1.696)	63491	40.0000	53.8	
	45	Chlorobenzene	112	10.573	10.574	(1.733)	2037415	40.0000	40.3	
	46	Ethylbenzene	91	10.638	10.639	(1.743)	3716210	40.0000	40.6	
	47	1,1,1,2-Tetrachloroethane	131	10.666	10.667	(1.748)	652847	40.0000	41.3	
	48	m+p-Xylenes	106	10.806	10.806	(1.771)	2713214	80.0000	84.4	
	49	o-Xylene	106	11.233	11.234	(1.841)	1357898	40.0000	40.1	
	50	Styrene	104	11.298	11.299	(1.852)	2007123	40.0000	40.1	
	51	Bromoform	173	11.289	11.289	(1.850)	226800	40.0000	42.7	
	52	Isopropylbenzene	105	11.568	11.568	(1.896)	3707953	40.0000	39.8	
$	53	P-Bromofluorobenzene	95	11.819	11.819	(1.937)	200941	10.0000	9.9	
	54	Bromobenzene	156	11.893	11.903	(1.949)	743878	40.0000	41.0	
	55	N-Propylbenzene	91	11.977	11.977	(1.963)	4494715	40.0000	38.9	
	56	1,1,2,2-Tetrachloroethane	83	12.061	12.061	(1.977)	333436	40.0000	40.9	
	57	2-Chlorotoluene	91	12.098	12.098	(1.983)	2521597	40.0000	39.4	
	58	1,2,3-Trichloropropane	75	12.163	12.163	(1.993)	253349	40.0000	39.8	
	59	1,3,5-Trimethylbenzene	105	12.181	12.182	(1.996)	3059772	40.0000	39.4	
	60	4-Chlorotoluene	91	12.256	12.256	(2.009)	2541801	40.0000	39.5	
	61	tert-Butylbenzene	119	12.786	12.786	(2.095)	3356590	40.0000	39.6	
	62	1,2,4-Trimethylbenzene	105	12.544	12.544	(2.056)	3095640	40.0000	39.6	
	63	sec-Butylbenzene	105	12.637	12.637	(2.071)	4050386	40.0000	38.6	
	64	P-Isopropyltoluene	119	12.470	12.470	(2.044)	2717778	40.0000	39.8	
	65	1,3-Dichlorobenzene	146	12.814	12.814	(2.100)	1554727	40.0000	38.4	
	66	1,4-Dichlorobenzene	146	12.907	12.907	(2.115)	1497283	40.0000	40.1	
	67	N-Butylbenzene	91	13.185	13.186	(2.161)	3291612	40.0000	40.1	
$	68	1,2-Dichlorobenzene-D4	152	13.297	13.297	(2.179)	186426	10.0000	9.8	
	69	1,2-Dichlorobenzene	146	13.306	13.307	(2.181)	1237197	40.0000	39.6	
	70	1,2-Dibromo-3-Chloropropane	157	14.255	14.255	(2.336)	37799	40.0000	46.7	
	71	1,3,5-Trichlorobenzene	180	14.292	14.292	(2.342)	1208060	40.0000	43.9	
	72	Hexachlorobutadiene	225	15.249	15.250	(2.499)	659397	40.0000	41.8	
	73	1,2,4-Trichlorobenzene	180	15.259	15.259	(2.501)	785347	40.0000	39.7	
	74	Naphthalene	128	15.723	15.724	(2.577)	822524	40.0000	56.0	
	75	1,2,3-Trichlorobenzene	180	15.956	15.956	(2.615)	552539	40.0000	41.4	
M	76	1,2-Dichloroethylene (total)	96				1385858	80.0000	(a)	
M	77	Xylenes (total)	106				4071112	120.000	(a)	
M	78	Trihalomethanes, Total	100				2971756	40.0000	(a)	

Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\D3310.d
Report Date: 07-Aug-2021 08:11

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).


Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\D3310.d
Date : 29-JUL-2021 11:08
Client ID:
Sample Info: WG303293-6
Purge Volume: 25.0
Column phase: RTX-VMS
Instrument: gcms-d.i
Operator: JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-d.i\D072921.b\D3310.d
Y (x10^6)
Min
-Chloromethane (1.231)
-Vinyl chloride (1.277)
-Bromomethane (1.491)
-Chloroethane
-Trichlorofluoromethane (1.658)
-1,1-Dichloroethene (2.040)+
-Methylene Chloride (2.495)+
-trans-1,2-Dichloroethene (2.625)
-Methyl tert-butyl ether (2.746)
-Tertiary-butyl alcohol (2.886)
-Di-isopropyl Ether (3.146)
-1,1-Dichloroethane (3.248)
-Ethyl tertiary-butyl ethe (3.564)
-cis-1,2-Dichloroethene (3.899)
-2,2-Dichloropropane (4.038)
-Bromochloromethane (4.168)
-Chloroform (4.308)
-Carbon Tetrachloride (4.457)
-1,1,1-Trichloroethane (4.578)
-1,1-Dichloropropene (4.782)+
-Benzene (5.219)
-Tertiary-amyl methyl ethe (5.554)+
-Fluorobenzene (6.102)
-Trichloroethene (6.437)
-Dibromomethane (7.190)
-1,2-Dichloropropane (7.366)
-Bromodichloromethane (7.524)
-cis-1,3-dichloropropene (8.482)
-Toluene (8.789)
-Tetrachloroethene (9.254)
-4-methyl-2-pentanone (9.374)+
-1,1,2-Trichloroethane (9.560)
-Dibromochloromethane (9.737)
-1,3-Dichloropropane (9.858)+
-1,2-Dibromoethane (9.960)
-2-Hexanone (10.351)
-Chlorobenzene (10.574)
-Ethylbenzene (10.639)+
m+p-Xylenes (10.806)
-o-Xylene (11.074)
-Styrene (11.299)+
-Isopropylbenzene (11.568)
-P-Bromofluorobenzene (11.849)
-Bromobenzene (11.894)
-N-Propylbenzene (11.977)
-1,1,2,2-Tetrachloroethane (12.038)+
-2-Chlorotoluene (12.098)
-1,3,5-Trimethylbenzene (12.182)+
-4-Chlorotoluene (12.298)
-P-Isopropyltoluene (12.470)
-1,2,4-Trimethylbenzene (12.545)
-sec-Butylbenzene (12.637)
-tert-Butylbenzene (12.786)+
-1,4-Dichlorobenzene (12.907)
-N-Butylbenzene (13.186)
-1,2-Dichlorobenzene-D4 (13.307)+
-1,2-Dibromo-3-Chloropropa (14.292)+
-Hexachlorobutadiene (15.250)+
-Naphthalene (15.715)
-1,2,3-Trichlorobenzene (15.956)

Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\D3311.d
Report Date: 07-Aug-2021 08:11

Katahdin Analytical Services

EPA 524.2

Data file : \\target_server\gg\chem\gcms-d.i\D072921.b\D3311.d
Lab Smp Id: WG303293-5
Inj Date : 29-JUL-2021 11:48
Operator : JSS Inst ID: gcms-d.i
Smp Info : WG303293-5
Misc Info :
Comment   :
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Meth Date : 01-Aug-2021 11:28 hgould Quant Type: ISTD
Cal Date : 29-JUL-2021 11:48 Cal File: D3311.d
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	25.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.109	1.110	(0.182)	484859	20.0000	19.3	
2	Chloromethane	50	1.230	1.231	(0.202)	547959	20.0000	19.8	
3	Vinyl chloride	62	1.277	1.277	(0.209)	318797	20.0000	19.5	
4	Bromomethane	94	1.491	1.491	(0.244)	121862	20.0000	18.1	
5	Chloroethane	64	1.574	1.575	(0.258)	106058	20.0000	20.2	
6	Trichlorofluoromethane	101	1.667	1.668	(0.273)	553715	20.0000	18.3	
7	1,1-Dichloroethene	96	2.020	2.021	(0.331)	250914	20.0000	19.0	
8	Carbon Disulfide	76	2.039	2.040	(0.334)	712736	20.0000	19.2	
9	Freon-113	151	2.058	2.057	(0.337)	206742	20.0000	18.8	
10	Methylene Chloride	84	2.495	2.495	(0.409)	200176	20.0000	19.8	
11	Acetone	43	2.550	2.551	(0.418)	15426	20.0000	20.9	
12	trans-1,2-Dichloroethene	96	2.625	2.634	(0.430)	269496	20.0000	18.8	
13	Methyl tert-butyl ether	73	2.746	2.746	(0.450)	267065	20.0000	20.3	
14	Tertiary-butyl alcohol	59	2.885	2.876	(0.473)	24363	100.000	130	
15	Di-isopropyl Ether	45	3.145	3.146	(0.516)	722843	20.0000	21.3	
16	1,1-Dichloroethane	63	3.248	3.248	(0.532)	685076	20.0000	19.7	
17	Ethyl tertiary-butyl ether	59	3.564	3.564	(0.584)	491282	20.0000	19.5	
18	cis-1,2-Dichloroethene	96	3.898	3.899	(0.639)	431776	20.0000	20.4	
19	2,2-Dichloropropane	77	4.038	4.038	(0.662)	414879	20.0000	18.9	
20	Bromochloromethane	128	4.168	4.168	(0.683)	157507	20.0000	21.0	
21	Chloroform	83	4.307	4.317	(0.706)	726892	20.0000	19.5	
22	Carbon Tetrachloride	117	4.456	4.457	(0.730)	608279	20.0000	19.4	
23	1,1,1-Trichloroethane	97	4.577	4.577	(0.750)	675576	20.0000	19.9	
24	1,1-Dichloropropene	75	4.781	4.782	(0.784)	538831	20.0000	20.4	

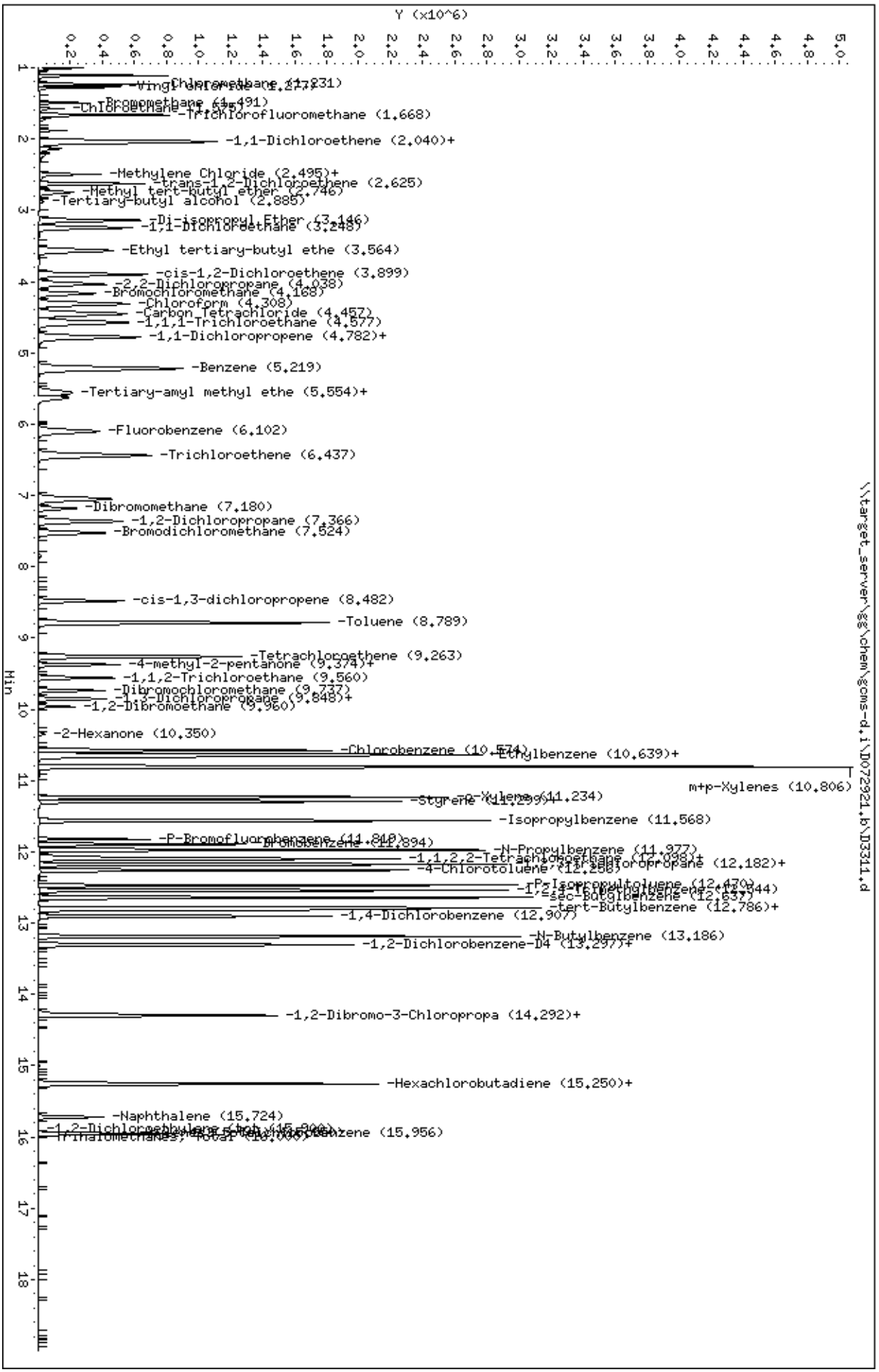
Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\D3311.d
Report Date: 07-Aug-2021 08:11

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
	25	2-Butanone	43	4.837	4.847	(0.793)	27618	20.0000	22.2	
	26	Benzene	78	5.218	5.219	(0.855)	1522603	20.0000	20.2	
	27	Tertiary-amyl methyl ether	73	5.553	5.554	(0.910)	282386	20.0000	18.7	
	28	1,2-Dichloroethane	62	5.637	5.637	(0.924)	286051	20.0000	19.6	
*	29	Fluorobenzene	96	6.102	6.102	(1.000)	706426	10.0000		
	30	Trichloroethene	95	6.436	6.437	(1.055)	431749	20.0000	19.8	
	31	Dibromomethane	93	7.180	7.180	(1.177)	138527	20.0000	19.7	
	32	1,2-Dichloropropane	63	7.366	7.366	(1.207)	313576	20.0000	20.2	
	33	Bromodichloromethane	83	7.524	7.534	(1.233)	409286	20.0000	19.9	
	34	cis-1,3-dichloropropene	75	8.481	8.481	(1.390)	376984	20.0000	19.8	
	35	Toluene	92	8.788	8.789	(1.440)	984941	20.0000	19.7	
	36	Tetrachloroethene	164	9.262	9.263	(1.518)	352862	20.0000	19.7	
	37	4-methyl-2-pentanone	43	9.365	9.365	(1.535)	54690	20.0000	19.7	
	38	trans-1,3-Dichloropropene	75	9.374	9.374	(1.536)	270556	20.0000	19.8	
	39	1,1,2-Trichloroethane	83	9.560	9.560	(1.567)	149770	20.0000	20.0	
	40	Dibromochloromethane	129	9.736	9.737	(1.596)	231858	20.0000	17.8	
	41	1,3-Dichloropropane	76	9.857	9.858	(1.615)	294343	20.0000	20.6	
	42	2-Chloroethylvinylether	63	9.848	9.858	(1.614)	30103	20.0000	20.2	
	43	1,2-Dibromoethane	107	9.960	9.960	(1.632)	155708	20.0000	20.2	
	44	2-Hexanone	43	10.350	10.341	(1.696)	25682	20.0000	17.8	
	45	Chlorobenzene	112	10.573	10.574	(1.733)	1038437	20.0000	19.8	
	46	Ethylbenzene	91	10.638	10.639	(1.743)	1924203	20.0000	20.2	
	47	1,1,1,2-Tetrachloroethane	131	10.666	10.667	(1.748)	324498	20.0000	19.7	
	48	m+p-Xylenes	106	10.805	10.806	(1.771)	1476254	40.0000	43.7	
	49	o-Xylene	106	11.233	11.234	(1.841)	695619	20.0000	19.9	
	50	Styrene	104	11.298	11.299	(1.852)	1025910	20.0000	19.8	
	51	Bromoform	173	11.289	11.289	(1.850)	106295	20.0000	19.6	
	52	Isopropylbenzene	105	11.568	11.568	(1.896)	1901906	20.0000	19.8	
$	53	P-Bromofluorobenzene	95	11.819	11.819	(1.937)	207295	10.0000	9.9	
	54	Bromobenzene	156	11.902	11.903	(1.951)	372071	20.0000	19.7	
	55	N-Propylbenzene	91	11.977	11.977	(1.963)	2309177	20.0000	19.5	
	56	1,1,2,2-Tetrachloroethane	83	12.060	12.061	(1.977)	165670	20.0000	19.5	
	57	2-Chlorotoluene	91	12.098	12.098	(1.983)	1283503	20.0000	19.5	
	58	1,2,3-Trichloropropane	75	12.163	12.163	(1.993)	131773	20.0000	20.1	
	59	1,3,5-Trimethylbenzene	105	12.181	12.182	(1.996)	1571397	20.0000	19.7	
	60	4-Chlorotoluene	91	12.256	12.256	(2.009)	1298386	20.0000	19.6	
	61	tert-Butylbenzene	119	12.786	12.786	(2.095)	1727489	20.0000	19.8	
	62	1,2,4-Trimethylbenzene	105	12.544	12.544	(2.056)	1583376	20.0000	19.6	
	63	sec-Butylbenzene	105	12.637	12.637	(2.071)	2096260	20.0000	19.5	
	64	P-Isopropyltoluene	119	12.470	12.470	(2.044)	1386030	20.0000	19.6	
	65	1,3-Dichlorobenzene	146	12.814	12.814	(2.100)	794786	20.0000	19.2	
	66	1,4-Dichlorobenzene	146	12.906	12.907	(2.115)	750992	20.0000	19.4	
	67	N-Butylbenzene	91	13.185	13.186	(2.161)	1641867	20.0000	19.3	
$	68	1,2-Dichlorobenzene-D4	152	13.297	13.297	(2.179)	188915	10.0000	9.6	
	69	1,2-Dichlorobenzene	146	13.306	13.307	(2.181)	625150	20.0000	19.4	
	70	1,2-Dibromo-3-Chloropropane	157	14.254	14.255	(2.336)	16543	20.0000	19.1	
	71	1,3,5-Trichlorobenzene	180	14.292	14.292	(2.342)	574212	20.0000	19.7	
	72	Hexachlorobutadiene	225	15.249	15.250	(2.499)	315642	20.0000	19.1	
	73	1,2,4-Trichlorobenzene	180	15.258	15.259	(2.501)	374386	20.0000	18.3	
	74	Naphthalene	128	15.723	15.724	(2.577)	365483	20.0000	19.2	
	75	1,2,3-Trichlorobenzene	180	15.956	15.956	(2.615)	269602	20.0000	19.3	
M	76	1,2-Dichloroethylene (total)	96				701272	40.0000		(a)
M	77	Xylenes (total)	106				2171873	60.0000		(a)
M	78	Trihalomethanes, Total	100				1474331	20.0000		(a)

Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\D3311.d
Report Date: 07-Aug-2021 08:11

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).


Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\D3311.d
Date : 29-JUL-2021 11:48
Client ID:
Sample Info: WG303293-5
Purge Volume: 25.0
Column phase: RTX-VMS
Instrument: gcms-d.i
Operator: JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-d.i\D072921.b\D3311.d
Y (x10^6)
Min
Chloromethane (1.231)
Vinyl chloride (1.277)
Bromomethane (1.491)
Chloroethane (1.567)
Trichlorofluoromethane (1.668)
1,1-Dichloroethene (2.040)+
Methylene Chloride (2.495)+
trans-1,2-Dichloroethene (2.625)
Methyl tert-butyl ether (2.746)
Tertiary-butyl alcohol (2.885)
Di-isopropyl Ether (3.146)
1,1-Dichloroethane (3.248)
Ethyl tertiary-butyl ethe (3.564)
cis-1,2-Dichloroethene (3.899)
2,2-Dichloropropane (4.038)
Bromochloromethane (4.168)
Chloroform (4.308)
Carbon Tetrachloride (4.457)
1,1,1-Trichloroethane (4.577)
1,1-Dichloropropene (4.782)+
Benzene (5.219)
Tertiary-amyl methyl ethe (5.554)+
Fluorobenzene (6.102)
Trichloroethene (6.437)
Dibromomethane (7.180)
1,2-Dichloropropane (7.366)
Bromodichloromethane (7.524)
cis-1,3-dichloropropene (8.482)
Toluene (8.789)
Tetrachloroethene (9.263)
4-methyl-2-pentanone (9.374)+
1,1,2-Trichloroethane (9.560)
Dibromochloromethane (9.737)
1,3-Dichloropropane (9.848)+
1,2-Dibromoethane (9.960)
2-Hexanone (10.350)
Chlorobenzene (10.574)
Ethylbenzene (10.639)+
m+p-Xylenes (10.806)
o-Xylene (11.234)
Styrene (11.299)+
Isopropylbenzene (11.568)
P-Bromofluorobenzene (11.840)
Bromobenzene (11.894)
N-Propylbenzene (11.977)
1,1,2,2-Tetrachloroethane (12.098)+
2-Chlorotoluene (12.168)
1,2,3-Trichloropropane (12.182)+
4-Chlorotoluene (12.258)
P-Isopropyltoluene (12.470)
1,3,5-Trimethylbenzene (12.544)
sec-Butylbenzene (12.637)
tert-Butylbenzene (12.786)+
1,4-Dichlorobenzene (12.907)
N-Butylbenzene (13.186)
1,2-Dichlorobenzene-D4 (13.297)+
1,2-Dibromo-3-Chloropropa (14.292)+
Hexachlorobutadiene (15.250)+
Naphthalene (15.724)
1,2-Dichlorobenzene (15.956)

Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\D3313.d
Report Date: 07-Aug-2021 08:12

Katahdin Analytical Services

EPA 524.2

Data file : \\target_server\gg\chem\gcms-d.i\D072921.b\D3313.d
Lab Smp Id: WG303293-2
Inj Date : 29-JUL-2021 13:06
Operator : JSS Inst ID: gcms-d.i
Smp Info : WG303293-2
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gcms-d.i\D072921.b\D5A25(70)D.m
Meth Date : 01-Aug-2021 11:28 hgould Quant Type: ISTD
Cal Date : 29-JUL-2021 13:06 Cal File: D3313.d
Als bottle: 9 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	25.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.109	1.110	(0.182)	41897	2.00000	1.9	
2	Chloromethane	50	1.230	1.231	(0.202)	56273	2.00000	2.3	
3	Vinyl chloride	62	1.277	1.277	(0.209)	28492	2.00000	2.0	
4	Bromomethane	94	1.491	1.491	(0.244)	10466	2.00000	1.8	
5	Chloroethane	64	1.574	1.575	(0.258)	13678	2.00000	2.9	
6	Trichlorofluoromethane	101	1.667	1.668	(0.273)	52283	2.00000	2.0	
7	1,1-Dichloroethene	96	2.020	2.021	(0.331)	21585	2.00000	1.9	
8	Carbon Disulfide	76	2.039	2.040	(0.334)	58952	2.00000	1.8	
9	Freon-113	151	2.058	2.057	(0.337)	17441	2.00000	1.8	
10	Methylene Chloride	84	2.495	2.495	(0.409)	22837	2.00000	2.6	
11	Acetone	43	2.560	2.551	(0.420)	2033	2.00000	3.1	
12	trans-1,2-Dichloroethene	96	2.634	2.634	(0.432)	24294	2.00000	1.9	
13	Methyl tert-butyl ether	73	2.746	2.746	(0.450)	22840	2.00000	2.0	
14	Tertiary-butyl alcohol	59	2.885	2.876	(0.473)	1396	10.0000	7.8	
15	Di-isopropyl Ether	45	3.145	3.146	(0.516)	47633	2.00000	1.6	
16	1,1-Dichloroethane	63	3.248	3.248	(0.532)	57738	2.00000	1.9	
17	Ethyl tertiary-butyl ether	59	3.573	3.564	(0.586)	28372	2.00000	1.3	
18	cis-1,2-Dichloroethene	96	3.898	3.899	(0.639)	30563	2.00000	1.6	
19	2,2-Dichloropropane	77	4.038	4.038	(0.662)	34242	2.00000	1.8	
20	Bromochloromethane	128	4.177	4.168	(0.685)	12192	2.00000	1.8	
21	Chloroform	83	4.307	4.317	(0.706)	64336	2.00000	2.0	
22	Carbon Tetrachloride	117	4.456	4.457	(0.730)	46042	2.00000	1.7	
23	1,1,1-Trichloroethane	97	4.577	4.577	(0.750)	50918	2.00000	1.7	
24	1,1-Dichloropropene	75	4.791	4.782	(0.785)	31936	2.00000	1.4	

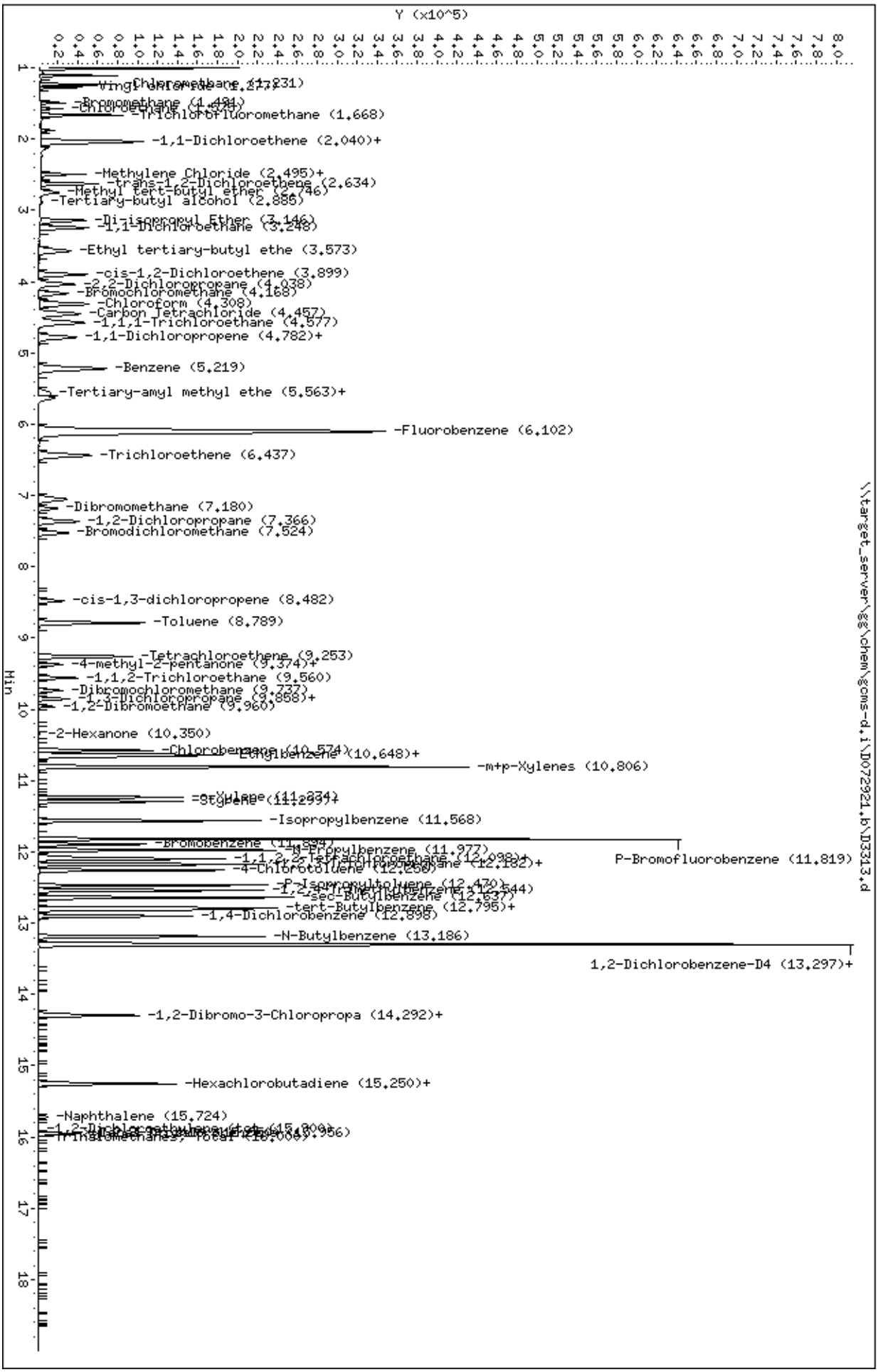
Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\D3313.d
Report Date: 07-Aug-2021 08:12

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
	25	2-Butanone	43	4.847	4.847	(0.794)	2010	2.00000	1.8(a)	
	26	Benzene	78	5.218	5.219	(0.855)	112176	2.00000	1.7	
	27	Tertiary-amyl methyl ether	73	5.562	5.554	(0.912)	14953	2.00000	1.1	
	28	1,2-Dichloroethane	62	5.637	5.637	(0.924)	24046	2.00000	1.9	
*	29	Fluorobenzene	96	6.102	6.102	(1.000)	625885	10.0000		
	30	Trichloroethene	95	6.436	6.437	(1.055)	32792	2.00000	1.7	
	31	Dibromomethane	93	7.189	7.180	(1.178)	11323	2.00000	1.8	
	32	1,2-Dichloropropane	63	7.366	7.366	(1.207)	23345	2.00000	1.7	
	33	Bromodichloromethane	83	7.524	7.534	(1.233)	29080	2.00000	1.6	
	34	cis-1,3-dichloropropene	75	8.481	8.481	(1.390)	19008	2.00000	1.2	
	35	Toluene	92	8.788	8.789	(1.440)	55960	2.00000	1.3	
	36	Tetrachloroethene	164	9.253	9.263	(1.516)	25689	2.00000	1.6	
	37	4-methyl-2-pentanone	43	9.365	9.365	(1.535)	2680	2.00000	1.1(a)	
	38	trans-1,3-Dichloropropene	75	9.374	9.374	(1.536)	13847	2.00000	1.2	
	39	1,1,2-Trichloroethane	83	9.560	9.560	(1.567)	11954	2.00000	1.8	
	40	Dibromochloromethane	129	9.736	9.737	(1.596)	14628	2.00000	1.3	
	41	1,3-Dichloropropane	76	9.857	9.858	(1.615)	20335	2.00000	1.6	
	42	2-Chloroethylvinylether	63	9.857	9.858	(1.615)	2100	2.00000	1.6	
	43	1,2-Dibromoethane	107	9.960	9.960	(1.632)	10686	2.00000	1.6	
	44	2-Hexanone	43	10.350	10.341	(1.696)	1051	2.00000	0.92(a)	
	45	Chlorobenzene	112	10.573	10.574	(1.733)	63029	2.00000	1.4	
	46	Ethylbenzene	91	10.638	10.639	(1.743)	123371	2.00000	1.5	
	47	1,1,1,2-Tetrachloroethane	131	10.666	10.667	(1.748)	24176	2.00000	1.7	
	48	m+p-Xylenes	106	10.805	10.806	(1.771)	114308	4.00000	3.8	
	49	o-Xylene	106	11.242	11.234	(1.842)	40704	2.00000	1.3	
	50	Styrene	104	11.298	11.299	(1.852)	62808	2.00000	1.4	
	51	Bromoform	173	11.289	11.289	(1.850)	6418	2.00000	1.4	
	52	Isopropylbenzene	105	11.568	11.568	(1.896)	127668	2.00000	1.5	
$	53	P-Bromofluorobenzene	95	11.819	11.819	(1.937)	182193	10.0000	9.8	
	54	Bromobenzene	156	11.893	11.903	(1.949)	29935	2.00000	1.8	
	55	N-Propylbenzene	91	11.977	11.977	(1.963)	180586	2.00000	1.7	
	56	1,1,2,2-Tetrachloroethane	83	12.061	12.061	(1.977)	14224	2.00000	1.9	
	57	2-Chlorotoluene	91	12.098	12.098	(1.983)	100186	2.00000	1.7	
	58	1,2,3-Trichloropropane	75	12.163	12.163	(1.993)	11316	2.00000	1.9	
	59	1,3,5-Trimethylbenzene	105	12.181	12.182	(1.996)	115370	2.00000	1.6	
	60	4-Chlorotoluene	91	12.256	12.256	(2.009)	103726	2.00000	1.8	
	61	tert-Butylbenzene	119	12.786	12.786	(2.095)	124406	2.00000	1.6	
	62	1,2,4-Trimethylbenzene	105	12.544	12.544	(2.056)	118121	2.00000	1.7	
	63	sec-Butylbenzene	105	12.637	12.637	(2.071)	163736	2.00000	1.7	
	64	P-Isopropyltoluene	119	12.470	12.470	(2.044)	98540	2.00000	1.6	
	65	1,3-Dichlorobenzene	146	12.814	12.814	(2.100)	72130	2.00000	2.0	
	66	1,4-Dichlorobenzene	146	12.906	12.907	(2.115)	61890	2.00000	1.8	
	67	N-Butylbenzene	91	13.185	13.186	(2.161)	118367	2.00000	1.6	
$	68	1,2-Dichlorobenzene-D4	152	13.297	13.297	(2.179)	175574	10.0000	10.2	
	69	1,2-Dichlorobenzene	146	13.306	13.307	(2.181)	56919	2.00000	2.0	
	70	1,2-Dibromo-3-Chloropropane	157	14.245	14.255	(2.335)	1038	2.00000	1.5	
	71	1,3,5-Trichlorobenzene	180	14.292	14.292	(2.342)	38146	2.00000	1.5	
	72	Hexachlorobutadiene	225	15.249	15.250	(2.499)	23066	2.00000	1.6	
	73	1,2,4-Trichlorobenzene	180	15.258	15.259	(2.501)	18301	2.00000	1.0	
	74	Naphthalene	128	15.723	15.724	(2.577)	9858	2.00000	0.62	
	75	1,2,3-Trichlorobenzene	180	15.956	15.956	(2.615)	13872	2.00000	1.1	
M	76	1,2-Dichloroethylene (total)	96				54857	4.00000	(a)	
M	77	Xylenes (total)	106				155012	6.00000	(a)	
M	78	Trihalomethanes, Total	100				114462	2.00000	(a)	

Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\D3313.d
Report Date: 07-Aug-2021 08:12

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).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Date : 29-JUL-2021 13:06
Client ID:
Sample Info: WG303293-2
Purge Volume: 25.0
Column phase: RTX-VMS
Instrument: gcms-d.i
Operator: JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-d.i\D072921.b\D3313.d
Y (x10^5)
Min
Chloromethane (1.231)
Vinyl chloride (1.277)
Bromomethane (1.494)
Chloroethane (1.526)
Trichlorofluoromethane (1.668)
1,1-Dichloroethene (2.040)+
Methylene Chloride (2.495)+
trans-1,2-Dichloroethene (2.634)
Methyl tert-butyl ether (2.746)
Tertiary-butyl alcohol (2.888)
Diisopropyl Ether (3.146)
1,1-Dichloroethane (3.248)
Ethyl tertiary-butyl ethe (3.573)
cis-1,2-Dichloroethene (3.899)
2,2-Dichloropropane (4.038)
Bromochloromethane (4.168)
Chloroform (4.308)
Carbon Tetrachloride (4.457)
1,1,1-Trichloroethane (4.577)
1,1-Dichloropropene (4.782)+
Benzene (5.219)
Tertiary-amyl methyl ethe (5.563)+
Fluorobenzene (6.102)
Trichloroethene (6.437)
Dibromomethane (7.180)
1,2-Dichloropropane (7.366)
Bromodichloromethane (7.524)
cis-1,3-dichloropropene (8.482)
Toluene (8.789)
Tetrachloroethene (9.253)
4-methyl-2-pentanone (9.374)+
1,1,2-Trichloroethane (9.560)
Dibromochloromethane (9.737)
1,3-Dichloropropane (9.858)+
1,2-Dibromoethane (9.960)
2-Hexanone (10.350)
Chlorobenzene (10.574)
Ethylbenzene (10.648)+
m+p-Xylenes (10.806)
o-Xylene (11.234)
Styrene (11.299)+
Isopropylbenzene (11.568)
Bromobenzene (11.894)
n-Propylbenzene (11.977)
1,1,2,2-Tetrachloroethane (12.098)+
4-Chlorotoluene (12.250)
1,3,5-Trimethylbenzene (12.182)+
P-Bromofluorobenzene (11.819)
P-Isopropyltoluene (12.470)+
1,2,4-Trimethylbenzene (12.544)
sec-Butylbenzene (12.627)
tert-Butylbenzene (12.795)+
1,4-Dichlorobenzene (12.898)
N-Butylbenzene (13.186)
1,2-Dichlorobenzene-D4 (13.297)+
1,2-Dibromo-3-Chloropropa (14.292)+
Hexachlorobutadiene (15.250)+
Naphthalene (15.724)
1,2-Dichlorotetrafluoroet (15.809)
Trihalomethanes, Total (10.006)

Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\D3314.d
Report Date: 07-Aug-2021 08:12

Katahdin Analytical Services

EPA 524.2

Data file : \\target_server\gg\chem\gcms-d.i\D072921.b\D3314.d
Lab Smp Id: WG303293-1
Inj Date : 29-JUL-2021 13:45
Operator : JSS Inst ID: gcms-d.i
Smp Info : WG303293-1
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gcms-d.i\D072921.b\D5A25(70)D.m
Meth Date : 01-Aug-2021 11:28 hgould Quant Type: ISTD
Cal Date : 29-JUL-2021 13:45 Cal File: D3314.d
Als bottle: 10 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	25.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.109	1.110	(0.182)	10411	0.50000	0.51	
2	Chloromethane	50	1.230	1.231	(0.202)	15836	0.50000	0.68	
3	Vinyl chloride	62	1.277	1.277	(0.209)	6822	0.50000	0.51	
4	Bromomethane	94	1.491	1.491	(0.244)	2695	0.50000	0.50	
5	Chloroethane	64	1.574	1.575	(0.258)	3521	0.50000	0.81	
6	Trichlorofluoromethane	101	1.667	1.668	(0.273)	12770	0.50000	0.52	
7	1,1-Dichloroethene	96	2.020	2.021	(0.331)	6165	0.50000	0.58	
8	Carbon Disulfide	76	2.039	2.040	(0.334)	15295	0.50000	0.51	
9	Freon-113	151	2.058	2.057	(0.337)	5067	0.50000	0.58	
10	Methylene Chloride	84	2.495	2.495	(0.409)	10536	0.50000	1.3(a)	
11	Acetone	43	2.550	2.551	(0.418)	2011	0.50000	3.3	
12	trans-1,2-Dichloroethene	96	2.634	2.634	(0.432)	7232	0.50000	0.63	
13	Methyl tert-butyl ether	73	2.746	2.746	(0.450)	5919	0.50000	0.55	
14	Tertiary-butyl alcohol	59	2.885	2.876	(0.473)	442	2.50000	2.8	
15	Di-isopropyl Ether	45	3.145	3.146	(0.516)	11159	0.50000	0.41(a)	
16	1,1-Dichloroethane	63	3.248	3.248	(0.532)	14749	0.50000	0.52	
17	Ethyl tertiary-butyl ether	59	3.564	3.564	(0.584)	5995	0.50000	0.29(a)	
18	cis-1,2-Dichloroethene	96	3.908	3.899	(0.640)	7286	0.50000	0.43(a)	
19	2,2-Dichloropropane	77	4.028	4.038	(0.660)	8353	0.50000	0.48(a)	
20	Bromochloromethane	128	4.177	4.168	(0.685)	3084	0.50000	0.50	
21	Chloroform	83	4.307	4.317	(0.706)	18217	0.50000	0.60	
22	Carbon Tetrachloride	117	4.447	4.457	(0.729)	11824	0.50000	0.48(a)	
23	1,1,1-Trichloroethane	97	4.577	4.577	(0.750)	12514	0.50000	0.46(a)	
24	1,1-Dichloropropene	75	4.781	4.782	(0.784)	7410	0.50000	0.36(a)	

Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\D3314.d
Report Date: 07-Aug-2021 08:12

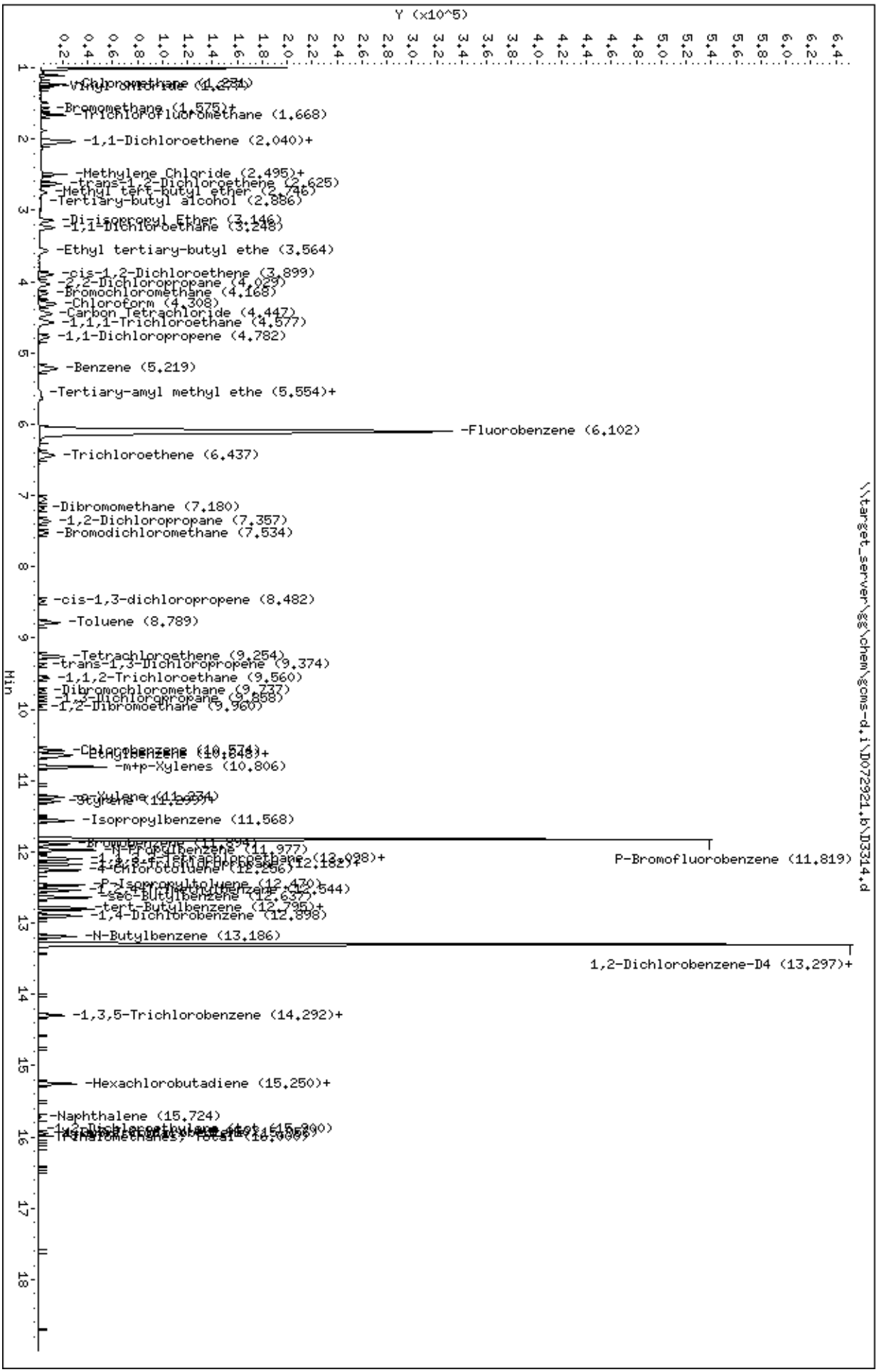
10:05 am, Aug 09, 2021

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)	REVIEW CODE
	26	Benzene	78	5.218	5.219	(0.855)	24377	0.50000	0.40(a)	
	27	Tertiary-amyl methyl ether	73	5.553	5.554	(0.910)	3050	0.50000	0.25(a)	
	28	1,2-Dichloroethane	62	5.637	5.637	(0.924)	5672	0.50000	0.48(a)	
*	29	Fluorobenzene	96	6.102	6.102	(1.000)	579930	10.0000		
	30	Trichloroethene	95	6.436	6.437	(1.055)	8681	0.50000	0.50	
	31	Dibromomethane	93	7.180	7.180	(1.177)	2612	0.50000	0.46(a)	
	32	1,2-Dichloropropane	63	7.357	7.366	(1.206)	5379	0.50000	0.43(Ta)	
	33	Bromodichloromethane	83	7.533	7.534	(1.235)	7105	0.50000	0.44(a)	
	34	cis-1,3-dichloropropene	75	8.481	8.481	(1.390)	3913	0.50000	0.26(a)	
	35	Toluene	92	8.788	8.789	(1.440)	9686	0.50000	0.24(a)	
	36	Tetrachloroethene	164	9.262	9.263	(1.518)	5957	0.50000	0.42(a)	
	38	trans-1,3-Dichloropropene	75	9.374	9.374	(1.536)	2599	0.50000	0.24(a)	
	39	1,1,2-Trichloroethane	83	9.560	9.560	(1.567)	2485	0.50000	0.41(a)	
	40	Dibromochloromethane	129	9.736	9.737	(1.596)	3104	0.50000	0.29(a)	
	41	1,3-Dichloropropane	76	9.857	9.858	(1.615)	4162	0.50000	0.36(a)	
	43	1,2-Dibromoethane	107	9.960	9.960	(1.632)	2233	0.50000	0.36(Ta)	
	45	Chlorobenzene	112	10.573	10.574	(1.733)	11877	0.50000	0.28(a)	
	46	Ethylbenzene	91	10.638	10.639	(1.743)	16847	0.50000	0.22(a)	
	47	1,1,1,2-Tetrachloroethane	131	10.666	10.667	(1.748)	5153	0.50000	0.39(a)	
	48	m+p-Xylenes	106	10.806	10.806	(1.771)	15000	1.00000	0.54(a)	
	49	o-Xylene	106	11.233	11.234	(1.841)	6127	0.50000	0.21(a)	
	50	Styrene	104	11.298	11.299	(1.852)	7553	0.50000	0.18(a)	
	51	Bromoform	173	11.289	11.289	(1.850)	1387	0.50000	0.33(Ta)	
	52	Isopropylbenzene	105	11.568	11.568	(1.896)	17232	0.50000	0.22(a)	
$	53	P-Bromofluorobenzene	95	11.819	11.819	(1.937)	153524	10.0000	9.0	
	54	Bromobenzene	156	11.893	11.903	(1.949)	6852	0.50000	0.45(a)	
	55	N-Propylbenzene	91	11.977	11.977	(1.963)	34056	0.50000	0.36(a)	
	56	1,1,2,2-Tetrachloroethane	83	12.061	12.061	(1.977)	3305	0.50000	0.48(a)	
	57	2-Chlorotoluene	91	12.098	12.098	(1.983)	19858	0.50000	0.38(a)	
	58	1,2,3-Trichloropropane	75	12.163	12.163	(1.993)	2576	0.50000	0.48(a)	
	59	1,3,5-Trimethylbenzene	105	12.181	12.182	(1.996)	17975	0.50000	0.28(a)	
	60	4-Chlorotoluene	91	12.256	12.256	(2.009)	19690	0.50000	0.37(a)	
	61	tert-Butylbenzene	119	12.786	12.786	(2.095)	19078	0.50000	0.28(a)	
	62	1,2,4-Trimethylbenzene	105	12.544	12.544	(2.056)	17326	0.50000	0.27(a)	
	63	sec-Butylbenzene	105	12.637	12.637	(2.071)	28072	0.50000	0.33(a)	
	64	P-Isopropyltoluene	119	12.470	12.470	(2.044)	16165	0.50000	0.29(a)	
	65	1,3-Dichlorobenzene	146	12.814	12.814	(2.100)	15563	0.50000	0.46(a)	
	66	1,4-Dichlorobenzene	146	12.907	12.907	(2.115)	13423	0.50000	0.43(a)	
	67	N-Butylbenzene	91	13.185	13.186	(2.161)	16922	0.50000	0.24(a)	
$	68	1,2-Dichlorobenzene-D4	152	13.297	13.297	(2.179)	155203	10.0000	9.7	
	69	1,2-Dichlorobenzene	146	13.306	13.307	(2.181)	14230	0.50000	0.54	
	70	1,2-Dibromo-3-Chloropropane	157	14.254	14.255	(2.336)	140	0.50000	0.21(aM)	M6
	71	1,3,5-Trichlorobenzene	180	14.292	14.292	(2.342)	8057	0.50000	0.35(a)	
	72	Hexachlorobutadiene	225	15.249	15.250	(2.499)	5558	0.50000	0.43(a)	
	73	1,2,4-Trichlorobenzene	180	15.259	15.259	(2.501)	3666	0.50000	0.22(a)	
	74	Naphthalene	128	15.723	15.724	(2.577)	1855	0.50000	0.13(a)	
	75	1,2,3-Trichlorobenzene	180	15.956	15.956	(2.615)	3175	0.50000	0.28(a)	
M	76	1,2-Dichloroethylene (total)	96				14518	1.00000	(a)	
M	77	Xylenes (total)	106				21127	1.50000	(a)	
M	78	Trihalomethanes, Total	100				29813	0.50000	(a)	

Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\D3314.d
Report Date: 07-Aug-2021 08:12

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.


Y (x10^5)
Min
-Chloromethane (1.234)
-Vinyl chloride (1.377)
-Bromomethane (1.575)+
-Trichlorofluoromethane (1.668)
-1,1-Dichloroethene (2.040)+
-Methylene Chloride (2.495)+
-trans-1,2-Dichloroethene (2.625)
-Methyl tert-butyl ether (2.746)
-Tertiary-butyl alcohol (2.886)
-Diisopropyl Ether (3.146)
-1,1-Dichloroethane (3.248)
-Ethyl tertiary-butyl ethe (3.564)
-cis-1,2-Dichloroethene (3.899)
-2,2-Dichloropropane (4.029)
-Bromochloromethane (4.168)
-Chloroform (4.308)
-Carbon Tetrachloride (4.447)
-1,1,1-Trichloroethane (4.577)
-1,1-Dichloropropene (4.782)
-Benzene (5.219)
-Tertiary-amyl methyl ethe (5.554)+
-Fluorobenzene (6.102)
-Trichloroethene (6.437)
-Dibromomethane (7.180)
-1,2-Dichloropropane (7.357)
-Bromodichloromethane (7.534)
-cis-1,3-dichloropropene (8.482)
-Toluene (8.789)
-Tetrachloroethene (9.254)
-trans-1,3-Dichloropropene (9.374)
-1,1,2-Trichloroethane (9.560)
-Dibromochloromethane (9.737)
-1,3-Dichloropropane (9.868)
-1,2-Dibromoethane (9.960)
-Chlorobenzene (10.574)
-Ethylbenzene (10.648)+
-m+p-Xylenes (10.806)
-o-Xylene (11.234)
-Styrene (11.297)+
-Isopropylbenzene (11.568)
-Bromobenzene (11.894)
-N-Propylbenzene (11.977)
-1,3,5-Trimethylbenzene (12.098)+
-4-Chlorotoluene (12.256)
-2-Chlorotoluene (12.182)+
-P-Isopropyltoluene (12.470)
-1,2,4-Trimethylbenzene (12.544)
-sec-Butylbenzene (12.627)
-tert-Butylbenzene (12.795)+
-1,4-Dichlorobenzene (12.898)
-N-Butylbenzene (13.186)
-1,3,5-Trichlorobenzene (14.292)+
-Hexachlorobutadiene (15.250)+
-Naphthalene (15.724)
-1,2,3-Trichlorobenzene (15.890)
P-Bromofluorobenzene (11.819)
1,2-Dichlorobenzene-D4 (13.297)+
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Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\D3314.d
Date : 29-JUL-2021 13:45
Client ID:
Sample Info: WG303293-1
Purge Volume: 25.0
Column phase: RTX-VMS
Instrument: gcms-d.i
Operator: JSS
Column diameter: 0.18

Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\D3315.d
Report Date: 07-Aug-2021 08:12

Katahdin Analytical Services

EPA 524.2

Data file : \\target_server\gg\chem\gcms-d.i\D072921.b\D3315.d
Lab Smp Id: WG303293-4
Inj Date : 29-JUL-2021 14:24
Operator : JSS Inst ID: gcms-d.i
Smp Info : WG303293-4
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gcms-d.i\D072921.b\D5A25(70)D.m
Meth Date : 01-Aug-2021 11:28 hgould Quant Type: ISTD
Cal Date : 29-JUL-2021 14:24 Cal File: D3315.d
Als bottle: 11 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	25.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.109	1.110	(0.182)	219543	10.0000	(a)	
2	Chloromethane	50	1.230	1.231	(0.202)	239254	10.0000	(a)	
3	Vinyl chloride	62	1.277	1.277	(0.209)	146966	10.0000	(a)	
4	Bromomethane	94	1.491	1.491	(0.244)	59656	10.0000	(a)	
5	Chloroethane	64	1.574	1.575	(0.258)	62044	10.0000	(a)	
6	Trichlorofluoromethane	101	1.667	1.668	(0.273)	282348	10.0000	(a)	
7	1,1-Dichloroethene	96	2.020	2.021	(0.331)	119859	10.0000	(a)	
8	Carbon Disulfide	76	2.039	2.040	(0.334)	333930	10.0000	(a)	
9	Freon-113	151	2.058	2.057	(0.337)	102339	10.0000	(a)	
10	Methylene Chloride	84	2.495	2.495	(0.409)	99277	10.0000	(a)	
11	Acetone	43	2.550	2.551	(0.418)	6943	10.0000	(a)	
12	trans-1,2-Dichloroethene	96	2.634	2.634	(0.432)	127955	10.0000	(a)	
13	Methyl tert-butyl ether	73	2.746	2.746	(0.450)	112775	10.0000	(a)	
14	Tertiary-butyl alcohol	59	2.876	2.876	(0.471)	6774	50.0000	(a)	
15	Di-isopropyl Ether	45	3.145	3.146	(0.516)	284089	10.0000	(a)	
16	1,1-Dichloroethane	63	3.248	3.248	(0.532)	305570	10.0000	(a)	
17	Ethyl tertiary-butyl ether	59	3.564	3.564	(0.584)	178116	10.0000	(a)	
18	cis-1,2-Dichloroethene	96	3.898	3.899	(0.639)	181397	10.0000	(a)	
19	2,2-Dichloropropane	77	4.038	4.038	(0.662)	188699	10.0000	(a)	
20	Bromochloromethane	128	4.168	4.168	(0.683)	67521	10.0000	(a)	
21	Chloroform	83	4.317	4.317	(0.707)	329468	10.0000	(a)	
22	Carbon Tetrachloride	117	4.456	4.457	(0.730)	270998	10.0000	(a)	
23	1,1,1-Trichloroethane	97	4.577	4.577	(0.750)	292380	10.0000	(a)	
24	1,1-Dichloropropene	75	4.781	4.782	(0.784)	228151	10.0000	(a)	

Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\D3315.d
Report Date: 07-Aug-2021 08:12

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
	25	2-Butanone	43	4.847	4.847	(0.794)	10838	10.0000	(a)	
	26	Benzene	78	5.218	5.219	(0.855)	664207	10.0000	(a)	
	27	Tertiary-amyl methyl ether	73	5.553	5.554	(0.910)	97249	10.0000	(a)	
	28	1,2-Dichloroethane	62	5.637	5.637	(0.924)	128672	10.0000	(a)	
*	29	Fluorobenzene	96	6.102	6.102	(1.000)	633772	10.0000		
	30	Trichloroethene	95	6.436	6.437	(1.055)	188243	10.0000	(a)	
	31	Dibromomethane	93	7.180	7.180	(1.177)	61364	10.0000	(a)	
	32	1,2-Dichloropropane	63	7.366	7.366	(1.207)	135354	10.0000	(a)	
	33	Bromodichloromethane	83	7.533	7.534	(1.235)	174208	10.0000	(a)	
	34	cis-1,3-dichloropropene	75	8.481	8.481	(1.390)	141412	10.0000	(a)	
	35	Toluene	92	8.788	8.789	(1.440)	425982	10.0000	(a)	
	36	Tetrachloroethene	164	9.262	9.263	(1.518)	155395	10.0000	(a)	
	37	4-methyl-2-pentanone	43	9.365	9.365	(1.535)	17723	10.0000	(a)	
	38	trans-1,3-Dichloropropene	75	9.374	9.374	(1.536)	105427	10.0000	(a)	
	39	1,1,2-Trichloroethane	83	9.560	9.560	(1.567)	66260	10.0000	(a)	
	40	Dibromochloromethane	129	9.736	9.737	(1.596)	93416	10.0000	(a)	
	41	1,3-Dichloropropane	76	9.857	9.858	(1.615)	123787	10.0000	(a)	
	42	2-Chloroethylvinylether	63	9.857	9.858	(1.615)	12713	10.0000	(a)	
	43	1,2-Dibromoethane	107	9.960	9.960	(1.632)	65561	10.0000	(a)	
	44	2-Hexanone	43	10.341	10.341	(1.695)	7770	10.0000	(a)	
	45	Chlorobenzene	112	10.573	10.574	(1.733)	437979	10.0000	(a)	
	46	Ethylbenzene	91	10.638	10.639	(1.743)	871885	10.0000	(a)	
	47	1,1,1,2-Tetrachloroethane	131	10.666	10.667	(1.748)	142013	10.0000	(a)	
	48	m+p-Xylenes	106	10.805	10.806	(1.771)	694738	20.0000	(a)	
	49	o-Xylene	106	11.233	11.234	(1.841)	300422	10.0000	(a)	
	50	Styrene	104	11.298	11.299	(1.852)	447543	10.0000	(a)	
	51	Bromoform	173	11.289	11.289	(1.850)	43054	10.0000	(a)	
	52	Isopropylbenzene	105	11.568	11.568	(1.896)	868958	10.0000	(a)	
$	53	P-Bromofluorobenzene	95	11.819	11.819	(1.937)	186366	10.0000	(a)	
	54	Bromobenzene	156	11.902	11.903	(1.951)	163551	10.0000	(a)	
	55	N-Propylbenzene	91	11.977	11.977	(1.963)	1090744	10.0000	(a)	
	56	1,1,2,2-Tetrachloroethane	83	12.060	12.061	(1.977)	73909	10.0000	(a)	
	57	2-Chlorotoluene	91	12.098	12.098	(1.983)	591449	10.0000	(a)	
	58	1,2,3-Trichloropropane	75	12.163	12.163	(1.993)	58505	10.0000	(a)	
	59	1,3,5-Trimethylbenzene	105	12.181	12.182	(1.996)	722908	10.0000	(a)	
	60	4-Chlorotoluene	91	12.256	12.256	(2.009)	600127	10.0000	(a)	
	61	tert-Butylbenzene	119	12.786	12.786	(2.095)	799076	10.0000	(a)	
	62	1,2,4-Trimethylbenzene	105	12.544	12.544	(2.056)	731553	10.0000	(a)	
	63	sec-Butylbenzene	105	12.637	12.637	(2.071)	988701	10.0000	(a)	
	64	P-Isopropyltoluene	119	12.470	12.470	(2.044)	635220	10.0000	(a)	
	65	1,3-Dichlorobenzene	146	12.814	12.814	(2.100)	371943	10.0000	(a)	
	66	1,4-Dichlorobenzene	146	12.906	12.907	(2.115)	339336	10.0000	(a)	
	67	N-Butylbenzene	91	13.185	13.186	(2.161)	769710	10.0000	(a)	
$	68	1,2-Dichlorobenzene-D4	152	13.297	13.297	(2.179)	174862	10.0000	(a)	
	69	1,2-Dichlorobenzene	146	13.306	13.307	(2.181)	281605	10.0000	(a)	
	70	1,2-Dibromo-3-Chloropropane	157	14.254	14.255	(2.336)	5850	10.0000	(a)	
	71	1,3,5-Trichlorobenzene	180	14.292	14.292	(2.342)	240491	10.0000	(a)	
	72	Hexachlorobutadiene	225	15.249	15.250	(2.499)	139207	10.0000	(a)	
	73	1,2,4-Trichlorobenzene	180	15.258	15.259	(2.501)	136967	10.0000	(a)	
	74	Naphthalene	128	15.723	15.724	(2.577)	93344	10.0000	(a)	
	75	1,2,3-Trichlorobenzene	180	15.956	15.956	(2.615)	92272	10.0000	(a)	
M	76	1,2-Dichloroethylene (total)	96				309352	20.0000	(a)	
M	77	Xylenes (total)	106				995160	30.0000	(a)	
M	78	Trihalomethanes, Total	100				640146	10.0000	(a)	

Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\D3315.d
Report Date: 07-Aug-2021 08:12

QC Flag Legend

a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).

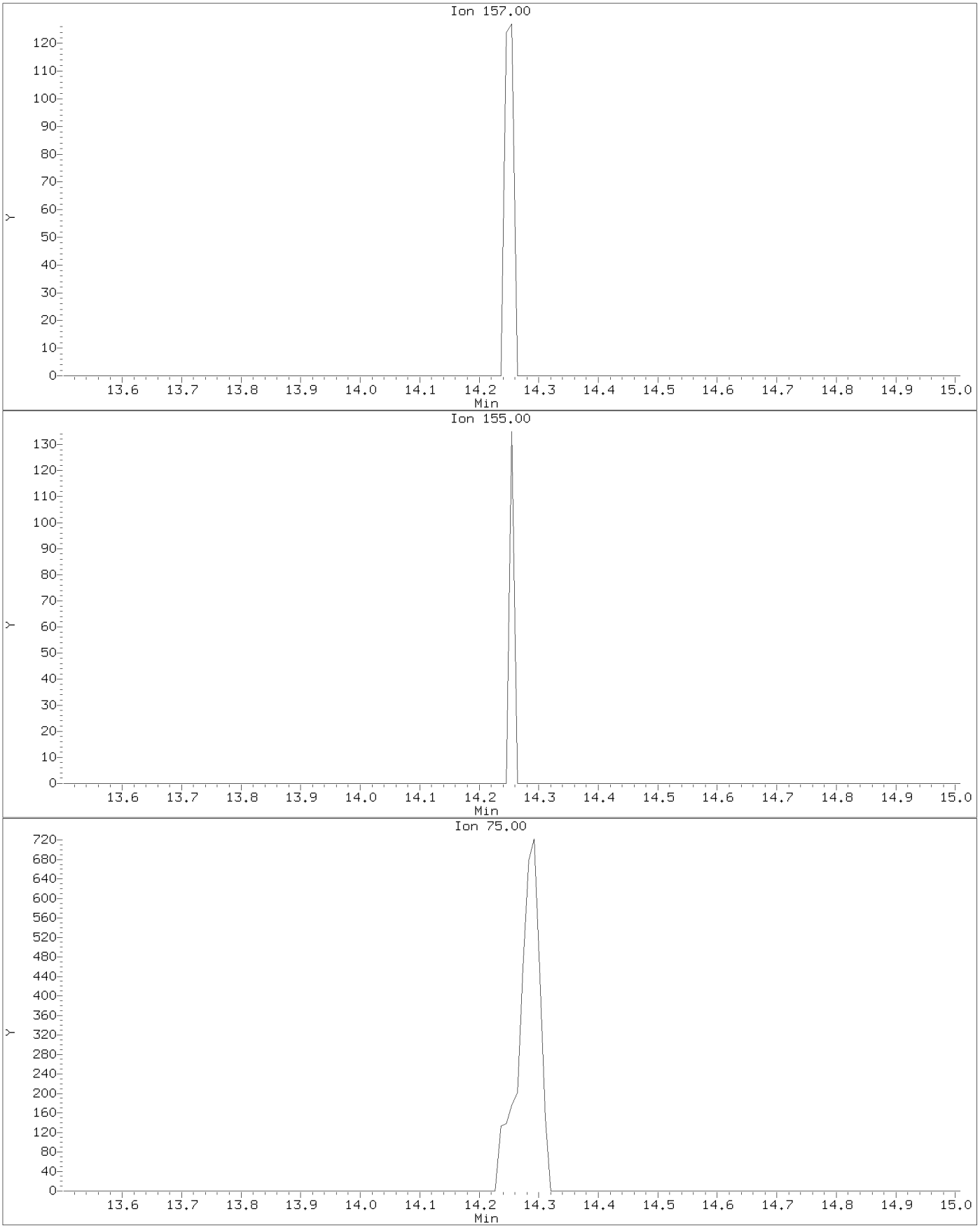
Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\D3315.d
Date : 29-JUL-2021 14:24
Client ID:
Sample Info: WG303293-4
Purge Volume: 25.0
Column phase: RTX-VMS

Instrument: gcms-d.i
Operator: JSS
Column diameter: 0.18

Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\D3314.d
Injection Date: 29-JUL-2021 13:45
Instrument: gcms-d.i
Client Sample ID:

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8

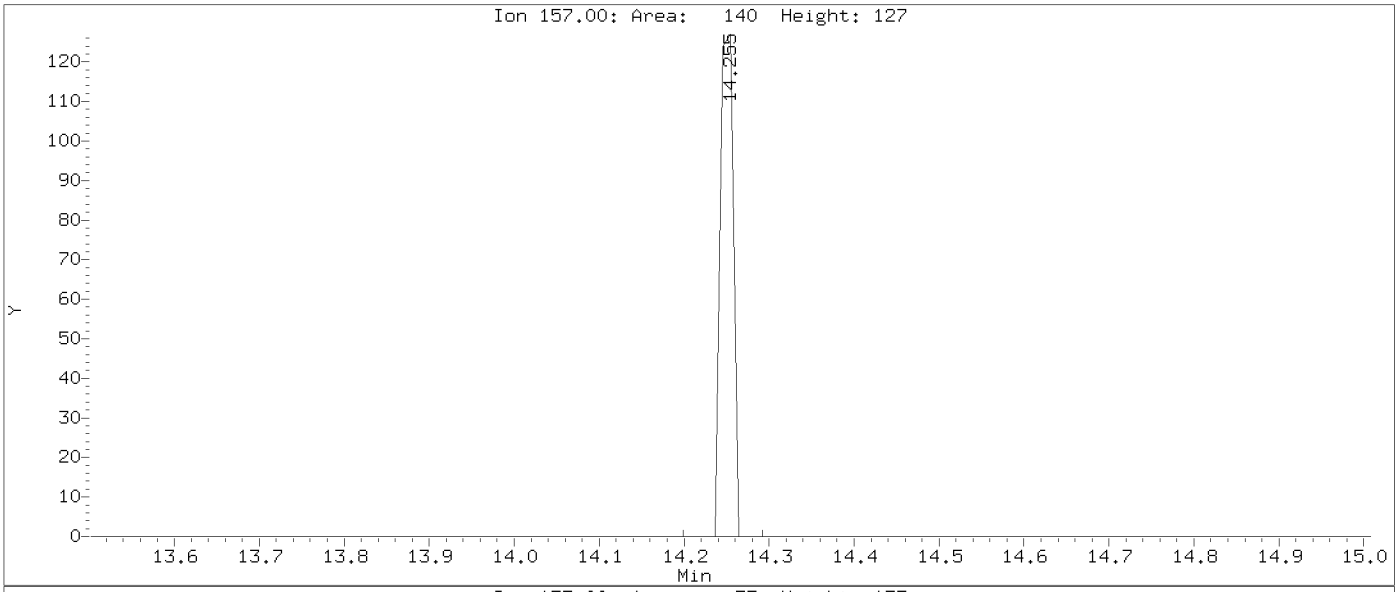
BEFORE MANUAL INTEGRATION

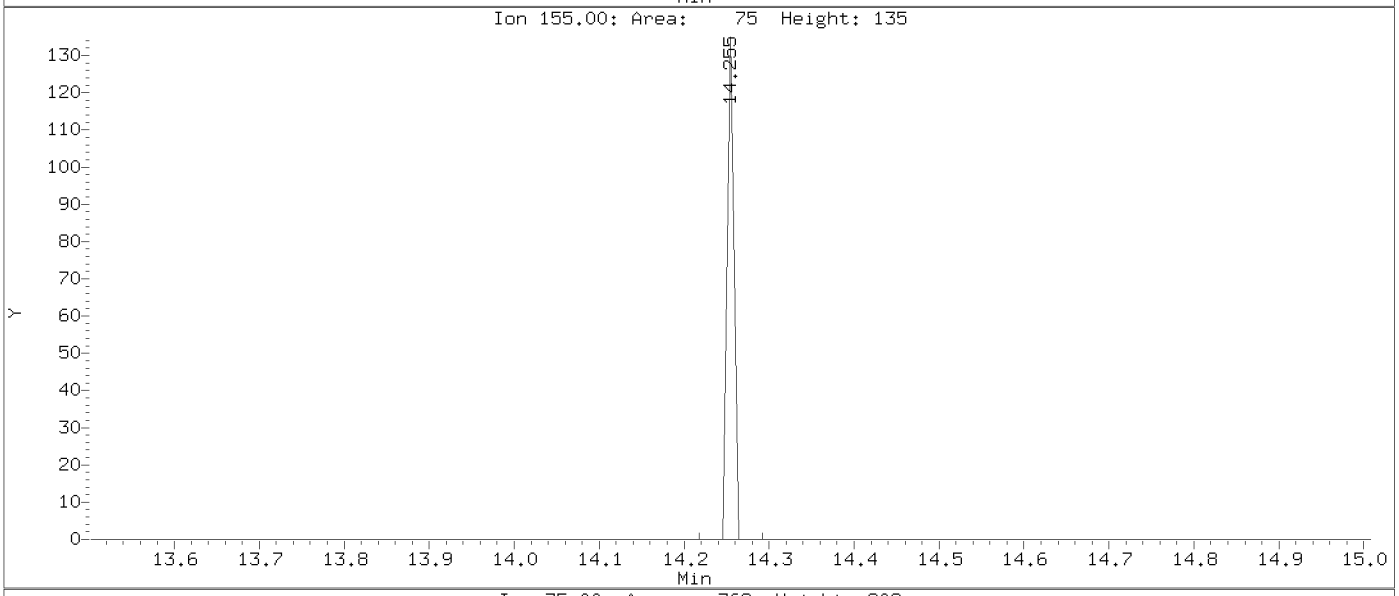


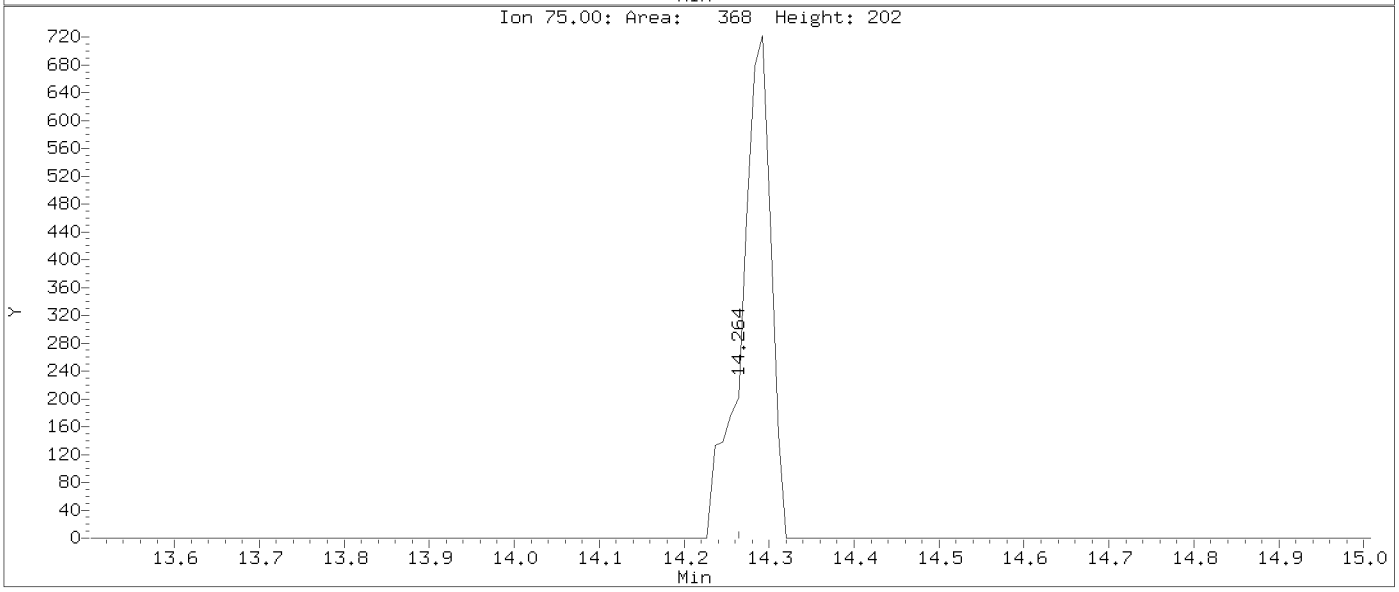
Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\D3314.d
Injection Date: 29-JUL-2021 13:45
Instrument: gcms-d.i
Client Sample ID:

Compound: 1,2-Dibromo-3-Chloropropane
CAS Number: 96-12-8

AFTER MANUAL INTEGRATION







Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site **SDG:** SO4724
Lab ID : WG303440-4 **Analytical Date:** 07/30/21 08:28
Lab File ID : D3322.d **Instrument ID:** GCMS-D
Initial Calibration Date(s): 07/29/21 08:32 07/29/21 14:24 **Column ID:**

	Compound	$\overline{RRF}$/Amount	RF10	CCAL RRF10	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
1	Dichlorodifluoromethane	0.35176	0.36524	0.36524	0.010	3.83345	30.00000	Averaged	
2	Chloromethane	0.42121	0.38379	0.38379	0.010	-8.88539	30.00000	Averaged	
3	Vinyl chloride	0.23067	0.23497	0.23497	0.010	1.86527	30.00000	Averaged	
4	Bromomethane	0.09200	0.09591	0.09591	0.010	4.24521	30.00000	Averaged	
5	Chloroethane	10.00000	13.28739	0.09962	0.010	32.87386	30.00000	Quadratic	*
6	Trichlorofluoromethane	0.42311	0.44074	0.44074	0.010	4.16776	30.00000	Averaged	
7	1,1-Dichloroethene	0.18737	0.19072	0.19072	0.010	1.78521	30.00000	Averaged	
8	Carbon Disulfide	0.51553	0.52417	0.52417	0.010	1.67669	30.00000	Averaged	
10	Methylene Chloride	10.00000	11.08596	0.15865	0.010	10.85960	30.00000	Linear	
11	Acetone	10.00000	9.73052	0.01023	0.010	-2.69484	30.00000	Linear	
12	trans-1,2-Dichloroethene	0.20625	0.20372	0.20372	0.010	-1.22330	30.00000	Averaged	
13	Methyl tert-butyl ether	0.18884	0.17744	0.17744	0.010	-6.03935	30.00000	Averaged	
16	1,1-Dichloroethane	0.48922	0.49374	0.49374	0.010	0.92274	30.00000	Averaged	
18	cis-1,2-Dichloroethene	0.28555	0.29197	0.29197	0.010	2.25000	30.00000	Averaged	
19	2,2-Dichloropropane	0.29980	0.33437	0.33437	0.010	11.53055	30.00000	Averaged	
20	Bromochloromethane	0.10564	0.10544	0.10544	0.010	-0.18883	30.00000	Averaged	
21	Chloroform	0.53796	0.53234	0.53234	0.010	-1.04486	30.00000	Averaged	
22	Carbon Tetrachloride	0.42611	0.44971	0.44971	0.010	5.54005	30.00000	Averaged	
23	1,1,1-Trichloroethane	0.46322	0.47895	0.47895	0.010	3.39649	30.00000	Averaged	
24	1,1-Dichloropropene	0.34131	0.37516	0.37516	0.010	9.91785	30.00000	Averaged	
25	2-Butanone	0.01768	0.01576	0.01576	0.005	-10.88382	30.00000	Averaged	
26	Benzene	1.01060	1.07190	1.07190	0.010	6.06658	30.00000	Averaged	
28	1,2-Dichloroethane	0.20258	0.20745	0.20745	0.010	2.40553	30.00000	Averaged	
30	Trichloroethene	0.29989	0.30452	0.30452	0.010	1.54334	30.00000	Averaged	
31	Dibromomethane	0.09666	0.09875	0.09875	0.010	2.16452	30.00000	Averaged	
32	1,2-Dichloropropane	0.21044	0.21623	0.21623	0.010	2.75233	30.00000	Averaged	
33	Bromodichloromethane	0.27583	0.27697	0.27697	0.010	0.41397	30.00000	Averaged	
34	cis-1,3-dichloropropene	10.00000	8.83447	0.23025	0.010	-11.65530	30.00000	Quadratic	
35	Toluene	10.00000	9.81982	0.69472	0.010	-1.80176	30.00000	Linear	
36	Tetrachloroethene	0.23933	0.25574	0.25574	0.010	6.85653	30.00000	Averaged	
37	4-methyl-2-pentanone	10.00000	7.68045	0.02900	0.010	-23.19548	30.00000	Quadratic	
38	trans-1,3-Dichloropropene	10.00000	9.12627	0.17080	0.010	-8.73734	30.00000	Quadratic	
39	1,1,2-Trichloroethane	0.10170	0.10334	0.10334	0.010	1.61256	30.00000	Averaged	
40	Dibromochloromethane	10.00000	8.11663	0.14865	0.010	-18.83368	30.00000	Linear	
41	1,3-Dichloropropane	0.18929	0.19544	0.19544	0.010	3.24823	30.00000	Averaged	
43	1,2-Dibromoethane	0.10131	0.10684	0.10684	0.010	5.45975	30.00000	Averaged	
44	2-Hexanone	10.00000	6.80260	0.01267	0.010	-31.97399	30.00000	Quadratic	*
45	Chlorobenzene	10.00000	9.56664	0.70873	0.010	-4.33360	30.00000	Linear	
46	Ethylbenzene	10.00000	10.51806	1.41541	0.010	5.18060	30.00000	Linear	
47	1,1,1,2-Tetrachloroethane	0.21913	0.23019	0.23019	0.010	5.04694	30.00000	Averaged	
48	m+p-Xylenes	20.00000	23.34249	0.56236	0.010	16.71243	30.00000	Linear	

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site **SDG:** SO4724
Lab ID : WG303440-4 **Analytical Date:** 07/30/21 08:28
Lab File ID : D3322.d **Instrument ID:** GCMS-D
Initial Calibration Date(s): 07/29/21 08:32 07/29/21 14:24 **Column ID:**

Compound	RRF/Amount	RF10	CCAL RRF10	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
49 o-Xylene	10.00000	9.86272	0.48838	0.010	-1.37283	30.00000	Linear	
50 Styrene	10.00000	9.99604	0.73163	0.010	-0.03956	30.00000	Linear	
51 Bromoform	10.00000	9.26793	0.06833	0.010	-7.32070	30.00000	Quadratic	
52 Isopropylbenzene	10.00000	10.40579	1.41381	0.010	4.05786	30.00000	Linear	
54 Bromobenzene	0.25828	0.26460	0.26460	0.010	2.44563	30.00000	Averaged	
55 N-Propylbenzene	1.56669	1.81188	1.81188	0.010	15.64973	30.00000	Averaged	
56 1,1,2,2-Tetrachloroethane	0.11782	0.11805	0.11805	0.010	0.19612	30.00000	Averaged	
57 2-Chlorotoluene	0.87459	0.95613	0.95613	0.010	9.32277	30.00000	Averaged	
58 1,2,3-Trichloropropane	0.09204	0.09613	0.09613	0.010	4.44742	30.00000	Averaged	
59 1,3,5-Trimethylbenzene	1.02556	1.17691	1.17691	0.010	14.75719	30.00000	Averaged	
60 4-Chlorotoluene	0.88319	0.97862	0.97862	0.010	10.80495	30.00000	Averaged	
62 1,2,4-Trimethylbenzene	1.03210	1.18291	1.18291	0.010	14.61181	30.00000	Averaged	
63 sec-Butylbenzene	1.40731	1.62526	1.62526	0.010	15.48637	30.00000	Averaged	
64 P-Isopropyltoluene	0.90274	1.04167	1.04167	0.010	15.38959	30.00000	Averaged	
65 1,3-Dichlorobenzene	0.57420	0.60899	0.60899	0.010	6.05785	30.00000	Averaged	
66 1,4-Dichlorobenzene	0.52530	0.55675	0.55675	0.010	5.98627	30.00000	Averaged	
67 N-Butylbenzene	10.00000	10.86934	1.30415	0.010	8.69335	30.00000	Linear	
69 1,2-Dichlorobenzene	0.45889	0.46012	0.46012	0.010	0.26781	30.00000	Averaged	
70 1,2-Dibromo-3-Chloropropane	10.00000	8.71910	0.01009	0.005	-12.80903	30.00000	Quadratic	
72 Hexachlorobutadiene	0.21911	0.23885	0.23885	0.010	9.01368	30.00000	Averaged	
73 1,2,4-Trichlorobenzene	10.00000	8.28197	0.23790	0.010	-17.18031	30.00000	Linear	
74 Naphthalene	10.00000	6.55019	0.16712	0.010	-34.49809	30.00000	Quadratic	*
75 1,2,3-Trichlorobenzene	10.00000	8.20167	0.16154	0.010	-17.98327	30.00000	Linear	
53 P-Bromofluorobenzene	0.29093	0.28973	0.28973	0.010	-0.41110	30.00000	Averaged	
68 1,2-Dichlorobenzene-D4	0.27530	0.28185	0.28185	0.010	2.37760	30.00000	Averaged	
69 1,2-Dichlorobenzene	0.45889	0.46012	0.46012	0.010	0.26781	30.00000	Averaged	

*** = Compound out of QC criteria**

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Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3322.d
Report Date: 07-Aug-2021 10:20

Katahdin Analytical Services

EPA 524.2

Data file : \\target_server\gg\chem\gcms-d.i\D073021.b\D3322.d
Lab Smp Id: WG303440-4
Inj Date : 30-JUL-2021 08:28
Operator : JSS Inst ID: gcms-d.i
Smp Info : WG303440-4,SO4724
Misc Info : WG303440,WG303293-4,SO4724-1
Comment   :
Method   : \\target_server\gg\chem\gcms-d.i\D073021.b\D5A25(70)D.m
Meth Date : 07-Aug-2021 10:18 hgould Quant Type: ISTD
Cal Date : 29-JUL-2021 13:45 Cal File: D3314.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: T7-O360

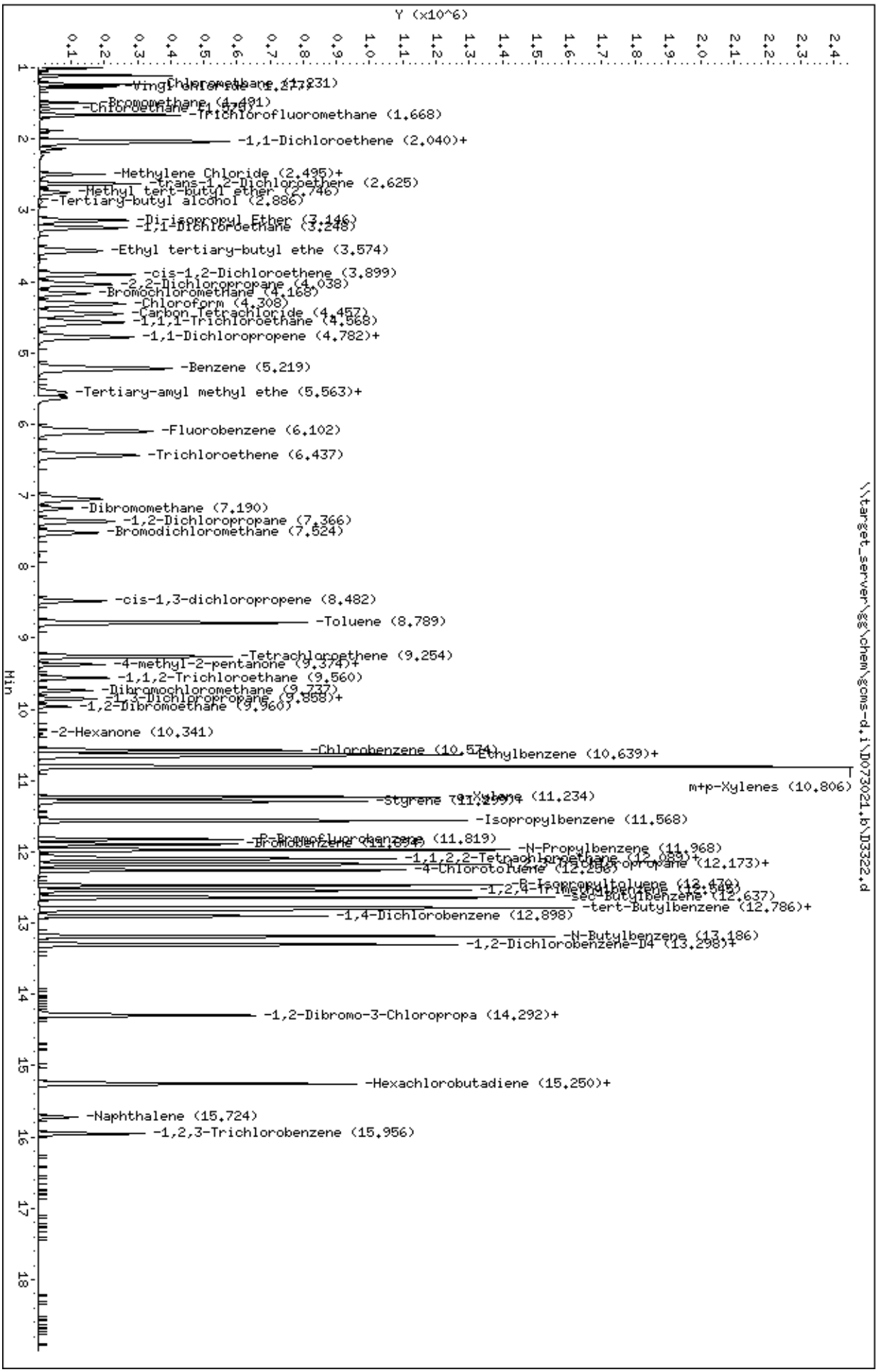
Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	25.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.109	1.110	(0.182)	227024	10.0000	10.4	
2	Chloromethane	50	1.230	1.231	(0.202)	238551	10.0000	9.1	
3	Vinyl chloride	62	1.277	1.277	(0.209)	146050	10.0000	10.2	
4	Bromomethane	94	1.491	1.491	(0.244)	59612	10.0000	10.4	
5	Chloroethane	64	1.574	1.575	(0.258)	61920	10.0000	13.3	
6	Trichlorofluoromethane	101	1.667	1.668	(0.273)	273952	10.0000	10.4	
7	1,1-Dichloroethene	96	2.021	2.021	(0.331)	118546	10.0000	10.2	
8	Carbon Disulfide	76	2.039	2.040	(0.334)	325809	10.0000	10.2	
9	Freon-113	151	2.058	2.057	(0.337)	105453	10.0000	11.0	
10	Methylene Chloride	84	2.495	2.495	(0.409)	98612	10.0000	11.1	
11	Acetone	43	2.550	2.551	(0.418)	6358	10.0000	9.7	
12	trans-1,2-Dichloroethene	96	2.634	2.635	(0.432)	126628	10.0000	9.9	
13	Methyl tert-butyl ether	73	2.746	2.746	(0.450)	110289	10.0000	9.4	
14	Tertiary-butyl alcohol	59	2.885	2.886	(0.473)	8436	50.0000	48.8	
15	Di-isopropyl Ether	45	3.145	3.146	(0.516)	282050	10.0000	9.9	
16	1,1-Dichloroethane	63	3.248	3.248	(0.532)	306894	10.0000	10.1	
17	Ethyl tertiary-butyl ether	59	3.564	3.564	(0.584)	179089	10.0000	8.1	
18	cis-1,2-Dichloroethene	96	3.898	3.908	(0.639)	181480	10.0000	10.2	
19	2,2-Dichloropropane	77	4.038	4.029	(0.662)	207837	10.0000	11.2	
20	Bromochloromethane	128	4.168	4.178	(0.683)	65537	10.0000	10	
21	Chloroform	83	4.307	4.308	(0.706)	330889	10.0000	9.9	
22	Carbon Tetrachloride	117	4.456	4.447	(0.730)	279528	10.0000	10.6	
23	1,1,1-Trichloroethane	97	4.577	4.577	(0.750)	297702	10.0000	10.3	

Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3322.d
Report Date: 07-Aug-2021 10:20

							AMOUNTS		
		QUANT SIG					CAL-AMT	ON-COL	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/L)	(ug/L)	REVIEW CODE
	24 1,1-Dichloropropene	75	4.782	4.782	(0.784)	233187	10.0000	11.0	
	25 2-Butanone	43	4.847	4.847	(0.794)	9796	10.0000	8.9	
	26 Benzene	78	5.218	5.219	(0.855)	666265	10.0000	10.6	
	27 Tertiary-amyl methyl ether	73	5.553	5.554	(0.910)	97932	10.0000	7.4	
	28 1,2-Dichloroethane	62	5.637	5.637	(0.924)	128944	10.0000	10.2	
*	29 Fluorobenzene	96	6.102	6.102	(1.000)	621571	10.0000		
	30 Trichloroethene	95	6.436	6.437	(1.055)	189278	10.0000	10.2	
	31 Dibromomethane	93	7.189	7.180	(1.178)	61379	10.0000	10.2	
	32 1,2-Dichloropropane	63	7.366	7.357	(1.207)	134401	10.0000	10.3	
	33 Bromodichloromethane	83	7.524	7.534	(1.233)	172157	10.0000	10.0	
	34 cis-1,3-dichloropropene	75	8.482	8.481	(1.390)	143117	10.0000	8.8	
	35 Toluene	92	8.788	8.789	(1.440)	431820	10.0000	9.8	
	36 Tetrachloroethene	164	9.262	9.263	(1.518)	158958	10.0000	10.7	
	37 4-methyl-2-pentanone	43	9.365	9.365	(1.535)	18026	10.0000	7.7	
	38 trans-1,3-Dichloropropene	75	9.374	9.374	(1.536)	106166	10.0000	9.1	
	39 1,1,2-Trichloroethane	83	9.560	9.560	(1.567)	64234	10.0000	10.2	
	40 Dibromochloromethane	129	9.737	9.737	(1.596)	92395	10.0000	8.1	
	41 1,3-Dichloropropane	76	9.857	9.858	(1.615)	121481	10.0000	10.3	
	42 2-Chloroethylvinylether	63	9.857	9.858	(1.615)	13287	10.0000	10.4	
	43 1,2-Dibromoethane	107	9.960	9.960	(1.632)	66408	10.0000	10.5	
	44 2-Hexanone	43	10.341	10.341	(1.695)	7877	10.0000	6.8	
	45 Chlorobenzene	112	10.573	10.574	(1.733)	440527	10.0000	9.6	
	46 Ethylbenzene	91	10.638	10.639	(1.743)	879777	10.0000	10.5	
	47 1,1,1,2-Tetrachloroethane	131	10.666	10.667	(1.748)	143078	10.0000	10.5	
	48 m+p-Xylenes	106	10.806	10.806	(1.771)	699092	20.0000	23.3	
	49 o-Xylene	106	11.233	11.234	(1.841)	303560	10.0000	9.9	
	50 Styrene	104	11.298	11.299	(1.852)	454759	10.0000	10	
	51 Bromoform	173	11.289	11.289	(1.850)	42475	10.0000	9.3	
	52 Isopropylbenzene	105	11.568	11.568	(1.896)	878783	10.0000	10.4	
$	53 P-Bromofluorobenzene	95	11.819	11.819	(1.937)	180089	10.0000	10	
	54 Bromobenzene	156	11.893	11.894	(1.949)	164465	10.0000	10.2	
	55 N-Propylbenzene	91	11.968	11.977	(1.961)	1126211	10.0000	11.6	
	56 1,1,2,2-Tetrachloroethane	83	12.061	12.061	(1.977)	73375	10.0000	10.0	
	57 2-Chlorotoluene	91	12.089	12.098	(1.981)	594303	10.0000	10.9	
	58 1,2,3-Trichloropropane	75	12.163	12.163	(1.993)	59754	10.0000	10.4	
	59 1,3,5-Trimethylbenzene	105	12.181	12.182	(1.996)	731531	10.0000	11.5	
	60 4-Chlorotoluene	91	12.256	12.256	(2.009)	608282	10.0000	11.1	
	61 tert-Butylbenzene	119	12.786	12.786	(2.095)	821908	10.0000	11.8	
	62 1,2,4-Trimethylbenzene	105	12.544	12.544	(2.056)	735265	10.0000	11.5	
	63 sec-Butylbenzene	105	12.637	12.637	(2.071)	1010212	10.0000	11.5	
	64 P-Isopropyltoluene	119	12.470	12.470	(2.044)	647474	10.0000	11.5	
	65 1,3-Dichlorobenzene	146	12.814	12.814	(2.100)	378528	10.0000	10.6	
	66 1,4-Dichlorobenzene	146	12.897	12.907	(2.114)	346057	10.0000	10.6	
	67 N-Butylbenzene	91	13.185	13.186	(2.161)	810619	10.0000	10.9	
$	68 1,2-Dichlorobenzene-D4	152	13.297	13.297	(2.179)	175187	10.0000	10.2	
	69 1,2-Dichlorobenzene	146	13.306	13.307	(2.181)	285997	10.0000	10.0	
	70 1,2-Dibromo-3-Chloropropane	157	14.255	14.255	(2.336)	6273	10.0000	8.7	
	71 1,3,5-Trichlorobenzene	180	14.292	14.292	(2.342)	251888	10.0000	10.7	
	72 Hexachlorobutadiene	225	15.249	15.250	(2.499)	148465	10.0000	10.9	
	73 1,2,4-Trichlorobenzene	180	15.259	15.259	(2.501)	147872	10.0000	8.3	
	74 Naphthalene	128	15.723	15.724	(2.577)	103877	10.0000	6.6	
	75 1,2,3-Trichlorobenzene	180	15.956	15.956	(2.615)	100407	10.0000	8.2	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Date : 30-JUL-2021 08:28
Client ID:
Sample Info: WG303440-4,SD4724
Purge Volume: 25.0
Column phase: RTX-VMS
Instrument: gcms-d.i
Operator: JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-d.i\D073021.b\D3322.d
Y (x10^6)
Min
-Chloromethane (1.231)
-Vinyl chloride (1.277)
-Bromomethane (1.491)
-Chloroethane (1.570)
-Trichlorofluoromethane (1.668)
-1,1-Dichloroethene (2.040)+
-Methylene Chloride (2.495)+
-trans-1,2-Dichloroethene (2.625)
-Methyl tert-butyl ether (2.746)
-Tertiary-butyl alcohol (2.886)
-Diisopropyl Ether (3.146)
-1,1-Dichloroethane (3.248)
-Ethyl tertiary-butyl ethe (3.574)
-cis-1,2-Dichloroethene (3.899)
-2,2-Dichloropropane (4.038)
-Bromochloromethane (4.168)
-Chloroform (4.308)
-Carbon Tetrachloride (4.457)
-1,1,1-Trichloroethane (4.568)
-1,1-Dichloropropene (4.782)+
-Benzene (5.219)
-Tertiary-amyl methyl ethe (5.563)+
-Fluorobenzene (6.102)
-Trichloroethene (6.437)
-Dibromomethane (7.190)
-1,2-Dichloropropane (7.366)
-Bromodichloromethane (7.524)
-cis-1,3-dichloropropene (8.482)
-Toluene (8.789)
-Tetrachloroethene (9.254)
-4-methyl-2-pentanone (9.374)+
-1,1,2-Trichloroethane (9.560)
-Dibromochloromethane (9.737)
-1,3-Dichloropropane (9.858)+
-1,2-Dibromoethane (9.960)
-2-Hexanone (10.341)
-Chlorobenzene (10.574)
-Ethylbenzene (10.639)+
m+p-Xylenes (10.806)
-Xylene (11.234)
-Styrene (11.299)+
-Isopropylbenzene (11.568)
-P-Bromofluorobenzene (11.819)
-Bromobenzene (11.874)
-N-Propylbenzene (11.968)
-1,1,2,2-Tetrachloroethane (12.089)+
-4-Chlorotoluene (12.096)
-1,3,5-Trimethylbenzene (12.173)+
-P-Isopropyltoluene (12.470)
-1,2,4-Trimethylbenzene (12.542)
-sec-Butylbenzene (12.637)
-tert-Butylbenzene (12.786)+
-1,4-Dichlorobenzene (12.898)
-N-Butylbenzene (13.186)
-1,2-Dichlorobenzene-D4 (13.298)+
-1,2-Dibromo-3-Chloropropa (14.292)+
-Hexachlorobutadiene (15.250)+
-Naphthalene (15.724)
-1,2,3-Trichlorobenzene (15.956)

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site **SDG:** SO4724
Lab ID : WG303440-9 **Analytical Date:** 07/30/21 17:35
Lab File ID : D3336.d **Instrument ID:** GCMS-D
Initial Calibration Date(s): 07/29/21 08:32 07/29/21 14:24 **Column ID:**

	Compound	$\overline{RRF}$/Amount	RF10	CCAL RRF10	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
1	Dichlorodifluoromethane	0.35176	0.33633	0.33633	0.010	-4.38519	50.00000	Averaged
2	Chloromethane	0.42121	0.38168	0.38168	0.010	-9.38678	50.00000	Averaged
3	Vinyl chloride	0.23067	0.23469	0.23469	0.010	1.74578	50.00000	Averaged
4	Bromomethane	0.09200	0.09519	0.09519	0.010	3.46319	50.00000	Averaged
5	Chloroethane	10.00000	13.54132	0.10151	0.010	35.41320	50.00000	Quadratic
6	Trichlorofluoromethane	0.42311	0.43498	0.43498	0.010	2.80609	50.00000	Averaged
7	1,1-Dichloroethene	0.18737	0.19286	0.19286	0.010	2.92788	50.00000	Averaged
8	Carbon Disulfide	0.51553	0.53340	0.53340	0.010	3.46796	50.00000	Averaged
10	Methylene Chloride	10.00000	12.28317	0.17578	0.010	22.83171	50.00000	Linear
11	Acetone	10.00000	12.68111	0.01333	0.010	26.81110	50.00000	Linear
12	trans-1,2-Dichloroethene	0.20625	0.21002	0.21002	0.010	1.82884	50.00000	Averaged
13	Methyl tert-butyl ether	0.18884	0.19231	0.19231	0.010	1.83971	50.00000	Averaged
16	1,1-Dichloroethane	0.48922	0.49559	0.49559	0.010	1.30067	50.00000	Averaged
18	cis-1,2-Dichloroethene	0.28555	0.29987	0.29987	0.010	5.01627	50.00000	Averaged
19	2,2-Dichloropropane	0.29980	0.26489	0.26489	0.010	-11.64542	50.00000	Averaged
20	Bromochloromethane	0.10564	0.11128	0.11128	0.010	5.33919	50.00000	Averaged
21	Chloroform	0.53796	0.53965	0.53965	0.010	0.31425	50.00000	Averaged
22	Carbon Tetrachloride	0.42611	0.43578	0.43578	0.010	2.27078	50.00000	Averaged
23	1,1,1-Trichloroethane	0.46322	0.47154	0.47154	0.010	1.79760	50.00000	Averaged
24	1,1-Dichloropropene	0.34131	0.36712	0.36712	0.010	7.56162	50.00000	Averaged
25	2-Butanone	0.01768	0.01715	0.01715	0.005	-3.02519	50.00000	Averaged
26	Benzene	1.01060	1.08353	1.08353	0.010	7.21642	50.00000	Averaged
28	1,2-Dichloroethane	0.20258	0.22042	0.22042	0.010	8.80792	50.00000	Averaged
30	Trichloroethene	0.29989	0.30445	0.30445	0.010	1.52276	50.00000	Averaged
31	Dibromomethane	0.09666	0.10512	0.10512	0.010	8.75183	50.00000	Averaged
32	1,2-Dichloropropane	0.21044	0.22456	0.22456	0.010	6.71146	50.00000	Averaged
33	Bromodichloromethane	0.27583	0.29354	0.29354	0.010	6.42135	50.00000	Averaged
34	cis-1,3-dichloropropene	10.00000	9.07229	0.23659	0.010	-9.27709	50.00000	Quadratic
35	Toluene	10.00000	9.83564	0.69584	0.010	-1.64365	50.00000	Linear
36	Tetrachloroethene	0.23933	0.25195	0.25195	0.010	5.27288	50.00000	Averaged
37	4-methyl-2-pentanone	10.00000	8.77048	0.03321	0.010	-12.29521	50.00000	Quadratic
38	trans-1,3-Dichloropropene	10.00000	9.73010	0.18239	0.010	-2.69903	50.00000	Quadratic
39	1,1,2-Trichloroethane	0.10170	0.11206	0.11206	0.010	10.18791	50.00000	Averaged
40	Dibromochloromethane	10.00000	8.87280	0.16250	0.010	-11.27198	50.00000	Linear
41	1,3-Dichloropropane	0.18929	0.21376	0.21376	0.010	12.92718	50.00000	Averaged
43	1,2-Dibromoethane	0.10131	0.11708	0.11708	0.010	15.56548	50.00000	Averaged
44	2-Hexanone	10.00000	7.64144	0.01428	0.010	-23.58560	50.00000	Quadratic
45	Chlorobenzene	10.00000	9.94777	0.73697	0.010	-0.52227	50.00000	Linear
46	Ethylbenzene	10.00000	10.53825	1.41813	0.010	5.38253	50.00000	Linear
47	1,1,1,2-Tetrachloroethane	0.21913	0.23908	0.23908	0.010	9.10577	50.00000	Averaged
48	m+p-Xylenes	20.00000	23.33332	0.56214	0.010	16.66661	50.00000	Linear

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site **SDG:** SO4724
Lab ID : WG303440-9 **Analytical Date:** 07/30/21 17:35
Lab File ID : D3336.d **Instrument ID:** GCMS-D
Initial Calibration Date(s): 07/29/21 08:32 07/29/21 14:24 **Column ID:**

Compound	$\overline{RRF}$/Amount	RF10	CCAL RRF10	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
49 o-Xylene	10.00000	10.06472	0.49838	0.010	0.64723	50.00000	Linear
50 Styrene	10.00000	10.21042	0.74732	0.010	2.10424	50.00000	Linear
51 Bromoform	10.00000	10.04698	0.07424	0.010	0.46982	50.00000	Quadratic
52 Isopropylbenzene	10.00000	10.37899	1.41017	0.010	3.78991	50.00000	Linear
54 Bromobenzene	0.25828	0.27652	0.27652	0.010	7.06351	50.00000	Averaged
55 N-Propylbenzene	1.56669	1.78080	1.78080	0.010	13.66633	50.00000	Averaged
56 1,1,2,2-Tetrachloroethane	0.11782	0.12856	0.12856	0.010	9.11502	50.00000	Averaged
57 2-Chlorotoluene	0.87459	0.97807	0.97807	0.010	11.83186	50.00000	Averaged
58 1,2,3-Trichloropropane	0.09204	0.10238	0.10238	0.010	11.23426	50.00000	Averaged
59 1,3,5-Trimethylbenzene	1.02556	1.18248	1.18248	0.010	15.30046	50.00000	Averaged
60 4-Chlorotoluene	0.88319	1.00248	1.00248	0.010	13.50660	50.00000	Averaged
62 1,2,4-Trimethylbenzene	1.03210	1.19264	1.19264	0.010	15.55447	50.00000	Averaged
63 sec-Butylbenzene	1.40731	1.61326	1.61326	0.010	14.63408	50.00000	Averaged
64 P-Isopropyltoluene	0.90274	1.03481	1.03481	0.010	14.62879	50.00000	Averaged
65 1,3-Dichlorobenzene	0.57420	0.62400	0.62400	0.010	8.67331	50.00000	Averaged
66 1,4-Dichlorobenzene	0.52530	0.57846	0.57846	0.010	10.12050	50.00000	Averaged
67 N-Butylbenzene	10.00000	10.42295	1.25059	0.010	4.22951	50.00000	Linear
69 1,2-Dichlorobenzene	0.45889	0.48751	0.48751	0.010	6.23644	50.00000	Averaged
70 1,2-Dibromo-3-Chloropropane	10.00000	9.43276	0.01095	0.005	-5.67236	50.00000	Quadratic
72 Hexachlorobutadiene	0.21911	0.22741	0.22741	0.010	3.79242	50.00000	Averaged
73 1,2,4-Trichlorobenzene	10.00000	8.75751	0.25156	0.010	-12.42488	50.00000	Linear
74 Naphthalene	10.00000	7.30306	0.18670	0.010	-26.96941	50.00000	Quadratic
75 1,2,3-Trichlorobenzene	10.00000	8.82729	0.17386	0.010	-11.72715	50.00000	Linear
53 P-Bromofluorobenzene	0.29093	0.30100	0.30100	0.010	3.46049	50.00000	Averaged
68 1,2-Dichlorobenzene-D4	0.27530	0.29693	0.29693	0.010	7.85718	50.00000	Averaged
69 1,2-Dichlorobenzene	0.45889	0.48751	0.48751	0.010	6.23644	50.00000	Averaged

*** = Compound out of QC criteria**

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Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3336.d
Report Date: 07-Aug-2021 10:01

Katahdin Analytical Services

EPA 524.2

Data file : \\target_server\gg\chem\gcms-d.i\D073021.b\D3336.d
Lab Smp Id: WG303440-9
Inj Date : 30-JUL-2021 17:35
Operator : JSS Inst ID: gcms-d.i
Smp Info : WG303440-9,SO4724
Misc Info : WG303440,WG303293-4,SO4724-2
Comment   :
Method   : \\target_server\gg\chem\gcms-d.i\D073021.b\D5A25(70)D.m
Meth Date : 07-Aug-2021 10:01 hgould Quant Type: ISTD
Cal Date : 29-JUL-2021 13:45 Cal File: D3314.d
Als bottle: 16 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: ORGANICS2

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	25.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.109	1.110	(0.182)	206861	10.0000	9.6	
2	Chloromethane	50	1.230	1.231	(0.202)	234749	10.0000	9.1	
3	Vinyl chloride	62	1.277	1.277	(0.209)	144348	10.0000	10.2	
4	Bromomethane	94	1.490	1.491	(0.244)	58544	10.0000	10.3	
5	Chloroethane	64	1.574	1.575	(0.258)	62435	10.0000	13.5	
6	Trichlorofluoromethane	101	1.667	1.668	(0.273)	267534	10.0000	10.3	
7	1,1-Dichloroethene	96	2.020	2.021	(0.331)	118619	10.0000	10.3	
8	Carbon Disulfide	76	2.039	2.040	(0.334)	328070	10.0000	10.3	
9	Freon-113	151	2.058	2.057	(0.337)	99194	10.0000	10.4	
10	Methylene Chloride	84	2.494	2.495	(0.409)	108115	10.0000	12.3	
11	Acetone	43	2.550	2.551	(0.418)	8199	10.0000	12.7	
12	trans-1,2-Dichloroethene	96	2.634	2.635	(0.432)	129171	10.0000	10.2	
13	Methyl tert-butyl ether	73	2.745	2.746	(0.450)	118283	10.0000	10.2	
14	Tertiary-butyl alcohol	59	2.876	2.886	(0.471)	7733	50.0000	45.2	
15	Di-isopropyl Ether	45	3.145	3.146	(0.516)	296252	10.0000	10.5	
16	1,1-Dichloroethane	63	3.247	3.248	(0.532)	304811	10.0000	10.1	
17	Ethyl tertiary-butyl ether	59	3.564	3.564	(0.584)	188031	10.0000	8.6	
18	cis-1,2-Dichloroethene	96	3.898	3.908	(0.639)	184434	10.0000	10.5	
19	2,2-Dichloropropane	77	4.038	4.029	(0.662)	162921	10.0000	8.8	
20	Bromochloromethane	128	4.168	4.178	(0.683)	68441	10.0000	10.5	
21	Chloroform	83	4.307	4.308	(0.706)	331914	10.0000	10.0	
22	Carbon Tetrachloride	117	4.456	4.447	(0.730)	268027	10.0000	10.2	
23	1,1,1-Trichloroethane	97	4.577	4.577	(0.750)	290023	10.0000	10.2	

Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3336.d
Report Date: 07-Aug-2021 10:01

			QUANT SIG					AMOUNTS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/L)	ON-COL (ug/L)	REVIEW CODE
	24	1,1-Dichloropropene	75	4.781	4.782	(0.784)	225794	10.0000	10.8	
	25	2-Butanone	43	4.846	4.847	(0.794)	10548	10.0000	9.7	
	26	Benzene	78	5.218	5.219	(0.855)	666421	10.0000	10.7	
	27	Tertiary-amyl methyl ether	73	5.553	5.554	(0.910)	103559	10.0000	7.9	
	28	1,2-Dichloroethane	62	5.637	5.637	(0.924)	135568	10.0000	10.9	
*	29	Fluorobenzene	96	6.101	6.102	(1.000)	615049	10.0000		
	30	Trichloroethene	95	6.436	6.437	(1.055)	187254	10.0000	10.2	
	31	Dibromomethane	93	7.189	7.180	(1.178)	64651	10.0000	10.9	
	32	1,2-Dichloropropane	63	7.366	7.357	(1.207)	138115	10.0000	10.7	
	33	Bromodichloromethane	83	7.533	7.534	(1.235)	180542	10.0000	10.6	
	34	cis-1,3-dichloropropene	75	8.481	8.481	(1.390)	145515	10.0000	9.1	
	35	Toluene	92	8.788	8.789	(1.440)	427977	10.0000	9.8	
	36	Tetrachloroethene	164	9.262	9.263	(1.518)	154959	10.0000	10.5	
	37	4-methyl-2-pentanone	43	9.374	9.365	(1.536)	20423	10.0000	8.8	
	38	trans-1,3-Dichloropropene	75	9.374	9.374	(1.536)	112178	10.0000	9.7	
	39	1,1,2-Trichloroethane	83	9.560	9.560	(1.567)	68924	10.0000	11.0	
	40	Dibromochloromethane	129	9.736	9.737	(1.596)	99943	10.0000	8.9	
	41	1,3-Dichloropropane	76	9.857	9.858	(1.616)	131475	10.0000	11.3	
	42	2-Chloroethylvinylether	63	9.857	9.858	(1.616)	13806	10.0000	11.0	
	43	1,2-Dibromoethane	107	9.959	9.960	(1.632)	72008	10.0000	11.6	
	44	2-Hexanone	43	10.350	10.341	(1.696)	8781	10.0000	7.6	
	45	Chlorobenzene	112	10.573	10.574	(1.733)	453271	10.0000	9.9	
	46	Ethylbenzene	91	10.638	10.639	(1.743)	872217	10.0000	10.5	
	47	1,1,1,2-Tetrachloroethane	131	10.666	10.667	(1.748)	147047	10.0000	10.9	
	48	m+p-Xylenes	106	10.805	10.806	(1.771)	691485	20.0000	23.3	
	49	o-Xylene	106	11.233	11.234	(1.841)	306527	10.0000	10.1	
	50	Styrene	104	11.298	11.299	(1.852)	459638	10.0000	10.2	
	51	Bromoform	173	11.289	11.289	(1.850)	45659	10.0000	10.0	
	52	Isopropylbenzene	105	11.568	11.568	(1.896)	867323	10.0000	10.4	
$	53	P-Bromofluorobenzene	95	11.819	11.819	(1.937)	185127	10.0000	10.3	
	54	Bromobenzene	156	11.893	11.894	(1.949)	170075	10.0000	10.7	
	55	N-Propylbenzene	91	11.977	11.977	(1.963)	1095282	10.0000	11.4	
	56	1,1,2,2-Tetrachloroethane	83	12.060	12.061	(1.977)	79068	10.0000	10.9	
	57	2-Chlorotoluene	91	12.098	12.098	(1.983)	601564	10.0000	11.2	
	58	1,2,3-Trichloropropane	75	12.163	12.163	(1.993)	62969	10.0000	11.1	
	59	1,3,5-Trimethylbenzene	105	12.181	12.182	(1.996)	727282	10.0000	11.5	
	60	4-Chlorotoluene	91	12.256	12.256	(2.009)	616575	10.0000	11.4	
	61	tert-Butylbenzene	119	12.786	12.786	(2.095)	807187	10.0000	11.7	
	62	1,2,4-Trimethylbenzene	105	12.544	12.544	(2.056)	733534	10.0000	11.6	
	63	sec-Butylbenzene	105	12.637	12.637	(2.071)	992235	10.0000	11.5	
	64	P-Isopropyltoluene	119	12.469	12.470	(2.044)	636456	10.0000	11.5	
	65	1,3-Dichlorobenzene	146	12.813	12.814	(2.100)	383793	10.0000	10.9	
	66	1,4-Dichlorobenzene	146	12.906	12.907	(2.115)	355783	10.0000	11.0	
	67	N-Butylbenzene	91	13.185	13.186	(2.161)	769172	10.0000	10.4	
$	68	1,2-Dichlorobenzene-D4	152	13.297	13.297	(2.179)	182627	10.0000	10.8	
	69	1,2-Dichlorobenzene	146	13.306	13.307	(2.181)	299842	10.0000	10.6	
	70	1,2-Dibromo-3-Chloropropane	157	14.254	14.255	(2.336)	6732	10.0000	9.4	
	71	1,3,5-Trichlorobenzene	180	14.292	14.292	(2.342)	256551	10.0000	11.1	
	72	Hexachlorobutadiene	225	15.249	15.250	(2.499)	139871	10.0000	10.4	
	73	1,2,4-Trichlorobenzene	180	15.258	15.259	(2.501)	154722	10.0000	8.8	
	74	Naphthalene	128	15.723	15.724	(2.577)	114827	10.0000	7.3	
	75	1,2,3-Trichlorobenzene	180	15.956	15.956	(2.615)	106932	10.0000	8.8	
M	76	1,2-Dichloroethylene (total)	96				313605	20.0000	20.7	
M	77	Xylenes (total)	106				998012	30.0000	33.4	

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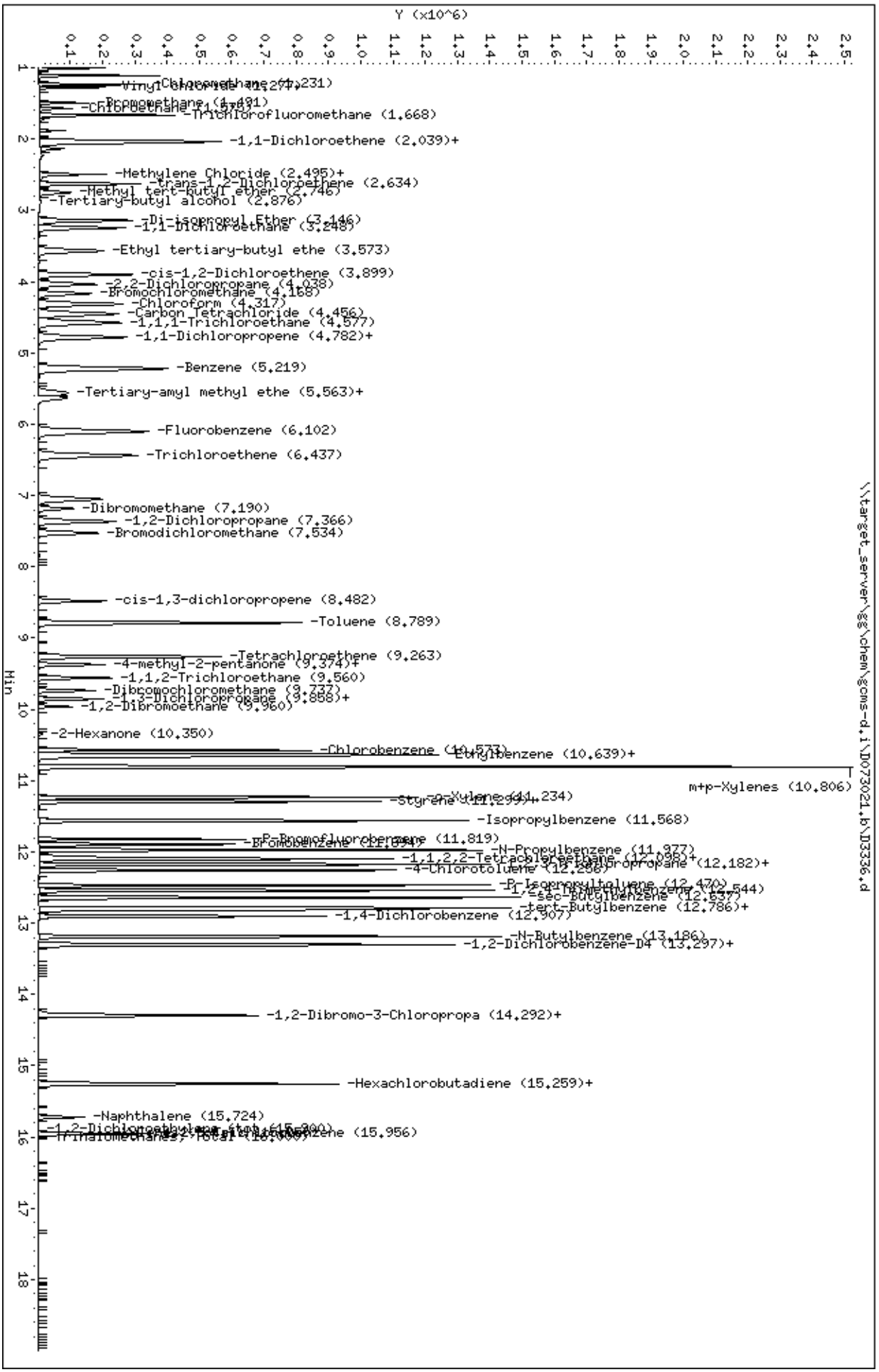
Report Date: 07-Aug-2021 10:01

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)	REVIEW CODE
M 78 Trihalomethanes, Total	100				658058	10.0000	39.6	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Date : 30-JUL-2021 17:35
Client ID:
Sample Info: WG303440-9,SD4724
Purge Volume: 25.0
Column phase: RTX-VMS
Instrument: gcms-d.i
Operator: JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-d.i\D073021.b\D3336.d
Y (x10^6)
Min
Chloromethane (1.231)
Vinyl chloride (1.277)
Bromomethane (1.491)
Chloroethane (1.577)
Trichlorofluoromethane (1.668)
1,1-Dichloroethene (2.039)+
Methylene Chloride (2.495)+
trans-1,2-Dichloroethene (2.634)
Methyl tert-butyl ether (2.746)
Tertiary-butyl alcohol (2.876)
Di-isopropyl Ether (3.146)
1,1-Dichloroethane (3.248)
Ethyl tertiary-butyl ethe (3.573)
cis-1,2-Dichloroethene (3.899)
2,2-Dichloropropane (4.038)
Bromochloromethane (4.168)
Chloroform (4.317)
Carbon Tetrachloride (4.456)
1,1,1-Trichloroethane (4.577)
1,1-Dichloropropene (4.782)+
Benzene (5.219)
Tertiary-amyl methyl ethe (5.563)+
Fluorobenzene (6.102)
Trichloroethene (6.437)
Dibromomethane (7.190)
1,2-Dichloropropane (7.366)
Bromodichloromethane (7.534)
cis-1,3-dichloropropene (8.482)
Toluene (8.789)
Tetrachloroethene (9.263)
4-methyl-2-pentanone (9.374)+
1,1,2-Trichloroethane (9.560)
Dibromochloromethane (9.727)
1,3-Dichloropropane (9.858)+
1,2-Dibromoethane (9.960)
2-Hexanone (10.350)
Chlorobenzene (10.573)
Ethylbenzene (10.639)+
m+p-Xylenes (10.806)
o-Xylene (11.234)
Styrene (11.299)+
Isopropylbenzene (11.568)
P-Bromofluorobenzene (11.819)
Bromobenzene (11.874)
N-Propylbenzene (11.977)
1,1,2,2-Tetrachloroethane (12.068)+
2-Chlorotoluene (12.098)
1,3,5-Trimethylbenzene (12.182)+
4-Chlorotoluene (12.256)
P-Isopropyltoluene (12.470)
1,2,4-Trimethylbenzene (12.544)
sec-Butylbenzene (12.637)
tert-Butylbenzene (12.786)+
1,4-Dichlorobenzene (12.907)
N-Butylbenzene (13.186)
1,2-Dichlorobenzene-D4 (13.297)+
1,2-Dibromo-3-Chloropropa (14.292)+
Hexachlorobutadiene (15.259)+
Naphthalene (15.724)
1,2-Dichlorobenzene (15.956)

Data File: \\target_server\gg\chem\gcms-d.i\D072921.b\DB911a.d

Date : 29-JUL-2021 07:23

Client ID:

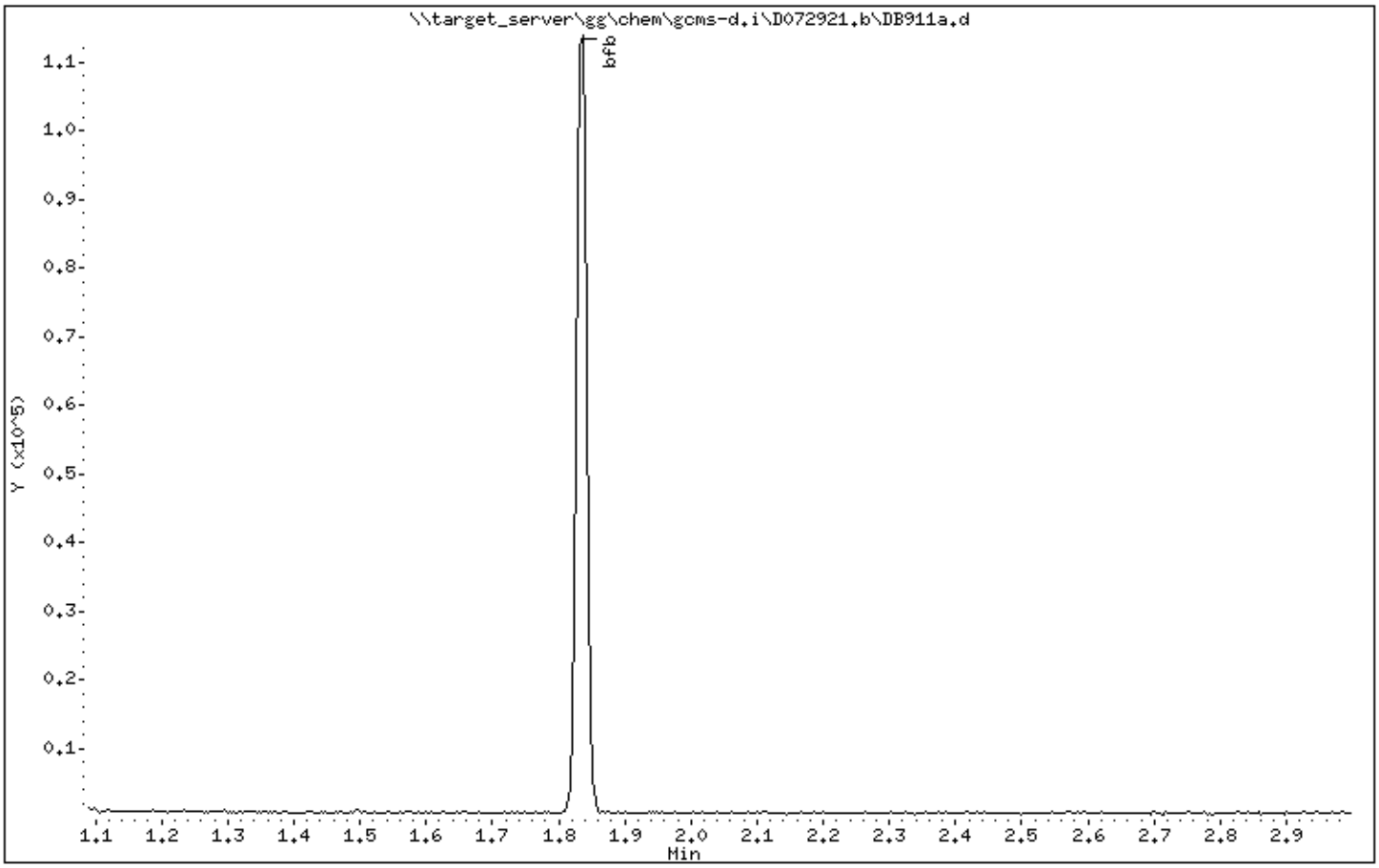
Instrument: gcms-d.i

Sample Info: WG303293-11,SO4724

Operator: JSS

Column phase: RTX-VMS

Column diameter: 0.18



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Date : 29-JUL-2021 07:23

Client ID:

Instrument: gcms-d.i

Sample Info: WG303293-11,SO4724

Operator: JSS

Column phase: RTX-VMS

Column diameter: 0.18

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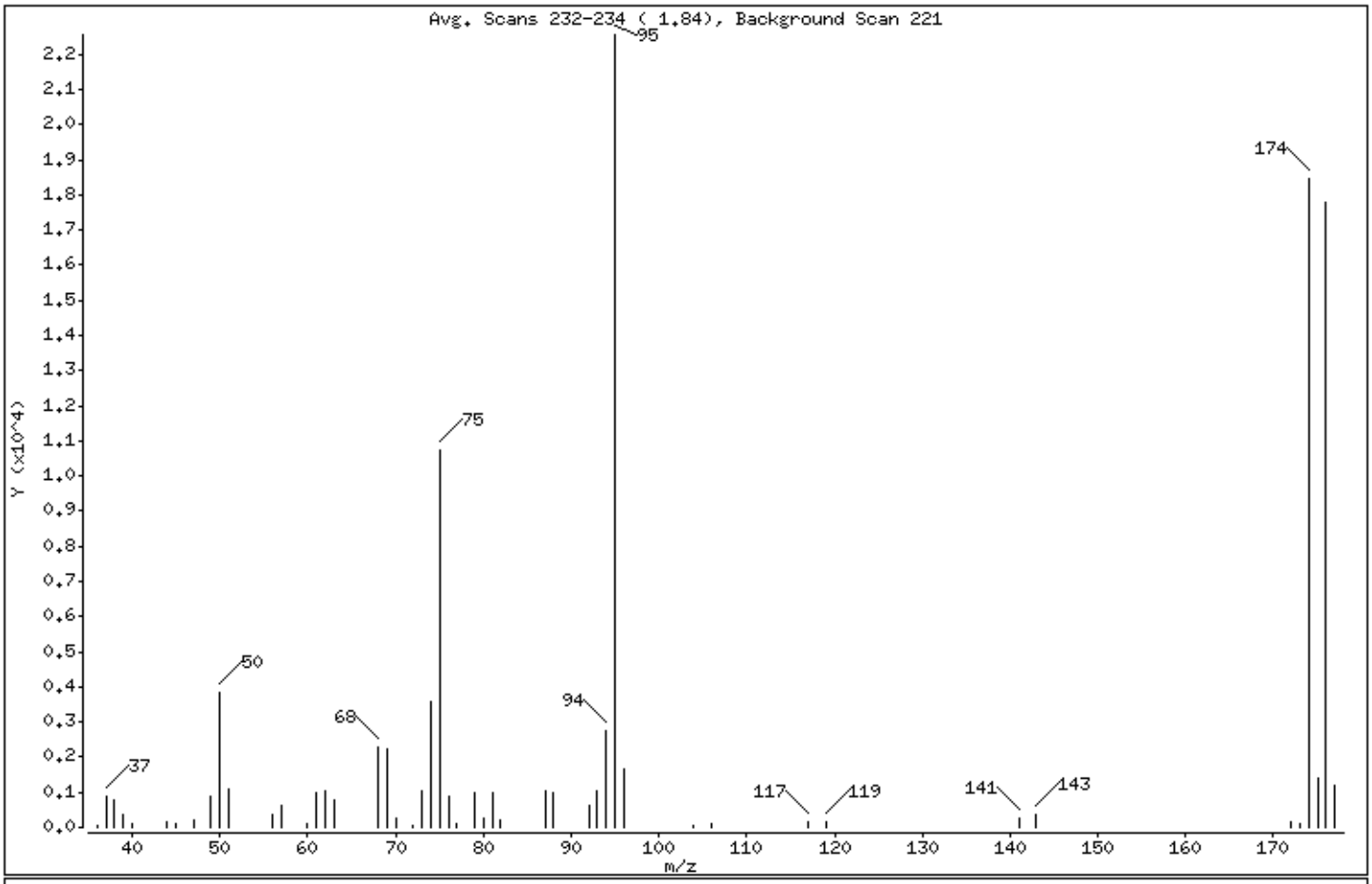


m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.05
75	30.00 - 60.00% of mass 95	47.55
96	5.00 - 9.00% of mass 95	7.36
173	Less than 2.00% of mass 174	0.55 (0.67)
174	Greater than 50.00% of mass 95	81.88
175	5.00 - 9.00% of mass 174	6.26 (7.65)
176	95.00 - 101.00% of mass 174	78.87 (96.32)
177	5.00 - 9.00% of mass 176	5.35 (6.78)

Date : 29-JUL-2021 07:23

Client ID: Instrument: gcms-d.i

Sample Info: WG303293-11,SO4724

Operator: JSS

Column phase: RTX-VMS Column diameter: 0.18

Data File: DB911a.d
Spectrum: Avg. Scans 232-234 (1.84), Background Scan 221
Location of Maximum: 95.00
Number of points: 49

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	75	60.00	116	79.00	1002	117.00	150
37.00	860	61.00	978	80.00	282	119.00	166
38.00	765	62.00	1013	81.00	976	141.00	284
39.00	349	63.00	792	82.00	217	143.00	342
40.00	116	68.00	2280	87.00	1026	172.00	133
44.00	161	69.00	2255	88.00	975	173.00	123
45.00	109	70.00	245	92.00	637	174.00	18472
47.00	228	72.00	58	93.00	1041	175.00	1413
49.00	877	73.00	1017	94.00	2762	176.00	17792
50.00	3847	74.00	3600	95.00	22560	177.00	1207
51.00	1069	75.00	10727	96.00	1661		
56.00	354	76.00	886	104.00	51		
57.00	601	77.00	118	106.00	102		

Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\DB912a.d

Date : 30-JUL-2021 07:15

Client ID:

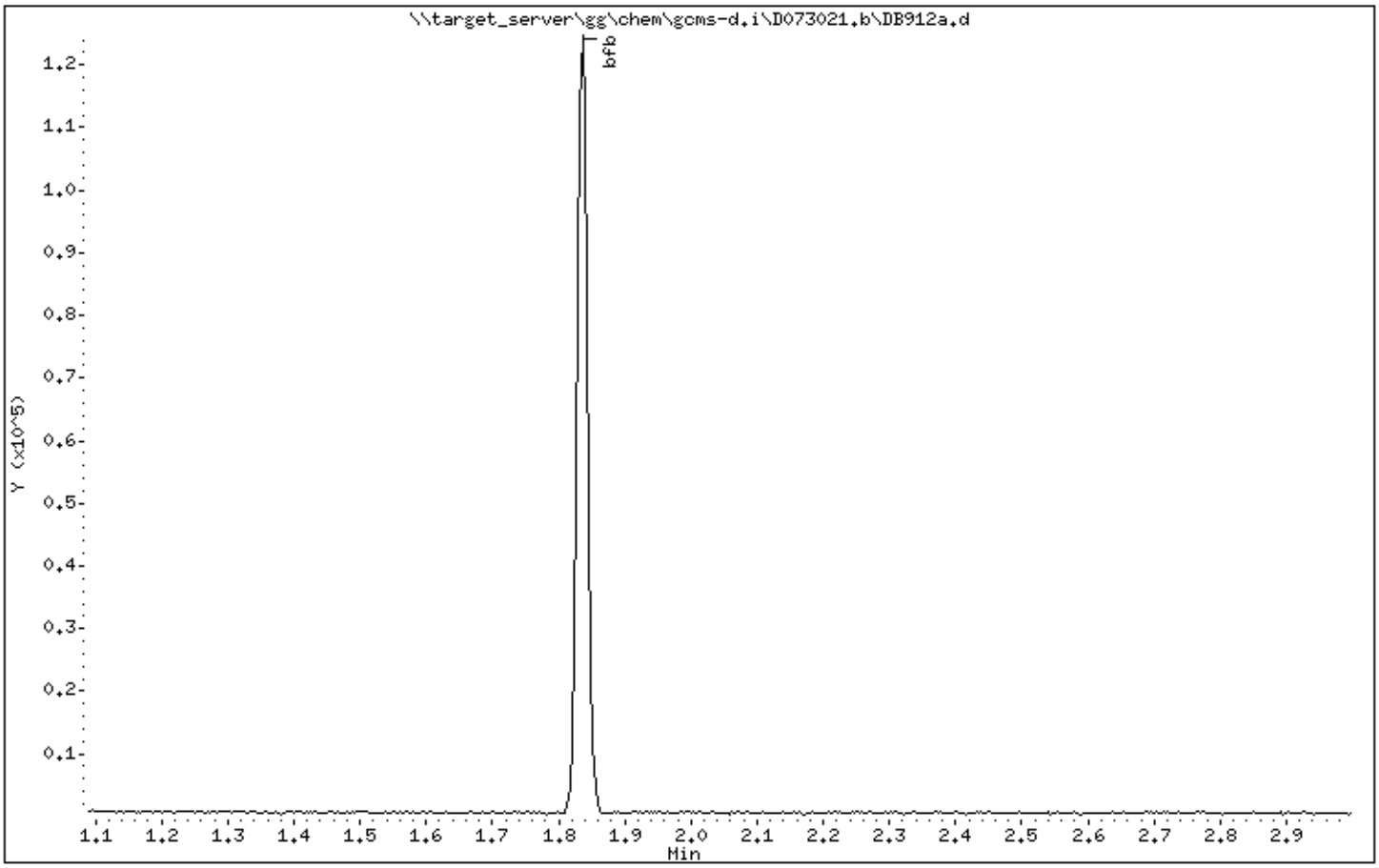
Instrument: gcms-d.i

Sample Info: WG303440-3,SO4724

Operator: JSS

Column phase: RTX-VMS

Column diameter: 0.18



Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\DB912a.d

Date : 30-JUL-2021 07:15

Client ID:

Instrument: gcms-d.i

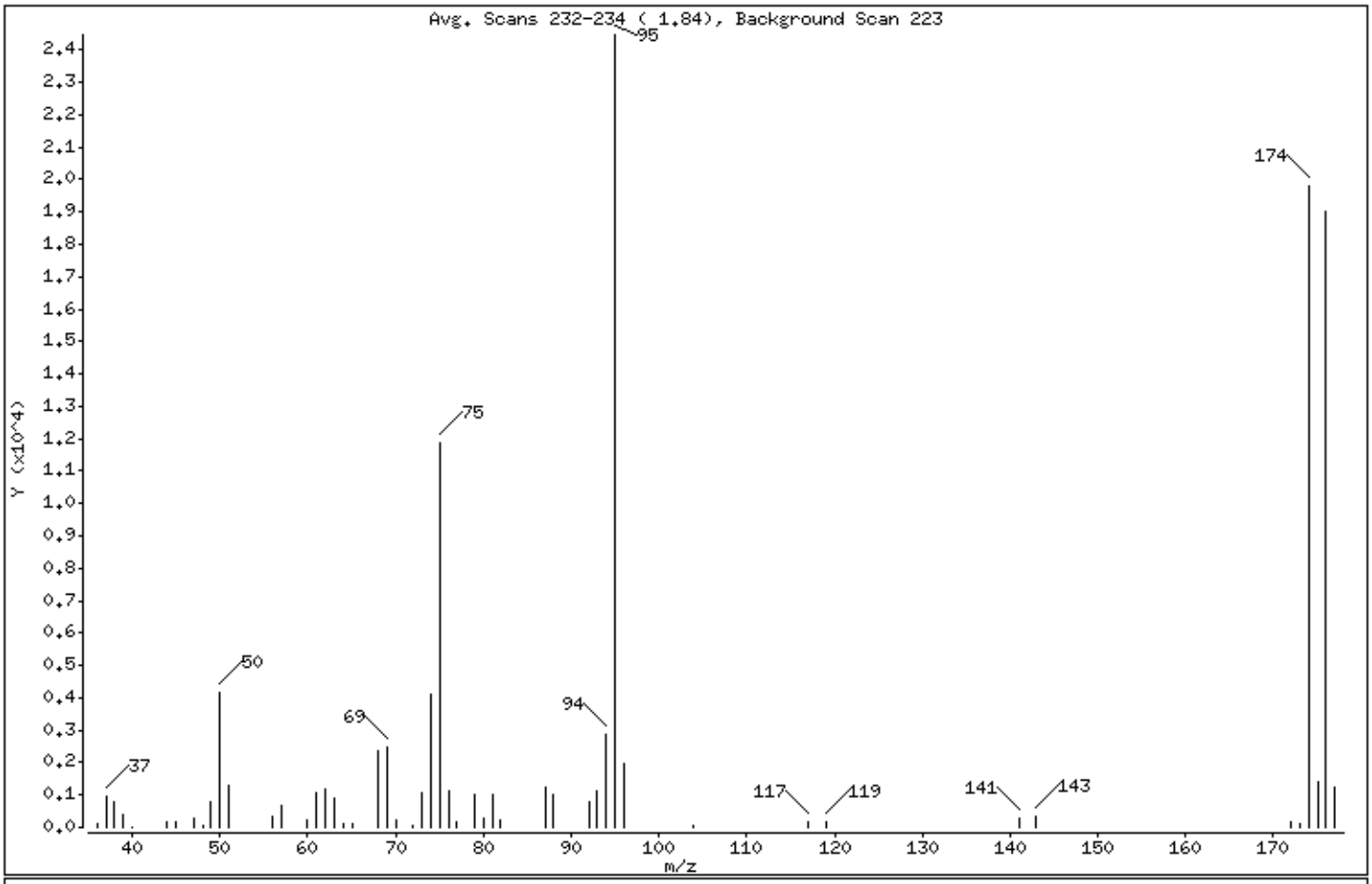
Sample Info: WG303440-3,SO4724

Operator: JSS

Column phase: RTX-VMS

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.04
75	30.00 - 60.00% of mass 95	48.53
96	5.00 - 9.00% of mass 95	8.00
173	Less than 2.00% of mass 174	0.51 (0.63)
174	Greater than 50.00% of mass 95	80.84
175	5.00 - 9.00% of mass 174	5.67 (7.02)
176	95.00 - 101.00% of mass 174	77.73 (96.16)
177	5.00 - 9.00% of mass 176	5.06 (6.51)

Date : 30-JUL-2021 07:15

Client ID: Instrument: gcms-d.i

Sample Info: WG303440-3,SO4724

Operator: JSS

Column phase: RTX-VMS Column diameter: 0.18

Data File: DB912a.d
Spectrum: Avg. Scans 232-234 (1.84), Background Scan 223
Location of Maximum: 95.00
Number of points: 51

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	94	57.00	680	75.00	11873	96.00	1957
37.00	945	60.00	204	76.00	1123	104.00	55
38.00	774	61.00	1092	77.00	195	117.00	142
39.00	377	62.00	1199	79.00	1001	119.00	182
40.00	14	63.00	891	80.00	296	141.00	268
44.00	151	64.00	120	81.00	999	143.00	339
45.00	180	65.00	110	82.00	234	172.00	167
47.00	256	68.00	2339	87.00	1243	173.00	125
48.00	57	69.00	2499	88.00	989	174.00	19776
49.00	789	70.00	211	92.00	761	175.00	1388
50.00	4169	72.00	64	93.00	1142	176.00	19016
51.00	1290	73.00	1044	94.00	2885	177.00	1237
56.00	345	74.00	4091	95.00	24464		

Raw QC Data Section

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Lab ID: WG303440-2
Client ID: Method Blank
SDG: SO4724
Lab File ID: D3326.D

Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440
% Solids: NA

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
Report Date: 07-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	0.50	ug/L	1	1	1.0	0.10	0.50
Chloromethane	J	0.10	ug/L	1	1	1.0	0.077	0.50
Vinyl Chloride	U	0.50	ug/L	1	1	1.0	0.083	0.50
Bromomethane	U	0.50	ug/L	1	1	1.0	0.13	0.50
Chloroethane	U	0.50	ug/L	1	1	1.0	0.085	0.50
Trichlorofluoromethane	U	0.25	ug/L	1	.5	0.50	0.072	0.25
1,1-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.084	0.25
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methylene Chloride	U	1.2	ug/L	1	2.5	2.5	0.62	1.2
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.076	0.25
1,1-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.049	0.25
cis-1,2-Dichloroethene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
2,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.14	0.25
Chloroform	J	0.16	ug/L	1	.5	0.50	0.047	0.25
Bromochloromethane	U	0.25	ug/L	1	.5	0.50	0.087	0.25
1,1,1-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.058	0.25
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dichloroethane	U	0.25	ug/L	1	.5	0.50	0.10	0.25
1,1-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.054	0.25
Carbon Tetrachloride	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Benzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
1,2-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.066	0.25
Trichloroethene	U	0.25	ug/L	1	.5	0.50	0.044	0.25
Dibromomethane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Bromodichloromethane	U	0.25	ug/L	1	.5	0.50	0.061	0.25
cis-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
Toluene	U	0.25	ug/L	1	1	1.0	0.061	0.25
trans-1,3-Dichloropropene	U	0.25	ug/L	1	.5	0.50	0.12	0.25
1,1,2-Trichloroethane	U	0.25	ug/L	1	.5	0.50	0.13	0.25
1,3-Dichloropropane	U	0.25	ug/L	1	.5	0.50	0.071	0.25
Dibromochloromethane	U	0.25	ug/L	1	.5	0.50	0.092	0.25
Tetrachloroethene	U	0.25	ug/L	1	.5	0.50	0.073	0.25
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
1,2-Dibromoethane	U	0.25	ug/L	1	.5	0.50	0.090	0.25
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5

600 Technology Way
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Tel:(207) 874-2400 Fax:(207) 775-4029

http://www.katahdinlab.com

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Lab ID: WG303440-2
Client ID: Method Blank
SDG: SO4724
Lab File ID: D3326.D

Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440
% Solids: NA

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
Report Date: 07-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Chlorobenzene	U	0.25	ug/L	1	.5	0.50	0.057	0.25
1,1,1,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.089	0.25
Ethylbenzene	U	0.25	ug/L	1	.5	0.50	0.062	0.25
m+p-Xylenes	U	0.25	ug/L	1	1	1.0	0.098	0.25
Bromoform	U	0.25	ug/L	1	.5	0.50	0.055	0.25
o-Xylene	U	0.25	ug/L	1	.5	0.50	0.043	0.25
Styrene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,1,2,2-Tetrachloroethane	U	0.25	ug/L	1	.5	0.50	0.11	0.25
1,2,3-Trichloropropane	U	0.25	ug/L	1	.5	0.50	0.099	0.25
Isopropylbenzene	U	0.25	ug/L	1	.5	0.50	0.059	0.25
Bromobenzene	U	0.25	ug/L	1	.5	0.50	0.066	0.25
2-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
N-Propylbenzene	U	0.25	ug/L	1	.5	0.50	0.063	0.25
4-Chlorotoluene	U	0.25	ug/L	1	.5	0.50	0.077	0.25
1,3,5-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.053	0.25
1,2,4-Trichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.10	0.25
sec-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.085	0.25
1,3-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.049	0.25
p-Isopropyltoluene	U	0.25	ug/L	1	.5	0.50	0.071	0.25
1,4-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2-Dichlorobenzene	U	0.25	ug/L	1	.5	0.50	0.065	0.25
N-Butylbenzene	U	0.25	ug/L	1	.5	0.50	0.083	0.25
1,2-Dibromo-3-Chloropropane	U	0.25	ug/L	1	.5	0.50	0.080	0.25
1,2,4-Trimethylbenzene	U	0.25	ug/L	1	.5	0.50	0.047	0.25
Naphthalene	U	0.50	ug/L	1	1	1.0	0.14	0.50
Hexachlorobutadiene	U	0.25	ug/L	1	.5	0.50	0.075	0.25
1,2,3-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.13	0.50
Methyl tert-butyl Ether	U	0.25	ug/L	1	1	1.0	0.097	0.25
p-Bromofluorobenzene		69.2	%					
1,2-Dichlorobenzene-D4		77.3	%					

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Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3326.d
Report Date: 07-Aug-2021 10:00

Katahdin Analytical Services

EPA 524.2

Data file : \\target_server\gg\chem\gcms-d.i\D073021.b\D3326.d
Lab Smp Id: WG303440-2 Client Smp ID: WG303440-Blank
Inj Date : 30-JUL-2021 11:04
Operator : JSS Inst ID: gcms-d.i
Smp Info : WG303440-2,SO4724
Misc Info : WG303440,WG303293-4,SO4724-2
Comment :
Method : \\target_server\gg\chem\gcms-d.i\D073021.b\D5A25(70)D.m
Meth Date : 03-Aug-2021 07:32 hgould Quant Type: ISTD
Cal Date : 29-JUL-2021 13:45 Cal File: D3314.d
Als bottle: 6 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: T7-O360

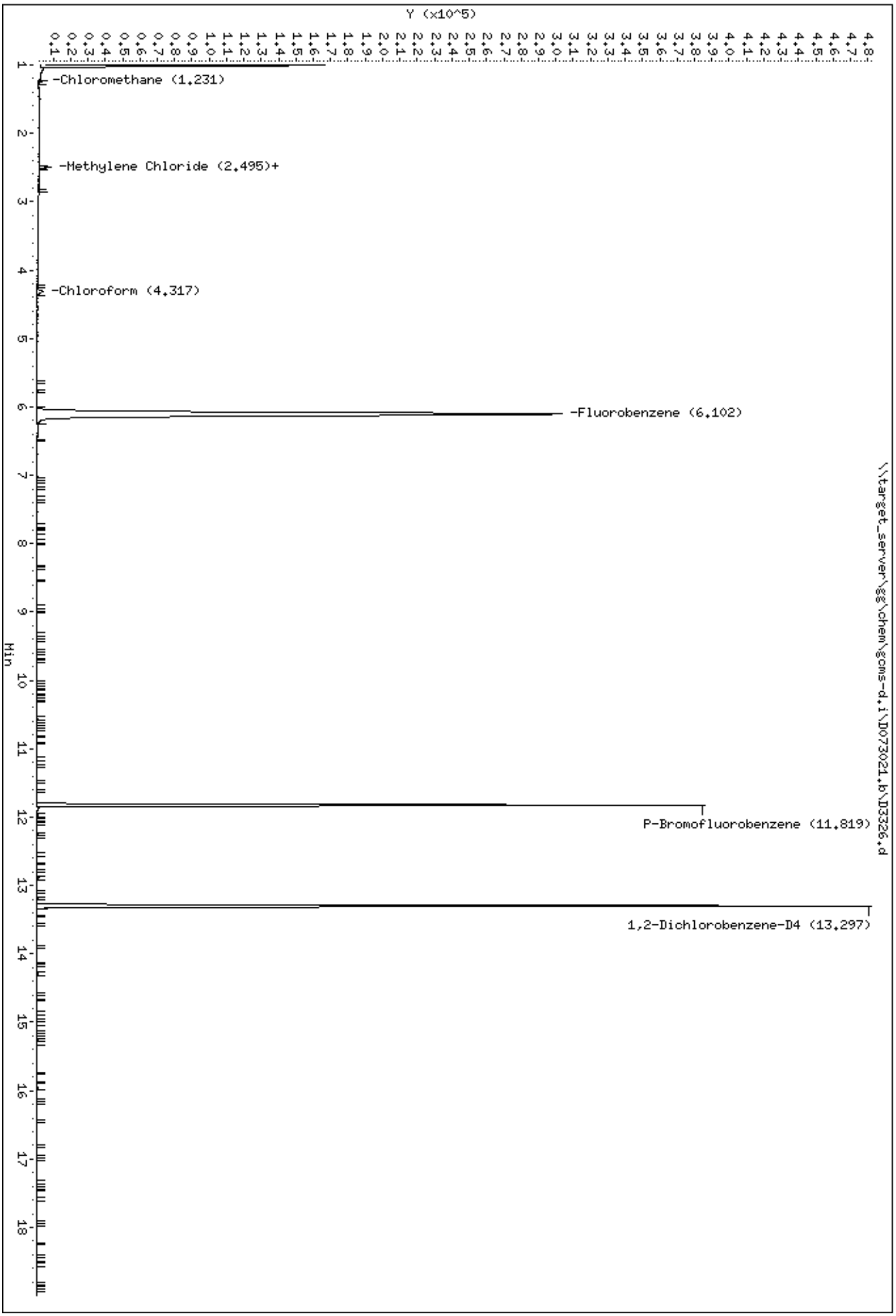
Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	25.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/l)	REVIEW CODE
2	Chloromethane	50	1.230	1.231	(0.202)	2200	0.09976	0.100(a)	
10	Methylene Chloride	84	2.495	2.495	(0.409)	3362	0.44872	0.45(a)	
11	Acetone	43	2.560	2.551	(0.420)	652	1.18468	1.2(a)	
21	Chloroform	83	4.317	4.308	(0.707)	4619	0.16400	0.16(a)	
* 29	Fluorobenzene	96	6.102	6.102	(1.000)	523543	10.0000		
$ 53	P-Bromofluorobenzene	95	11.819	11.819	(1.937)	105340	6.91601	6.9	
$ 68	1,2-Dichlorobenzene-D4	152	13.297	13.297	(2.179)	111448	7.73239	7.7	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).


Y (x10^5)
-Chloromethane (1,231)
-Methylene Chloride (2,495)+
-Chloroform (4,317)
-Fluorobenzene (6,102)
P-Bromofluorobenzene (11,819)
1,2-Dichlorobenzene-D4 (13,297)
Min
\\target_server\gg\chem\gcms-d,i\D073021,b\D3326,d
Data File: \\target_server\gg\chem\gcms-d,i\D073021,b\D3326,d
Date : 30-JUL-2021 11:04
Client ID: WG303440-Blank
Sample Info: WG303440-2,SD4724
Instrument: gcms-d,i

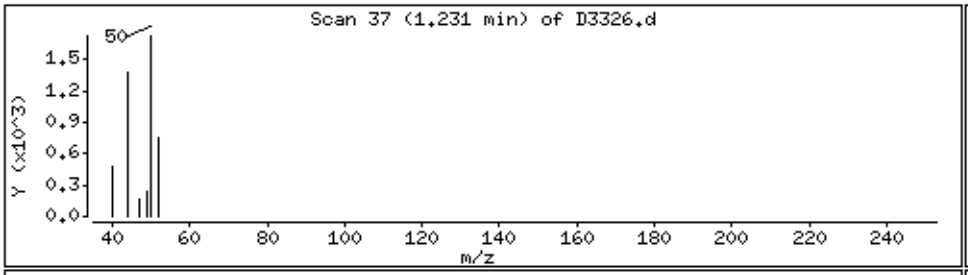
Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3326.d

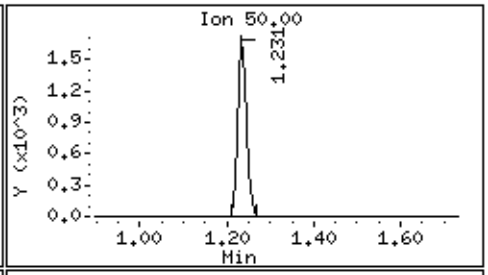
Date : 30-JUL-2021 11:04

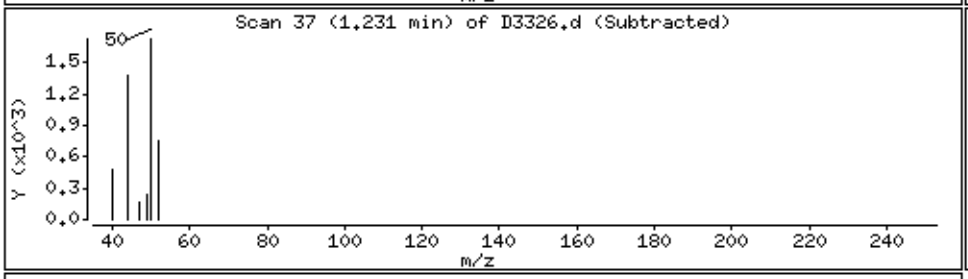
Client ID: WG303440-Blank Instrument: gcms-d.i

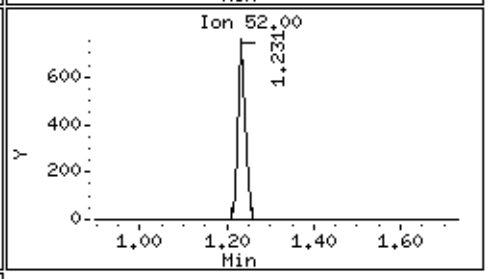
Sample Info: WG303440-2,SO4724

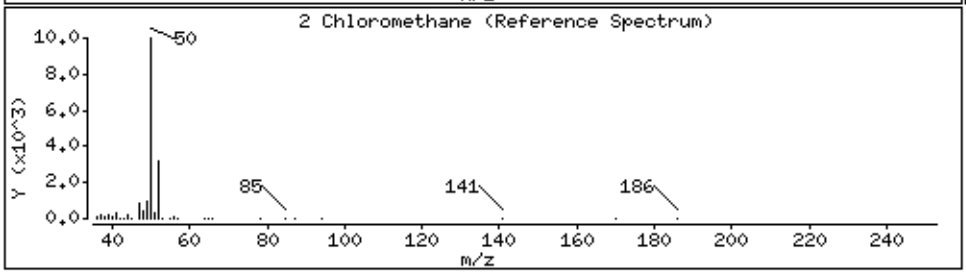
2 Chloromethane Concentration: 0.100 ug/l



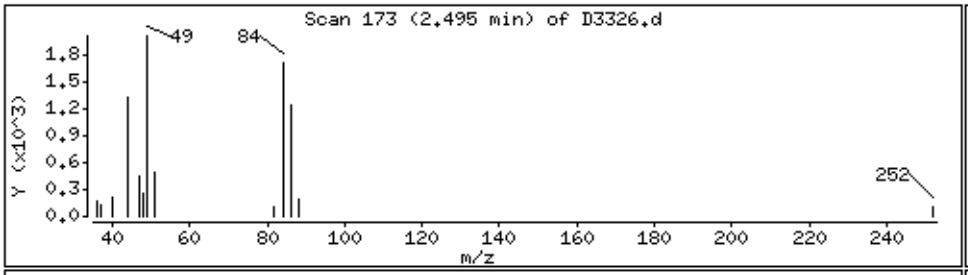


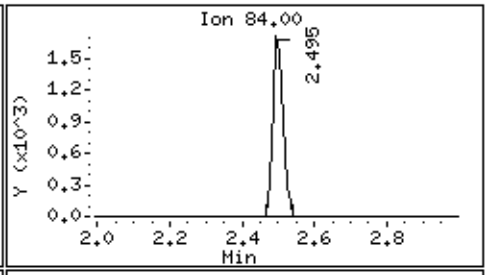


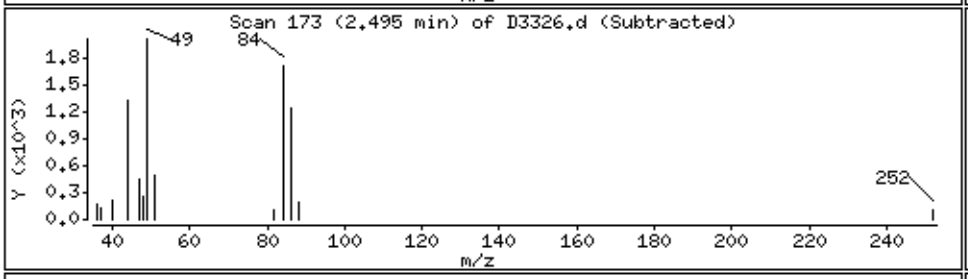


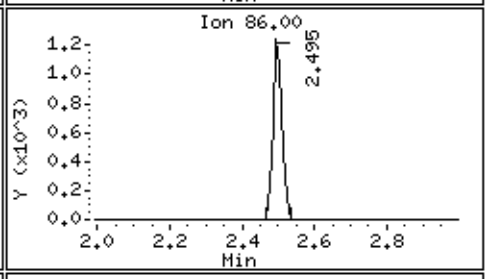


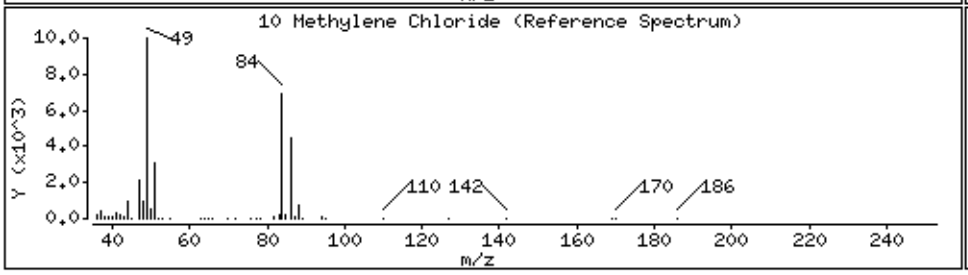
10 Methylene Chloride Concentration: 0.45 ug/l

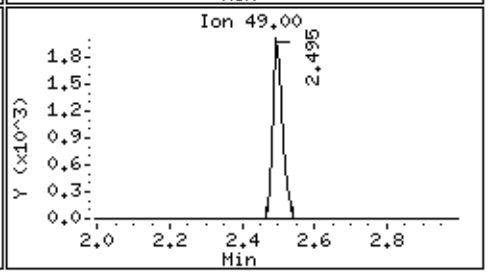












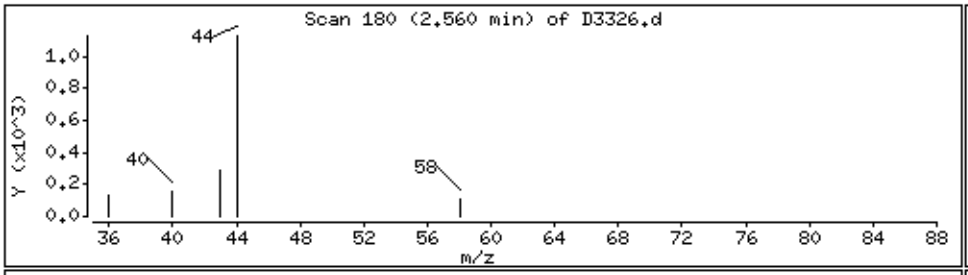
Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3326.d

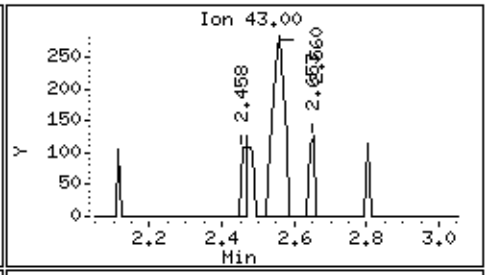
Date : 30-JUL-2021 11:04

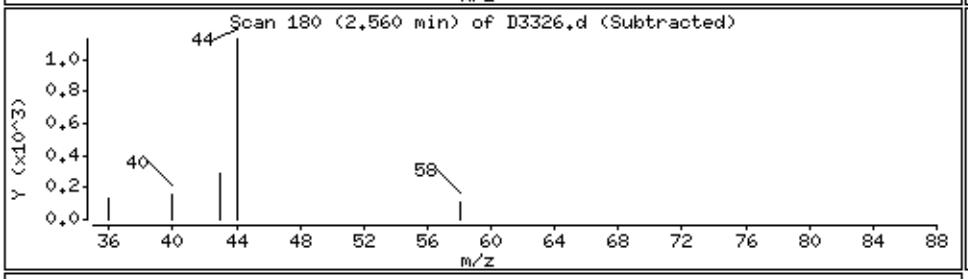
Client ID: WG303440-Blank Instrument: gcms-d.i

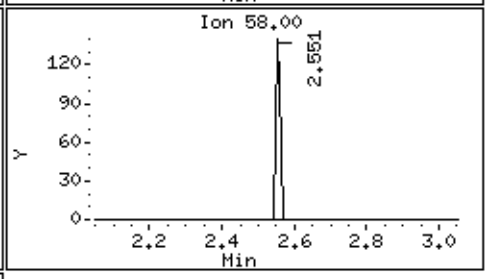
Sample Info: WG303440-2,S04724

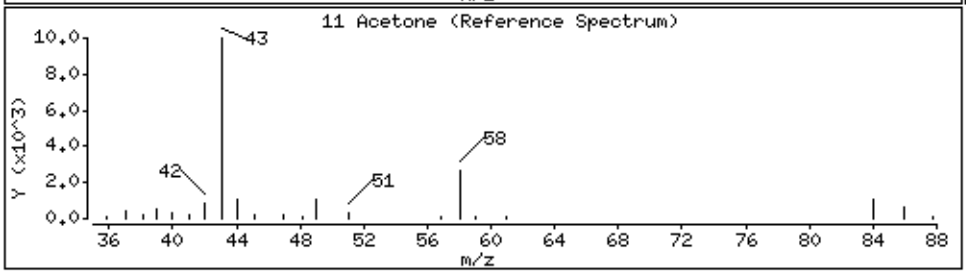
11 Acetone Concentration: 1.2 ug/l



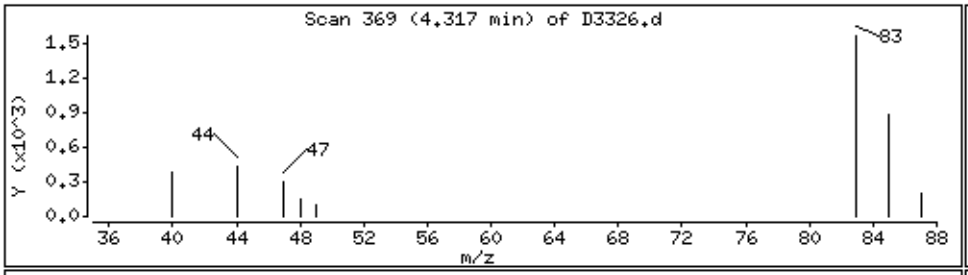


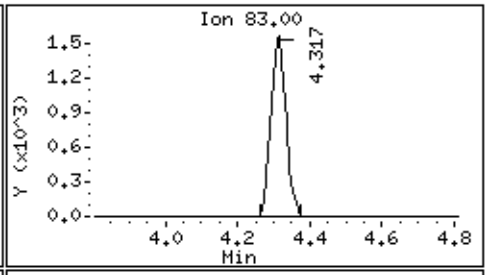


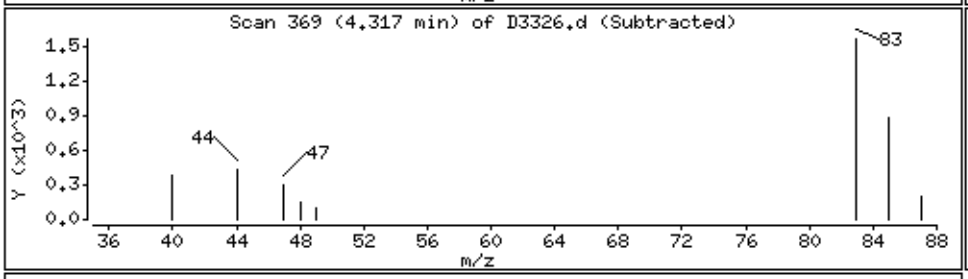


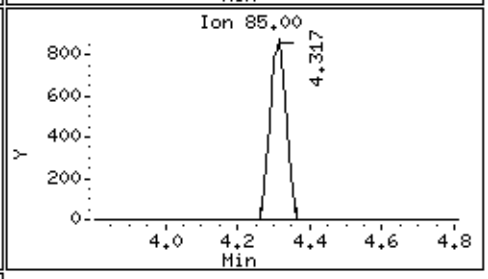


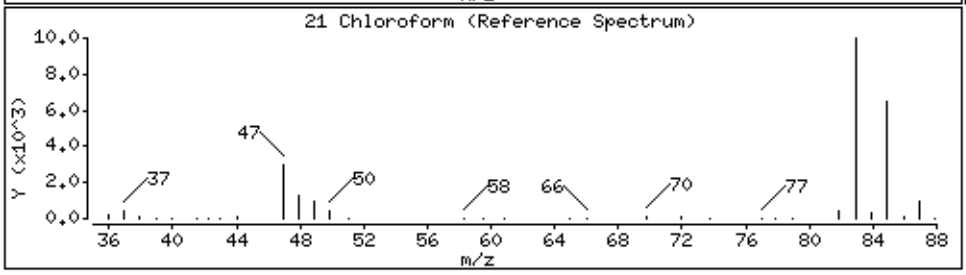
21 Chloroform Concentration: 0.16 ug/l











Katahdin
ANALYTICAL SERVICES

LCS/LCSD Recovery Report

LCS ID: WG303440-1
LCSD ID: WG303440-5
SDG: SO4724
LCS File ID: D3323.D

Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440
LCSD File ID: D3324.d

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
Report Date: 09-AUG-21

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Dichlorodifluoromethane	5.00	5.70	114.	5.50	110.	ug/L	4	20	70-130
Chloromethane	5.00	4.80	96.0	4.60	92.0	ug/L	4	20	70-130
Vinyl Chloride	5.00	5.20	104.	5.00	100.	ug/L	4	20	70-130
Bromomethane	5.00	4.90	98.0	4.60	92.0	ug/L	6	20	70-130
Chloroethane	5.00	6.90	138.*	6.50	130.	ug/L	6	20	70-130
Trichlorofluoromethane	5.00	5.20	104.	5.00	100.	ug/L	4	20	70-130
1,1-Dichloroethene	5.00	4.70	94.0	4.40	88.0	ug/L	6	20	70-130
Carbon Disulfide	5.00	4.80	96.0	4.60	92.0	ug/L	4	20	70-130
Methylene Chloride	5.00	5.60	112.	5.50	110.	ug/L	2	20	70-130
Acetone	5.00	6.70	134.*	6.30	126.	ug/L	6	20	70-130
trans-1,2-Dichloroethene	5.00	4.80	96.0	4.60	92.0	ug/L	4	20	70-130
1,1-Dichloroethane	5.00	5.10	102.	4.90	98.0	ug/L	4	20	70-130
cis-1,2-Dichloroethene	5.00	4.70	94.0	4.70	94.0	ug/L	0	20	70-130
2,2-Dichloropropane	5.00	5.10	102.	4.90	98.0	ug/L	4	20	70-130
Chloroform	5.00	4.90	98.0	4.80	96.0	ug/L	2	20	70-130
Bromochloromethane	5.00	5.20	104.	5.10	102.	ug/L	2	20	70-130
1,1,1-Trichloroethane	5.00	4.80	96.0	4.60	92.0	ug/L	4	20	70-130
2-Butanone	5.00	4.90	98.0	5.10	102.	ug/L	4	20	70-130
1,2-Dichloroethane	5.00	5.20	104.	5.20	104.	ug/L	0	20	70-130
1,1-Dichloropropene	5.00	5.10	102.	4.90	98.0	ug/L	4	20	70-130
Carbon Tetrachloride	5.00	4.60	92.0	4.50	90.0	ug/L	2	20	70-130
Benzene	5.00	5.20	104.	5.00	100.	ug/L	4	20	70-130
1,2-Dichloropropane	5.00	5.00	100.	4.90	98.0	ug/L	2	20	70-130
Trichloroethene	5.00	5.20	104.	5.20	104.	ug/L	0	20	70-130
Dibromomethane	5.00	4.80	96.0	4.80	96.0	ug/L	0	20	70-130
Bromodichloromethane	5.00	4.80	96.0	4.60	92.0	ug/L	4	20	70-130
cis-1,3-Dichloropropene	5.00	4.00	80.0	3.90	78.0	ug/L	2	20	70-130
Toluene	5.00	4.60	92.0	4.40	88.0	ug/L	4	20	70-130
trans-1,3-Dichloropropene	5.00	4.10	82.0	4.00	80.0	ug/L	2	20	70-130
1,1,2-Trichloroethane	5.00	5.00	100.	5.00	100.	ug/L	0	20	70-130
1,3-Dichloropropane	5.00	5.10	102.	5.10	102.	ug/L	0	20	70-130
Dibromochloromethane	5.00	3.80	76.0	3.70	74.0	ug/L	3	20	70-130
Tetrachloroethene	5.00	4.80	96.0	4.70	94.0	ug/L	2	20	70-130
4-Methyl-2-Pentanone	5.00	3.40	68.0*	3.50	70.0	ug/L	3	20	70-130
1,2-Dibromoethane	5.00	5.10	102.	5.10	102.	ug/L	0	20	70-130
2-Hexanone	5.00	3.40	68.0*	3.40	68.0*	ug/L	0	20	70-130

600 Technology Way
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Tel:(207) 874-2400 Fax:(207) 775-4029

http://www.katahdinlab.com

Katahdin
ANALYTICAL SERVICES

LCS/LCSD Recovery Report

LCS ID: WG303440-1
LCSD ID: WG303440-5
SDG: SO4724
LCS File ID: D3323.D

Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440
LCSD File ID: D3324.d

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
Report Date: 09-AUG-21

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
Chlorobenzene	5.00	4.50	90.0	4.40	88.0	ug/L	2	20	70-130
1,1,1,2-Tetrachloroethane	5.00	4.90	98.0	4.80	96.0	ug/L	2	20	70-130
Ethylbenzene	5.00	5.00	100.	4.80	96.0	ug/L	4	20	70-130
m+p-Xylenes	10.0	11.0	110.	10.7	107.	ug/L	3	20	70-130
Bromoform	5.00	4.20	84.0	4.10	82.0	ug/L	2	20	70-130
o-Xylene	5.00	4.50	90.0	4.40	88.0	ug/L	2	20	70-130
Styrene	5.00	4.60	92.0	4.40	88.0	ug/L	4	20	70-130
1,1,2,2-Tetrachloroethane	5.00	5.10	102.	5.10	102.	ug/L	0	20	70-130
1,2,3-Trichloropropane	5.00	5.10	102.	5.10	102.	ug/L	0	20	70-130
Isopropylbenzene	5.00	4.80	96.0	4.70	94.0	ug/L	2	20	70-130
Bromobenzene	5.00	5.00	100.	4.90	98.0	ug/L	2	20	70-130
2-Chlorotoluene	5.00	5.20	104.	5.10	102.	ug/L	2	20	70-130
N-Propylbenzene	5.00	5.40	108.	5.20	104.	ug/L	4	20	70-130
4-Chlorotoluene	5.00	5.30	106.	5.20	104.	ug/L	2	20	70-130
1,3,5-Trimethylbenzene	5.00	5.40	108.	5.30	106.	ug/L	2	20	70-130
1,2,4-Trichlorobenzene	5.00	3.70	74.0	3.50	70.0	ug/L	6	20	70-130
sec-Butylbenzene	5.00	5.50	110.	5.40	108.	ug/L	2	20	70-130
1,3-Dichlorobenzene	5.00	5.20	104.	5.10	102.	ug/L	2	20	70-130
p-Isopropyltoluene	5.00	5.30	106.	5.10	102.	ug/L	4	20	70-130
1,4-Dichlorobenzene	5.00	5.10	102.	5.00	100.	ug/L	2	20	70-130
1,2-Dichlorobenzene	5.00	5.10	102.	5.00	100.	ug/L	2	20	70-130
N-Butylbenzene	5.00	5.10	102.	4.90	98.0	ug/L	4	20	70-130
1,2-Dibromo-3-Chloropropane	5.00	4.00	80.0	4.30	86.0	ug/L	7	20	70-130
1,2,4-Trimethylbenzene	5.00	5.40	108.	5.20	104.	ug/L	4	20	70-130
Naphthalene	5.00	2.60	52.0*	2.40	48.0*	ug/L	8	20	70-130
Hexachlorobutadiene	5.00	5.00	100.	4.70	94.0	ug/L	6	20	70-130
1,2,3-Trichlorobenzene	5.00	3.90	78.0	3.60	72.0	ug/L	8	20	70-130
Methyl tert-butyl Ether	5.00	4.80	96.0	5.40	108.	ug/L	12	20	70-130
p-Bromofluorobenzene			99.9		98.7				60-121
1,2-Dichlorobenzene-D4			100.		99.8				51-133

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Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3323.d
Report Date: 07-Aug-2021 10:00

Katahdin Analytical Services

EPA 524.2

Data file : \\target_server\gg\chem\gcms-d.i\D073021.b\D3323.d
Lab Smp Id: WG303440-1
Inj Date : 30-JUL-2021 09:07
Operator : JSS Inst ID: gcms-d.i
Smp Info : WG303440-1,SO4724
Misc Info : WG303440,WG303293-4,SO4724-2
Comment   :
Method   : \\target_server\gg\chem\gcms-d.i\D073021.b\D5A25(70)D.m
Meth Date : 03-Aug-2021 07:32 hgould Quant Type: ISTD
Cal Date : 29-JUL-2021 13:45 Cal File: D3314.d
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	25.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.110	1.110	(0.182)	132505	5.68792	5.7	
2	Chloromethane	50	1.230	1.231	(0.202)	133886	4.79952	4.8	
3	Vinyl chloride	62	1.277	1.277	(0.209)	79486	5.20320	5.2	
4	Bromomethane	94	1.491	1.491	(0.244)	30059	4.93347	4.9	
5	Chloroethane	64	1.574	1.575	(0.258)	34163	6.86313	6.9(R)	
6	Trichlorofluoromethane	101	1.667	1.668	(0.273)	147173	5.25222	5.2	
7	1,1-Dichloroethene	96	2.021	2.021	(0.331)	58908	4.74709	4.7	
8	Carbon Disulfide	76	2.039	2.040	(0.334)	163049	4.77565	4.8	
9	Freon-113	151	2.058	2.057	(0.337)	41962	4.09182	4.1	
10	Methylene Chloride	84	2.495	2.495	(0.409)	53421	5.63652	5.6	
11	Acetone	43	2.550	2.551	(0.418)	4641	6.66627	6.7(R)	
12	trans-1,2-Dichloroethene	96	2.625	2.635	(0.430)	65744	4.81323	4.8	
13	Methyl tert-butyl ether	73	2.746	2.746	(0.450)	60217	4.81491	4.8	
14	Tertiary-butyl alcohol	59	2.885	2.886	(0.473)	4391	23.8455	23.8	
15	Di-isopropyl Ether	45	3.145	3.146	(0.516)	139996	4.62720	4.6	
16	1,1-Dichloroethane	63	3.248	3.248	(0.532)	166348	5.13421	5.1	
17	Ethyl tertiary-butyl ether	59	3.564	3.564	(0.584)	90579	3.84761	3.8	
18	cis-1,2-Dichloroethene	96	3.898	3.908	(0.639)	89335	4.72402	4.7	
19	2,2-Dichloropropane	77	4.038	4.029	(0.662)	101991	5.13675	5.1	
20	Bromochloromethane	128	4.168	4.178	(0.683)	36078	5.15692	5.2	
21	Chloroform	83	4.308	4.308	(0.706)	175091	4.91446	4.9	
22	Carbon Tetrachloride	117	4.456	4.447	(0.730)	131315	4.65331	4.6	
23	1,1,1-Trichloroethane	97	4.577	4.577	(0.750)	147088	4.79465	4.8	
24	1,1-Dichloropropene	75	4.782	4.782	(0.784)	114679	5.07345	5.1	

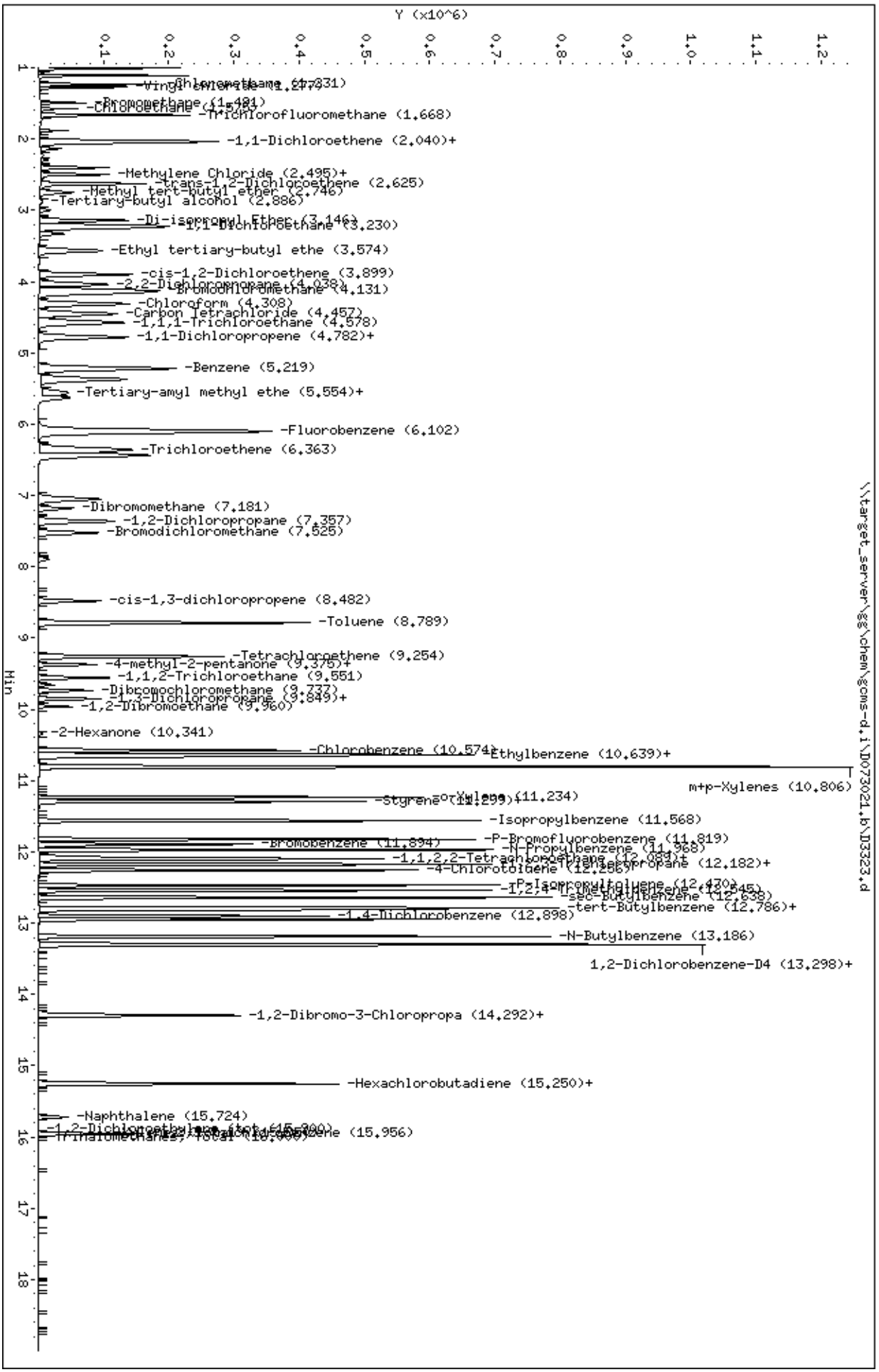
Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3323.d
Report Date: 07-Aug-2021 10:00

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
	25	2-Butanone	43	4.847	4.847	(0.794)	5729	4.89150	4.9	
	26	Benzene	78	5.219	5.219	(0.855)	347292	5.18898	5.2	
	27	Tertiary-amyl methyl ether	73	5.553	5.554	(0.910)	52686	3.73461	3.7	
	28	1,2-Dichloroethane	62	5.637	5.637	(0.924)	69546	5.18382	5.2	
*	29	Fluorobenzene	96	6.102	6.102	(1.000)	662270	10.0000		
	30	Trichloroethene	95	6.436	6.437	(1.055)	104307	5.25195	5.2	
	31	Dibromomethane	93	7.180	7.180	(1.177)	30612	4.78220	4.8	
	32	1,2-Dichloropropane	63	7.357	7.357	(1.206)	69154	4.96206	5.0	
	33	Bromodichloromethane	83	7.524	7.534	(1.233)	87617	4.79638	4.8	
	34	cis-1,3-dichloropropene	75	8.482	8.481	(1.390)	69088	4.05043	4.0	
	35	Toluene	92	8.788	8.789	(1.440)	213595	4.55877	4.6	
	36	Tetrachloroethene	164	9.262	9.263	(1.518)	76315	4.81487	4.8	
	37	4-methyl-2-pentanone	43	9.365	9.365	(1.535)	8516	3.44050	3.4(R)	
	38	trans-1,3-Dichloropropene	75	9.374	9.374	(1.536)	50256	4.10654	4.1	
	39	1,1,2-Trichloroethane	83	9.551	9.560	(1.565)	33879	5.03001	5.0	
	40	Dibromochloromethane	129	9.737	9.737	(1.596)	46054	3.79709	3.8	
	41	1,3-Dichloropropane	76	9.857	9.858	(1.615)	63986	5.10405	5.1	
	42	2-Chloroethylvinylether	63	9.857	9.858	(1.615)	6699	4.94837	4.9	
	43	1,2-Dibromoethane	107	9.960	9.960	(1.632)	34108	5.08368	5.1	
	44	2-Hexanone	43	10.341	10.341	(1.695)	4189	3.43436	3.4(R)	
	45	Chlorobenzene	112	10.573	10.574	(1.733)	220501	4.49421	4.5	
	46	Ethylbenzene	91	10.638	10.639	(1.743)	442685	4.96722	5.0	
	47	1,1,1,2-Tetrachloroethane	131	10.666	10.667	(1.748)	71346	4.91627	4.9	
	48	m+p-Xylenes	106	10.806	10.806	(1.771)	349672	10.9579	11.0	
	49	o-Xylene	106	11.233	11.234	(1.841)	147097	4.48551	4.5	
	50	Styrene	104	11.298	11.299	(1.852)	224527	4.63203	4.6	
	51	Bromoform	173	11.289	11.289	(1.850)	20299	4.21324	4.2	
	52	Isopropylbenzene	105	11.568	11.568	(1.896)	433994	4.82317	4.8	
$	53	P-Bromofluorobenzene	95	11.819	11.819	(1.937)	192561	9.99419	10	
	54	Bromobenzene	156	11.893	11.894	(1.949)	85217	4.98198	5.0	
	55	N-Propylbenzene	91	11.968	11.977	(1.961)	558638	5.38407	5.4	
	56	1,1,2,2-Tetrachloroethane	83	12.061	12.061	(1.977)	39519	5.06482	5.1	
	57	2-Chlorotoluene	91	12.098	12.098	(1.983)	303961	5.24779	5.2	
	58	1,2,3-Trichloropropane	75	12.163	12.163	(1.993)	31018	5.08862	5.1	
	59	1,3,5-Trimethylbenzene	105	12.182	12.182	(1.996)	367546	5.41146	5.4	
	60	4-Chlorotoluene	91	12.256	12.256	(2.009)	312204	5.33763	5.3	
	61	tert-Butylbenzene	119	12.786	12.786	(2.095)	413142	5.57970	5.6	
	62	1,2,4-Trimethylbenzene	105	12.544	12.544	(2.056)	367094	5.37055	5.4	
	63	sec-Butylbenzene	105	12.637	12.637	(2.071)	511838	5.49169	5.5	
	64	P-Isopropyltoluene	119	12.470	12.470	(2.044)	315059	5.26977	5.3	
	65	1,3-Dichlorobenzene	146	12.814	12.814	(2.100)	196955	5.17926	5.2	
	66	1,4-Dichlorobenzene	146	12.907	12.907	(2.115)	177814	5.11121	5.1	
	67	N-Butylbenzene	91	13.186	13.186	(2.161)	402357	5.06353	5.1	
$	68	1,2-Dichlorobenzene-D4	152	13.297	13.297	(2.179)	182748	10.0233	10.0	
	69	1,2-Dichlorobenzene	146	13.306	13.307	(2.181)	154036	5.06848	5.1	
	70	1,2-Dibromo-3-Chloropropane	157	14.245	14.255	(2.335)	3047	4.03855	4.0	
	71	1,3,5-Trichlorobenzene	180	14.292	14.292	(2.342)	116565	4.66798	4.7	
	72	Hexachlorobutadiene	225	15.249	15.250	(2.499)	72777	5.01541	5.0	
	73	1,2,4-Trichlorobenzene	180	15.259	15.259	(2.501)	69768	3.66741	3.7	
	74	Naphthalene	128	15.723	15.724	(2.577)	43449	2.59762	2.6(R)	
	75	1,2,3-Trichlorobenzene	180	15.956	15.956	(2.615)	51136	3.92031	3.9	
M	76	1,2-Dichloroethylene (total)	96				155079	9.53725	9.5	
M	77	Xylenes (total)	106				496769	15.4435	15.4	
M	78	Trihalomethanes, Total	100				329061	17.7212	17.7	

Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3323.d
Report Date: 07-Aug-2021 10:00

QC Flag Legend

R - Spike/Surrogate failed recovery limits.


Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3323.d
Date : 30-JUL-2021 09:07
Client ID:
Sample Info: WG303440-1,SD4724
Purge Volume: 25.0
Column phase: RTX-VMS
Instrument: gcms-d.i
Operator: JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-d.i\D073021.b\D3323.d
Y (x10^6)
Min
Chloromethane (1.831)
Vinyl chloride (1.977)
Bromomethane (1.491)
Chloroethane
Trichlorofluoromethane (1.668)
1,1-Dichloroethene (2.040)+
Methylene Chloride (2.495)+
trans-1,2-Dichloroethene (2.625)
Methyl tert-butyl ether (2.746)
Tertiary-butyl alcohol (2.886)
Di-isopropyl Ether (3.146)
1,1-Dichloroethane (3.230)
Ethyl tertiary-butyl ethe (3.574)
cis-1,2-Dichloroethene (3.899)
2,2-Dichloropropane (4.038)+
Bromochloromethane (4.131)
Chloroform (4.308)
Carbon Tetrachloride (4.457)
1,1,1-Trichloroethane (4.578)
1,1-Dichloropropene (4.782)+
Benzene (5.219)
Tertiary-amyl methyl ethe (5.554)+
Fluorobenzene (6.102)
Trichloroethene (6.363)
Dibromomethane (7.181)
1,2-Dichloropropane (7.357)
Bromodichloromethane (7.525)
cis-1,3-dichloropropene (8.482)
Toluene (8.789)
Tetrachloroethene (9.254)
4-methyl-2-pentanone (9.375)+
1,1,2-Trichloroethane (9.551)
Dibromochloromethane (9.737)
1,3-Dichloropropane (9.849)+
1,2-Dibromoethane (9.960)
2-Hexanone (10.341)
Chlorobenzene (10.574)
Ethylbenzene (10.639)+
m+p-Xylenes (10.806)
o-Xylene (11.234)
Styrene (11.299)+
Isopropylbenzene (11.568)
P-Bromofluorobenzene (11.819)
Bromobenzene (11.894)
N-Propylbenzene (11.968)
1,1,2,2-Tetrachloroethane (12.084)+
1,3,5-Trimethylbenzene (12.182)+
4-Chlorotoluene (12.256)
P-Isopropyltoluene (12.470)
1,2,4-Trimethylbenzene (12.545)
sec-Butylbenzene (12.638)
tert-Butylbenzene (12.786)+
1,4-Dichlorobenzene (12.898)
N-Butylbenzene (13.186)
1,2-Dichlorobenzene-D4 (13.298)+
1,2-Dibromo-3-Chloropropa (14.292)+
Hexachlorobutadiene (15.250)+
Naphthalene (15.724)
1,2-Dichloroethylbenzene (trans) (15.900)
1,2,3-Trichlorobenzene (15.956)
Trihalomethanes, Total (10.000)

Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3324.d
Report Date: 09-Aug-2021 07:22

Katahdin Analytical Services

EPA 524.2

Data file : \\target_server\gg\chem\gcms-d.i\D073021.b\D3324.d
Lab Smp Id: WG303440-5
Inj Date : 30-JUL-2021 09:46
Operator : JSS Inst ID: gcms-d.i
Smp Info : WG303440-5,SO4724
Misc Info : WG303440,WG303293-4,SO4724-2
Comment   :
Method   : \\target_server\gg\chem\gcms-d.i\D073021.b\D5A25(70)D.m
Meth Date : 07-Aug-2021 10:18 hgould Quant Type: ISTD
Cal Date : 29-JUL-2021 13:45 Cal File: D3314.d
Als bottle: 4 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: T7-O360

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	25.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.110	1.110	(0.182)	129418	5.54511	5.5	
2	Chloromethane	50	1.230	1.231	(0.202)	128787	4.60817	4.6	
3	Vinyl chloride	62	1.277	1.277	(0.209)	75841	4.95540	5.0	
4	Bromomethane	94	1.491	1.491	(0.244)	28169	4.61470	4.6	
5	Chloroethane	64	1.574	1.575	(0.258)	32625	6.54117	6.5(R)	
6	Trichlorofluoromethane	101	1.667	1.668	(0.273)	139182	4.95783	5.0	
7	1,1-Dichloroethene	96	2.021	2.021	(0.331)	55265	4.44527	4.4	
8	Carbon Disulfide	76	2.039	2.040	(0.334)	156799	4.58407	4.6	
9	Freon-113	151	2.058	2.057	(0.337)	40443	3.93639	3.9	
10	Methylene Chloride	84	2.495	2.495	(0.409)	52598	5.53940	5.5	
11	Acetone	43	2.550	2.551	(0.418)	4411	6.32415	6.3	
12	trans-1,2-Dichloroethene	96	2.634	2.635	(0.432)	63004	4.60408	4.6	
13	Methyl tert-butyl ether	73	2.755	2.746	(0.452)	67607	5.39579	5.4	
14	Tertiary-butyl alcohol	59	2.885	2.886	(0.473)	4279	23.1942	23.2	
15	Di-isopropyl Ether	45	3.145	3.146	(0.516)	136604	4.50672	4.5	
16	1,1-Dichloroethane	63	3.248	3.248	(0.532)	159597	4.91672	4.9	
17	Ethyl tertiary-butyl ether	59	3.564	3.564	(0.584)	89979	3.81503	3.8	
18	cis-1,2-Dichloroethene	96	3.898	3.908	(0.639)	88403	4.66607	4.7	
19	2,2-Dichloropropane	77	4.038	4.029	(0.662)	97742	4.91363	4.9	
20	Bromochloromethane	128	4.168	4.178	(0.683)	35894	5.12111	5.1	
21	Chloroform	83	4.317	4.308	(0.707)	171320	4.79970	4.8	
22	Carbon Tetrachloride	117	4.456	4.447	(0.730)	126964	4.49079	4.5	
23	1,1,1-Trichloroethane	97	4.568	4.577	(0.749)	142109	4.62376	4.6	

Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3324.d
Report Date: 09-Aug-2021 07:22

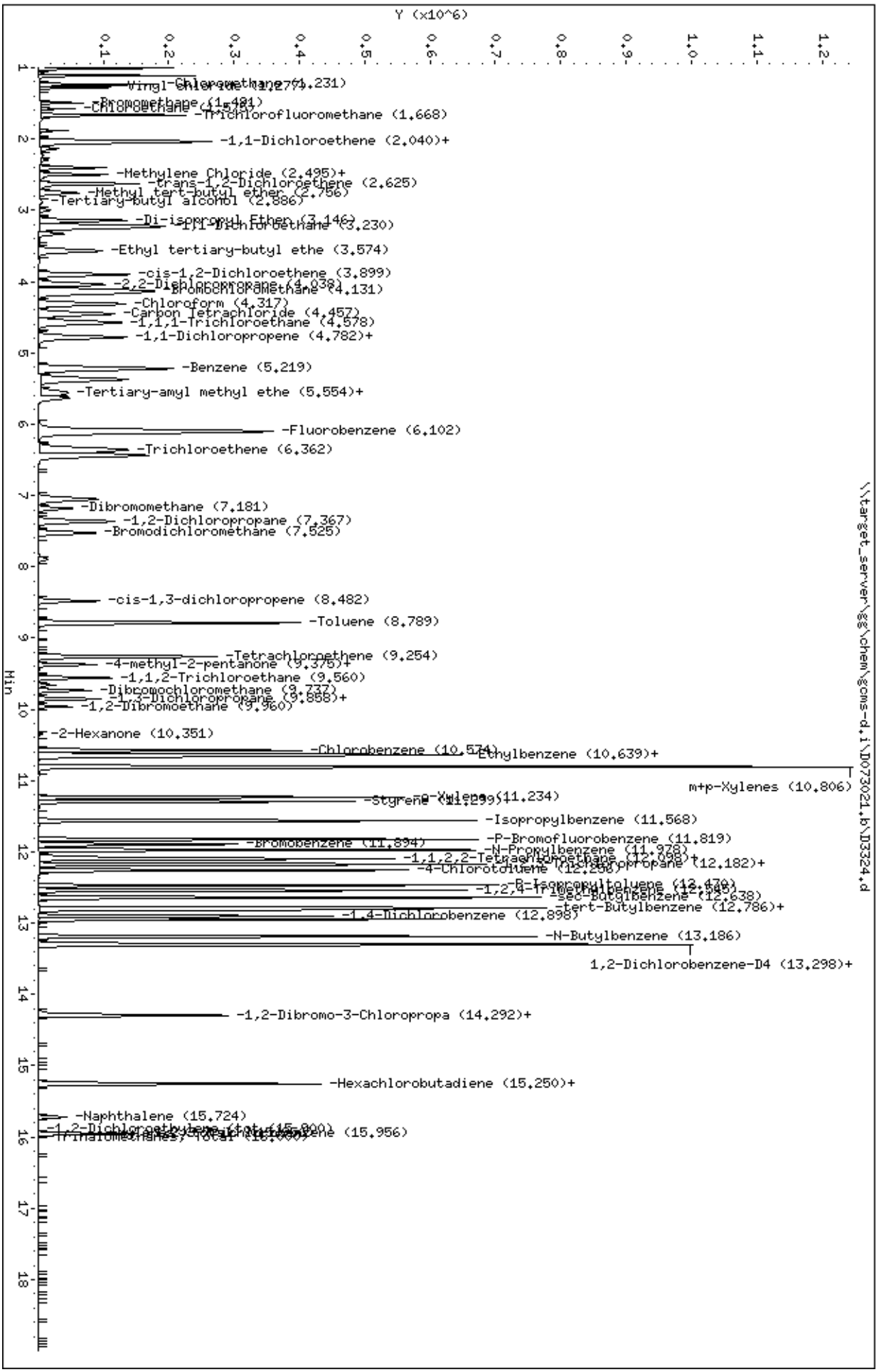
		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
	24	1,1-Dichloropropene	75	4.782	4.782	(0.784)	110538	4.88119	4.9	
	25	2-Butanone	43	4.847	4.847	(0.794)	5949	5.06993	5.1	
	26	Benzene	78	5.219	5.219	(0.855)	338541	5.04885	5.0	
	27	Tertiary-amyl methyl ether	73	5.563	5.554	(0.912)	51584	3.64972	3.6	
	28	1,2-Dichloroethane	62	5.637	5.637	(0.924)	69241	5.15152	5.2	
*	29	Fluorobenzene	96	6.102	6.102	(1.000)	663500	10.0000		
	30	Trichloroethene	95	6.436	6.437	(1.055)	102607	5.15677	5.2	
	31	Dibromomethane	93	7.180	7.180	(1.177)	30616	4.77396	4.8	
	32	1,2-Dichloropropane	63	7.366	7.357	(1.207)	68776	4.92579	4.9	
	33	Bromodichloromethane	83	7.524	7.534	(1.233)	84990	4.64395	4.6	
	34	cis-1,3-dichloropropene	75	8.482	8.481	(1.390)	67269	3.93756	3.9	
	35	Toluene	92	8.788	8.789	(1.440)	207250	4.41515	4.4	
	36	Tetrachloroethene	164	9.262	9.263	(1.518)	75121	4.73075	4.7	
	37	4-methyl-2-pentanone	43	9.365	9.365	(1.535)	8618	3.47497	3.5(R)	
	38	trans-1,3-Dichloropropene	75	9.374	9.374	(1.536)	48891	3.98876	4.0	
	39	1,1,2-Trichloroethane	83	9.560	9.560	(1.567)	33660	4.98823	5.0	
	40	Dibromochloromethane	129	9.737	9.737	(1.596)	45323	3.72989	3.7	
	41	1,3-Dichloropropane	76	9.857	9.858	(1.615)	64052	5.09984	5.1	
	42	2-Chloroethylvinylether	63	9.857	9.858	(1.615)	6711	4.94804	4.9	
	43	1,2-Dibromoethane	107	9.960	9.960	(1.632)	34253	5.09583	5.1	
	44	2-Hexanone	43	10.341	10.341	(1.695)	4187	3.42645	3.4(R)	
	45	Chlorobenzene	112	10.573	10.574	(1.733)	215099	4.37598	4.4	
	46	Ethylbenzene	91	10.638	10.639	(1.743)	429445	4.80973	4.8	
	47	1,1,1,2-Tetrachloroethane	131	10.666	10.667	(1.748)	70256	4.83219	4.8	
	48	m+p-Xylenes	106	10.806	10.806	(1.771)	342543	10.7146	10.7	
	49	o-Xylene	106	11.233	11.234	(1.841)	144984	4.41288	4.4	
	50	Styrene	104	11.298	11.299	(1.852)	214945	4.42613	4.4	
	51	Bromoform	173	11.289	11.289	(1.850)	20005	4.14526	4.1	
	52	Isopropylbenzene	105	11.568	11.568	(1.896)	421894	4.68001	4.7	
$	53	P-Bromofluorobenzene	95	11.819	11.819	(1.937)	190447	9.86615	9.9	
	54	Bromobenzene	156	11.893	11.894	(1.949)	83926	4.89741	4.9	
	55	N-Propylbenzene	91	11.977	11.977	(1.963)	540222	5.19693	5.2	
	56	1,1,2,2-Tetrachloroethane	83	12.061	12.061	(1.977)	40078	5.12694	5.1	
	57	2-Chlorotoluene	91	12.098	12.098	(1.983)	298108	5.13720	5.1	
	58	1,2,3-Trichloropropane	75	12.163	12.163	(1.993)	30998	5.07591	5.1	
	59	1,3,5-Trimethylbenzene	105	12.182	12.182	(1.996)	358823	5.27324	5.3	
	60	4-Chlorotoluene	91	12.256	12.256	(2.009)	305887	5.21993	5.2	
	61	tert-Butylbenzene	119	12.786	12.786	(2.095)	393550	5.30525	5.3	
	62	1,2,4-Trimethylbenzene	105	12.544	12.544	(2.056)	359215	5.24553	5.2	
	63	sec-Butylbenzene	105	12.637	12.637	(2.071)	499826	5.35287	5.4	
	64	P-Isopropyltoluene	119	12.470	12.470	(2.044)	307774	5.13838	5.1	
	65	1,3-Dichlorobenzene	146	12.814	12.814	(2.100)	194741	5.11154	5.1	
	66	1,4-Dichlorobenzene	146	12.907	12.907	(2.115)	175775	5.04323	5.0	
	67	N-Butylbenzene	91	13.186	13.186	(2.161)	388023	4.87409	4.9	
$	68	1,2-Dichlorobenzene-D4	152	13.297	13.297	(2.179)	182347	9.98278	10	
	69	1,2-Dichlorobenzene	146	13.306	13.307	(2.181)	151700	4.98236	5.0	
	70	1,2-Dibromo-3-Chloropropane	157	14.255	14.255	(2.336)	3232	4.27250	4.3	
	71	1,3,5-Trichlorobenzene	180	14.292	14.292	(2.342)	113029	4.51798	4.5	
	72	Hexachlorobutadiene	225	15.249	15.250	(2.499)	68524	4.71356	4.7	
	73	1,2,4-Trichlorobenzene	180	15.259	15.259	(2.501)	67253	3.52865	3.5	
	74	Naphthalene	128	15.723	15.724	(2.577)	40276	2.40463	2.4(R)	
	75	1,2,3-Trichlorobenzene	180	15.956	15.956	(2.615)	47572	3.64032	3.6	
M	76	1,2-Dichloroethylene (total)	96				151407	9.27015	9.3	
M	77	Xylenes (total)	106				487527	15.1275	15.1	

Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3324.d
Report Date: 09-Aug-2021 07:22

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
M 78 Trihalomethanes, Total	100				321638	17.3188	17.3	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.


Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3324.d
Date : 30-JUL-2021 09:46
Client ID:
Sample Info: WG303440-5,SD4724
Purge Volume: 25.0
Column phase: RTX-VMS
Instrument: gcms-d.i
Operator: JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-d.i\D073021.b\D3324.d
Y (x10^6)
Min
Vinyl Chloride (1.231)
Bromomethane (1.481)
Chloroethane
Trichlorofluoromethane (1.668)
1,1-Dichloroethene (2.040)+
Methylene Chloride (2.495)+
trans-1,2-Dichloroethene (2.625)
Methyl tert-butyl ether (2.756)
Tertiary-butyl alcohol (2.886)
Di-isopropyl Ether (3.146)
1,1-Dichloroethane (3.230)
Ethyl tertiary-butyl ethe (3.574)
cis-1,2-Dichloroethene (3.899)
2,2-Dichloropropane (4.038)
Bromochloromethane (4.131)
Chloroform (4.317)
Carbon Tetrachloride (4.457)
1,1,1-Trichloroethane (4.578)
1,1-Dichloropropene (4.782)+
Benzene (5.219)
Tertiary-amyl methyl ethe (5.554)+
Fluorobenzene (6.102)
Trichloroethene (6.362)
Dibromomethane (7.181)
1,2-Dichloropropane (7.367)
Bromodichloromethane (7.525)
cis-1,3-dichloropropene (8.482)
Toluene (8.789)
Tetrachloroethene (9.254)
4-methyl-2-pentanone (9.375)+
1,1,2-Trichloroethane (9.560)
Dibromochloromethane (9.737)
1,3-Dichloropropane (9.858)+
1,2-Dibromoethane (9.960)
2-Hexanone (10.351)
Chlorobenzene (10.574)
Ethylbenzene (10.639)+
m+p-Xylenes (10.806)
o-Xylene (11.234)
Styrene (11.299)
Isopropylbenzene (11.568)
P-Bromofluorobenzene (11.819)
Bromobenzene (11.894)
N-Propylbenzene (11.978)
1,1,2,2-Tetrachloroethane (12.098)+
1,2,3-Trichloropropane (12.182)+
4-Chlorotoluene (12.236)
n-Isopropyltoluene (12.470)
1,2,4-Trimethylbenzene (12.545)
sec-Butylbenzene (12.638)
tert-Butylbenzene (12.786)+
1,4-Dichlorobenzene (12.898)
N-Butylbenzene (13.186)
1,2-Dichlorobenzene-D4 (13.298)+
1,2-Dibromo-3-Chloropropa (14.292)+
Hexachlorobutadiene (15.250)+
Naphthalene (15.724)
1,2-Dichlorotetrafluoroethane (Ref) (15.900)
Trihalomethanes, Total (16.000)
1,2,3-Trichlorobenzene (15.956)

Katahdin
ANALYTICAL SERVICES

MS/MSD Recovery Report

MS ID: WG303440-6
MSD ID: WG303440-7
Sample ID: SO4724-2
Client ID: DW-01-INF-SUMMER2021
SDG: SO4724
MS File ID: D3334.D

Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440
Report Date: 13-AUG-21
MSD File ID: D3335.d

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
Dichlorodifluoromethane	5.00	5.00	ug/L	UM0.50	6.60	6.50	132.*	130.	2	20	70-130
Chloromethane	5.00	5.00	ug/L	J0.096	5.40	5.40	106.	106.	0	20	70-130
Vinyl Chloride	5.00	5.00	ug/L	U0.50	6.10	6.10	122.	122.	0	20	70-130
Bromomethane	5.00	5.00	ug/L	U0.50	5.60	5.40	112.	108.	4	20	70-130
Chloroethane	5.00	5.00	ug/L	ULMM0.50	8.60	8.10	172.*	162.*	6	20	70-130
Trichlorofluoromethane	5.00	5.00	ug/L	U0.25	6.40	6.20	128.	124.	3	20	70-130
1,1-Dichloroethene	5.00	5.00	ug/L	U0.25	5.70	5.60	114.	112.	2	20	70-130
Carbon Disulfide	5.00	5.00	ug/L	U0.50	5.70	5.50	114.	110.	4	20	70-130
Methylene Chloride	5.00	5.00	ug/L	UMM1.2	6.80	6.70	136.*	134.*	1	20	70-130
Acetone	5.00	5.00	ug/L	ULM2.5	6.50	7.30	130.	146.*	12	20	70-130
trans-1,2-Dichloroethene	5.00	5.00	ug/L	U0.25	5.90	5.60	118.	112.	5	20	70-130
1,1-Dichloroethane	5.00	5.00	ug/L	U0.25	5.80	5.80	116.	116.	0	20	70-130
cis-1,2-Dichloroethene	5.00	5.00	ug/L	0.74	6.10	6.20	107.	109.	2	20	70-130
2,2-Dichloropropane	5.00	5.00	ug/L	U0.25	4.90	5.00	98.0	100.	2	20	70-130
Chloroform	5.00	5.00	ug/L	J0.053	5.40	5.20	107.	103.	4	20	70-130
Bromochloromethane	5.00	5.00	ug/L	U0.25	5.80	5.80	116.	116.	0	20	70-130
1,1,1-Trichloroethane	5.00	5.00	ug/L	U0.25	5.30	5.30	106.	106.	0	20	70-130
2-Butanone	5.00	5.00	ug/L	U2.5	5.30	5.80	106.	116.	9	20	70-130
1,2-Dichloroethane	5.00	5.00	ug/L	U0.25	5.90	5.90	118.	118.	0	20	70-130
1,1-Dichloropropene	5.00	5.00	ug/L	U0.25	5.50	5.60	110.	112.	2	20	70-130
Carbon Tetrachloride	5.00	5.00	ug/L	U0.25	5.30	5.10	106.	102.	4	20	70-130
Benzene	5.00	5.00	ug/L	U0.25	5.70	5.80	114.	116.	2	20	70-130
1,2-Dichloropropane	5.00	5.00	ug/L	U0.25	5.50	5.50	110.	110.	0	20	70-130
Trichloroethene	5.00	5.00	ug/L	2.9	9.20	9.00	126.	122.	2	20	70-130
Dibromomethane	5.00	5.00	ug/L	U0.25	5.50	5.30	110.	106.	4	20	70-130
Bromodichloromethane	5.00	5.00	ug/L	U0.25	5.40	5.40	108.	108.	0	20	70-130
cis-1,3-Dichloropropene	5.00	5.00	ug/L	U0.25	4.20	4.30	84.0	86.0	2	20	70-130
Toluene	5.00	5.00	ug/L	U0.25	5.10	5.00	102.	100.	2	20	70-130
trans-1,3-Dichloropropene	5.00	5.00	ug/L	U0.25	4.30	4.40	86.0	88.0	2	20	70-130
1,1,2-Trichloroethane	5.00	5.00	ug/L	U0.25	5.70	5.70	114.	114.	0	20	70-130
1,3-Dichloropropane	5.00	5.00	ug/L	U0.25	5.70	5.70	114.	114.	0	20	70-130
Dibromochloromethane	5.00	5.00	ug/L	U0.25	4.40	4.30	88.0	86.0	2	20	70-130
Tetrachloroethene	5.00	5.00	ug/L	U0.25	5.40	5.30	108.	106.	2	20	70-130
4-Methyl-2-Pentanone	5.00	5.00	ug/L	ULM2.5	3.40	3.90	68.0*	78.0	14	20	70-130
1,2-Dibromoethane	5.00	5.00	ug/L	U0.25	5.70	5.70	114.	114.	0	20	70-130

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P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029
http://www.katahdinlab.com

Katahdin
ANALYTICAL SERVICES

MS/MSD Recovery Report

MS ID: WG303440-6
MSD ID: WG303440-7
Sample ID: SO4724-2
Client ID: DW-01-INF-SUMMER2021
SDG: SO4724
MS File ID: D3334.D

Extract Date: 30-JUL-21
Extracted By: JSS
Extraction Method: EPA 524.2
Lab Prep Batch: WG303440
Report Date: 13-AUG-21
MSD File ID: D3335.d

Analysis Date: 30-JUL-21
Analyst: JSS
Analysis Method: EPA 524.2
Matrix: AQ
% Solids: NA

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
2-Hexanone	5.00	5.00	ug/L	ULL2.5	3.50	3.70	70.0	74.0	6	20	70-130
Chlorobenzene	5.00	5.00	ug/L	U0.25	4.90	5.00	98.0	100.	2	20	70-130
1,1,1,2-Tetrachloroethane	5.00	5.00	ug/L	U0.25	5.70	5.60	114.	112.	2	20	70-130
Ethylbenzene	5.00	5.00	ug/L	U0.25	5.70	5.60	114.	112.	2	20	70-130
m+p-Xylenes	10.0	10.0	ug/L	U0.25	12.8	12.3	128.	123.	4	20	70-130
Bromoform	5.00	5.00	ug/L	U0.25	4.80	4.70	96.0	94.0	2	20	70-130
o-Xylene	5.00	5.00	ug/L	U0.25	5.10	5.00	102.	100.	2	20	70-130
Styrene	5.00	5.00	ug/L	U0.25	5.20	5.10	104.	102.	2	20	70-130
1,1,2,2-Tetrachloroethane	5.00	5.00	ug/L	U0.25	5.80	5.60	116.	112.	4	20	70-130
1,2,3-Trichloropropane	5.00	5.00	ug/L	U0.25	5.90	5.70	118.	114.	3	20	70-130
Isopropylbenzene	5.00	5.00	ug/L	U0.25	5.60	5.40	112.	108.	4	20	70-130
Bromobenzene	5.00	5.00	ug/L	U0.25	5.70	5.60	114.	112.	2	20	70-130
2-Chlorotoluene	5.00	5.00	ug/L	U0.25	6.00	5.90	120.	118.	2	20	70-130
N-Propylbenzene	5.00	5.00	ug/L	U0.25	6.20	6.00	124.	120.	3	20	70-130
4-Chlorotoluene	5.00	5.00	ug/L	U0.25	6.10	5.90	122.	118.	3	20	70-130
1,3,5-Trimethylbenzene	5.00	5.00	ug/L	U0.25	6.20	6.00	124.	120.	3	20	70-130
1,2,4-Trichlorobenzene	5.00	5.00	ug/L	U0.25	3.70	3.80	74.0	76.0	3	20	70-130
sec-Butylbenzene	5.00	5.00	ug/L	U0.25	6.40	6.10	128.	122.	5	20	70-130
1,3-Dichlorobenzene	5.00	5.00	ug/L	U0.25	6.00	5.80	120.	116.	3	20	70-130
p-Isopropyltoluene	5.00	5.00	ug/L	U0.25	6.10	6.00	122.	120.	2	20	70-130
1,4-Dichlorobenzene	5.00	5.00	ug/L	U0.25	5.80	5.70	116.	114.	2	20	70-130
1,2-Dichlorobenzene	5.00	5.00	ug/L	U0.25	5.80	5.70	116.	114.	2	20	70-130
N-Butylbenzene	5.00	5.00	ug/L	U0.25	5.80	5.50	116.	110.	5	20	70-130
1,2-Dibromo-3-Chloropropane	5.00	5.00	ug/L	U0.25	4.70	4.90	94.0	98.0	4	20	70-130
1,2,4-Trimethylbenzene	5.00	5.00	ug/L	U0.25	6.10	5.90	122.	118.	3	20	70-130
Naphthalene	5.00	5.00	ug/L	ULLMM0.50	2.40	2.60	48.0*	52.0*	8	20	70-130
Hexachlorobutadiene	5.00	5.00	ug/L	U0.25	5.50	5.30	110.	106.	4	20	70-130
1,2,3-Trichlorobenzene	5.00	5.00	ug/L	U0.50	3.70	4.00	74.0	80.0	8	20	70-130
Methyl tert-butyl Ether	5.00	5.00	ug/L	U0.25	5.00	5.10	100.	102.	2	20	70-130
p-Bromofluorobenzene							102.	101.			60-121
1,2-Dichlorobenzene-D4							106.	103.			51-133

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
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Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3334.d
Report Date: 07-Aug-2021 10:54

Katahdin Analytical Services

EPA 524.2

Data file : \\target_server\gg\chem\gcms-d.i\D073021.b\D3334.d
Lab Smp Id: WG303440-6
Inj Date : 30-JUL-2021 16:17
Operator : JSS Inst ID: gcms-d.i
Smp Info : WG303440-6,SO4724
Misc Info : WG303440,WG303293-4,SO4724-2
Comment :
Method : \\target_server\gg\chem\gcms-d.i\D073021.b\D5A25(70)D.m
Meth Date : 07-Aug-2021 10:18 hgould Quant Type: ISTD
Cal Date : 29-JUL-2021 13:45 Cal File: D3314.d
Als bottle: 14 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: ORGANICS2

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	25.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.109	1.110	(0.182)	137224	6.60704	6.6	
2	Chloromethane	50	1.230	1.231	(0.202)	135734	5.45766	5.4	
3	Vinyl chloride	62	1.277	1.277	(0.209)	83061	6.09864	6.1	
4	Bromomethane	94	1.491	1.491	(0.244)	30220	5.56325	5.6	
5	Chloroethane	64	1.574	1.575	(0.258)	38124	8.59642	8.6(R)	
6	Trichlorofluoromethane	101	1.667	1.668	(0.273)	159670	6.39136	6.4	
7	1,1-Dichloroethene	96	2.020	2.021	(0.331)	62679	5.66541	5.7	
8	Carbon Disulfide	76	2.039	2.040	(0.334)	174303	5.72631	5.7	
9	Freon-113	151	2.058	2.057	(0.337)	49676	5.43329	5.4	
10	Methylene Chloride	84	2.495	2.495	(0.409)	57238	6.77391	6.8	
11	Acetone	43	2.550	2.551	(0.418)	4014	6.46702	6.5	
12	trans-1,2-Dichloroethene	96	2.634	2.635	(0.432)	72367	5.94260	5.9	
13	Methyl tert-butyl ether	73	2.746	2.746	(0.450)	56006	5.02296	5.0	
14	Tertiary-butyl alcohol	59	2.876	2.886	(0.471)	3104	18.9069	18.9	
15	Di-isopropyl Ether	45	3.145	3.146	(0.516)	124038	4.59847	4.6	
16	1,1-Dichloroethane	63	3.248	3.248	(0.532)	167319	5.79238	5.8	
17	Ethyl tertiary-butyl ether	59	3.564	3.564	(0.584)	74817	3.56467	3.6	
18	cis-1,2-Dichloroethene	96	3.908	3.908	(0.640)	102399	6.07354	6.1	
19	2,2-Dichloropropane	77	4.038	4.029	(0.662)	86897	4.90893	4.9	
20	Bromochloromethane	128	4.168	4.178	(0.683)	36524	5.85575	5.8	
21	Chloroform	83	4.317	4.308	(0.707)	170107	5.35537	5.4	
22	Carbon Tetrachloride	117	4.456	4.447	(0.730)	132419	5.26324	5.3	
23	1,1,1-Trichloroethane	97	4.577	4.577	(0.750)	144558	5.28540	5.3	

Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3334.d
Report Date: 07-Aug-2021 10:54

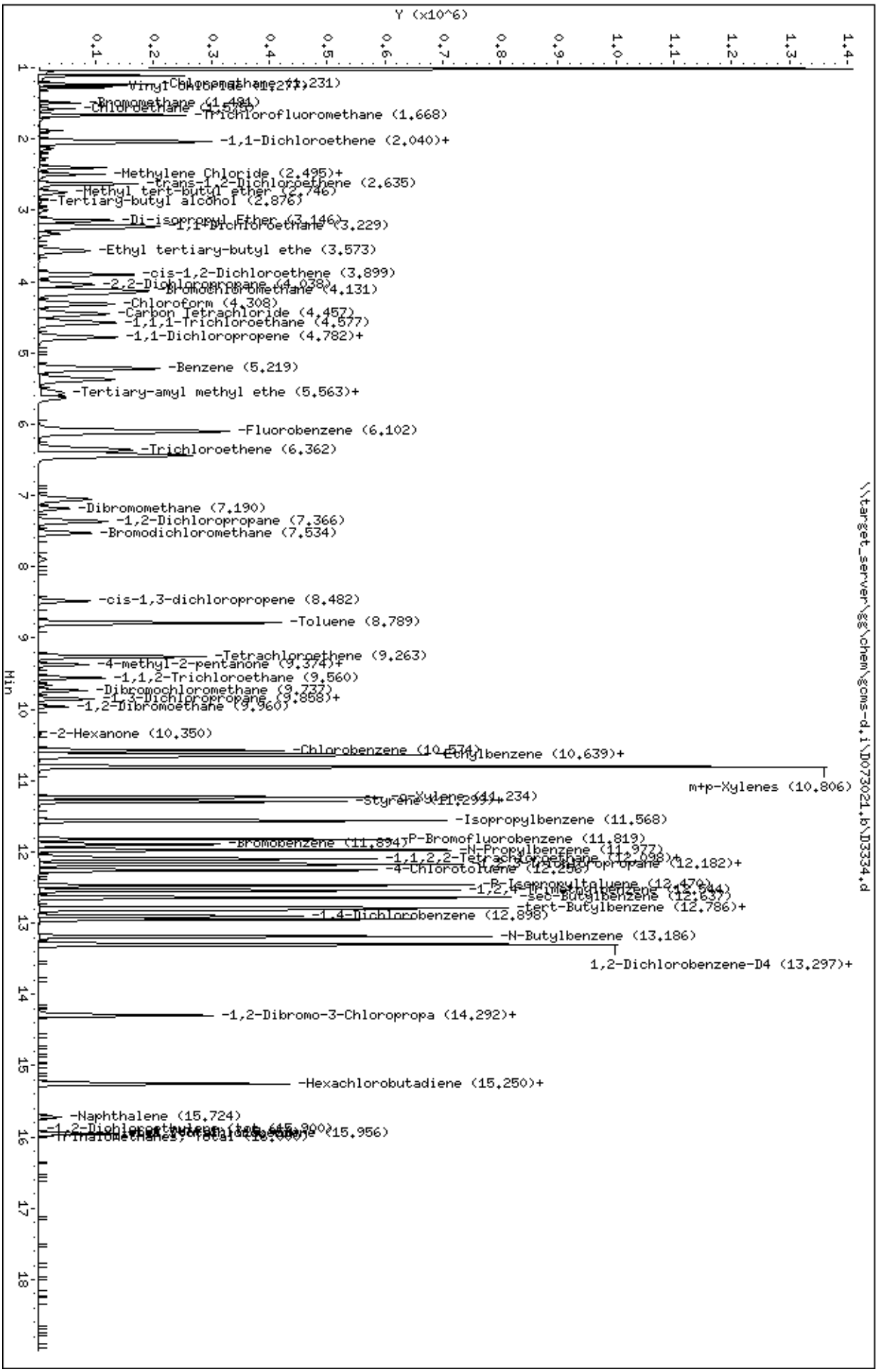
			QUANT SIG					CONCENTRATIONS		
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/L)	FINAL (ug/l)	REVIEW CODE
	24	1,1-Dichloropropene	75	4.781	4.782	(0.784)	110796	5.49793	5.5	
	25	2-Butanone	43	4.856	4.847	(0.796)	5516	5.28255	5.3	
	26	Benzene	78	5.218	5.219	(0.855)	340482	5.70607	5.7	
	27	Tertiary-amyl methyl ether	73	5.553	5.554	(0.910)	43494	3.45808	3.4	
	28	1,2-Dichloroethane	62	5.637	5.637	(0.924)	70610	5.90337	5.9	
*	29	Fluorobenzene	96	6.102	6.102	(1.000)	590445	10.0000		
	30	Trichloroethene	95	6.436	6.437	(1.055)	163334	9.22442	9.2(R)	
	31	Dibromomethane	93	7.189	7.180	(1.178)	31386	5.49956	5.5	
	32	1,2-Dichloropropane	63	7.366	7.357	(1.207)	68814	5.53831	5.5	
	33	Bromodichloromethane	83	7.533	7.534	(1.235)	88306	5.42214	5.4	
	34	cis-1,3-dichloropropene	75	8.481	8.481	(1.390)	64053	4.21041	4.2	
	35	Toluene	92	8.788	8.789	(1.440)	213899	5.12060	5.1	
	36	Tetrachloroethene	164	9.262	9.263	(1.518)	76229	5.39449	5.4	
	37	4-methyl-2-pentanone	43	9.365	9.365	(1.535)	7635	3.45964	3.4	
	38	trans-1,3-Dichloropropene	75	9.374	9.374	(1.536)	47415	4.34314	4.3	
	39	1,1,2-Trichloroethane	83	9.560	9.560	(1.567)	34472	5.74064	5.7	
	40	Dibromochloromethane	129	9.736	9.737	(1.596)	47689	4.41019	4.4	
	41	1,3-Dichloropropane	76	9.857	9.858	(1.615)	63402	5.67268	5.7	
	42	2-Chloroethylvinylether	63	9.857	9.858	(1.615)	6829	5.65803	5.6	
	43	1,2-Dibromoethane	107	9.960	9.960	(1.632)	34164	5.71145	5.7	
	44	2-Hexanone	43	10.341	10.341	(1.695)	3780	3.47555	3.5	
	45	Chlorobenzene	112	10.573	10.574	(1.733)	216276	4.94432	4.9	
	46	Ethylbenzene	91	10.638	10.639	(1.743)	454928	5.72555	5.7	
	47	1,1,1,2-Tetrachloroethane	131	10.666	10.667	(1.748)	73556	5.68512	5.7	
	48	m+p-Xylenes	106	10.806	10.806	(1.771)	364616	12.8162	12.8	
	49	o-Xylene	106	11.233	11.234	(1.841)	148869	5.09176	5.1	
	50	Styrene	104	11.298	11.299	(1.852)	226297	5.23645	5.2	
	51	Bromoform	173	11.289	11.289	(1.850)	20735	4.81963	4.8	
	52	Isopropylbenzene	105	11.568	11.568	(1.896)	446874	5.57044	5.6	
$	53	P-Bromofluorobenzene	95	11.819	11.819	(1.937)	174498	10.1584	10.2	
	54	Bromobenzene	156	11.902	11.894	(1.951)	87659	5.74815	5.7	
	55	N-Propylbenzene	91	11.977	11.977	(1.963)	577601	6.24402	6.2	
	56	1,1,2,2-Tetrachloroethane	83	12.061	12.061	(1.977)	40341	5.79910	5.8	
	57	2-Chlorotoluene	91	12.098	12.098	(1.983)	312667	6.05475	6.0	
	58	1,2,3-Trichloropropane	75	12.163	12.163	(1.993)	32053	5.89808	5.9	
	59	1,3,5-Trimethylbenzene	105	12.181	12.182	(1.996)	378401	6.24900	6.2	
	60	4-Chlorotoluene	91	12.256	12.256	(2.009)	319291	6.12283	6.1	
	61	tert-Butylbenzene	119	12.786	12.786	(2.095)	424264	6.42693	6.4	
	62	1,2,4-Trimethylbenzene	105	12.544	12.544	(2.056)	374156	6.13973	6.1	
	63	sec-Butylbenzene	105	12.637	12.637	(2.071)	528421	6.35930	6.4	
	64	P-Isopropyltoluene	119	12.470	12.470	(2.044)	326372	6.12306	6.1	
	65	1,3-Dichlorobenzene	146	12.814	12.814	(2.100)	203453	6.00095	6.0	
	66	1,4-Dichlorobenzene	146	12.906	12.907	(2.115)	180536	5.82072	5.8	
	67	N-Butylbenzene	91	13.185	13.186	(2.161)	410034	5.78785	5.8	
$	68	1,2-Dichlorobenzene-D4	152	13.297	13.297	(2.179)	171507	10.5511	10.6	
	69	1,2-Dichlorobenzene	146	13.306	13.307	(2.181)	157501	5.81292	5.8	
	70	1,2-Dibromo-3-Chloropropane	157	14.254	14.255	(2.336)	3184	4.72274	4.7	
	71	1,3,5-Trichlorobenzene	180	14.292	14.292	(2.342)	113232	5.08610	5.1	
	72	Hexachlorobutadiene	225	15.249	15.250	(2.499)	70842	5.47594	5.5	
	73	1,2,4-Trichlorobenzene	180	15.258	15.259	(2.501)	63546	3.74668	3.7	
	74	Naphthalene	128	15.723	15.724	(2.577)	35321	2.36992	2.4(R)	
	75	1,2,3-Trichlorobenzene	180	15.956	15.956	(2.615)	43581	3.74755	3.7	
M	76	1,2-Dichloroethylene (total)	96				174766	12.0161	12.0	
M	77	Xylenes (total)	106				513485	17.9080	17.9	

Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3334.d
Report Date: 07-Aug-2021 10:54

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/l)	REVIEW CODE
M 78 Trihalomethanes, Total	100				326837	20.0073	20.0	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.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Date : 30-JUL-2021 16:17
Client ID:
Sample Info: WG303440-6,SD4724
Purge Volume: 25.0
Column phase: RTX-VMS
Instrument: gcms-d.i
Operator: JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-d.i\D073021.b\D3334.d
Y (x10^6)
Min
Chloromethane (1.231)
Vinyl Chloride (1.277)
Bromomethane (1.491)
Chloroethane (1.576)
Trichlorofluoromethane (1.668)
1,1-Dichloroethene (2.040)+
Methylene Chloride (2.495)+
trans-1,2-Dichloroethene (2.635)
Methyl tert-butyl ether (2.746)
Tertiary-butyl alcohol (2.876)
Di-isopropyl Ether (3.146)
1,1-Dichloroethane (3.229)
Ethyl tertiary-butyl ethe (3.573)
cis-1,2-Dichloroethene (3.899)
2,2-Dichloropropane (4.038)
Bromochloromethane (4.131)
Chloroform (4.308)
Carbon Tetrachloride (4.457)
1,1,1-Trichloroethane (4.577)
1,1-Dichloropropene (4.782)+
Benzene (5.219)
Tertiary-amyl methyl ethe (5.563)+
Fluorobenzene (6.102)
Trichloroethene (6.362)
Dibromomethane (7.190)
1,2-Dichloropropane (7.366)
Bromodichloromethane (7.534)
cis-1,3-dichloropropene (8.482)
Toluene (8.789)
Tetrachloroethene (9.263)
4-methyl-2-pentanone (9.374)+
1,1,2-Trichloroethane (9.560)
Dibromochloromethane (9.727)
1,3-Dichloropropane (9.868)+
1,2-Dibromoethane (9.960)
2-Hexanone (10.350)
Chlorobenzene (10.574)
Ethylbenzene (10.639)+
m+p-Xylenes (10.806)
o-Xylene (11.234)
Styrene (11.299)+
Isopropylbenzene (11.568)
Bromobenzene (11.894)
P-Bromofluorobenzene (11.819)
N-Propylbenzene (11.977)
1,1,2,2-Tetrachloroethane (12.098)+
2-Chlorotoluene (12.156)
1,2,3-Trichloropropane (12.182)+
4-Chlorotoluene (12.256)
P-Isopropyltoluene (12.470)
1,2,4-Trimethylbenzene (12.544)
sec-Butylbenzene (12.637)
tert-Butylbenzene (12.786)+
1,3-Dichlorobenzene (12.898)
1,4-Dichlorobenzene (12.956)
N-Butylbenzene (13.186)
1,2-Dichlorobenzene-D4 (13.297)+
1,2-Dibromo-3-Chloropropa (14.292)+
Hexachlorobutadiene (15.250)+
Naphthalene (15.724)
1,2,3-Trichlorobenzene (15.900)

Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3335.d
Report Date: 09-Aug-2021 07:18

Katahdin Analytical Services

EPA 524.2

Data file : \\target_server\gg\chem\gcms-d.i\D073021.b\D3335.d
Lab Smp Id: WG303440-7
Inj Date : 30-JUL-2021 16:56
Operator : JSS Inst ID: gcms-d.i
Smp Info : WG303440-7,SO4724
Misc Info : WG303440,WG303293-4,SO4724-2
Comment   :
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Meth Date : 07-Aug-2021 10:18 hgould Quant Type: ISTD
Cal Date : 29-JUL-2021 13:45 Cal File: D3314.d
Als bottle: 15 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.12
Processing Host: ORGANICS2

Concentration Formula: Amt * DF * 25/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	25.000	sample purged
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
1	Dichlorodifluoromethane	85	1.110	1.110	(0.182)	142728	6.50535	6.5	
2	Chloromethane	50	1.230	1.231	(0.202)	141974	5.40396	5.4	
3	Vinyl chloride	62	1.277	1.277	(0.209)	87967	6.11421	6.1	
4	Bromomethane	94	1.491	1.491	(0.244)	31048	5.41069	5.4	
5	Chloroethane	64	1.574	1.575	(0.258)	38062	8.12296	8.1(R)	
6	Trichlorofluoromethane	101	1.667	1.668	(0.273)	162719	6.16586	6.2	
7	1,1-Dichloroethene	96	2.021	2.021	(0.331)	65083	5.56880	5.6	
8	Carbon Disulfide	76	2.039	2.040	(0.334)	175952	5.47203	5.5	
9	Freon-113	151	2.058	2.057	(0.337)	50619	5.24100	5.2	
10	Methylene Chloride	84	2.495	2.495	(0.409)	59471	6.66262	6.7	
11	Acetone	43	2.551	2.551	(0.418)	4804	7.32680	7.3	
12	trans-1,2-Dichloroethene	96	2.634	2.635	(0.432)	72800	5.65916	5.6	
13	Methyl tert-butyl ether	73	2.746	2.746	(0.450)	60240	5.11440	5.1	
14	Tertiary-butyl alcohol	59	2.876	2.886	(0.471)	4045	23.3239	23.3	
15	Di-isopropyl Ether	45	3.145	3.146	(0.516)	141498	4.96585	5.0	
16	1,1-Dichloroethane	63	3.248	3.248	(0.532)	175488	5.75101	5.8	
17	Ethyl tertiary-butyl ether	59	3.564	3.564	(0.584)	87473	3.94528	3.9	
18	cis-1,2-Dichloroethene	96	3.908	3.908	(0.640)	110381	6.19762	6.2	
19	2,2-Dichloropropane	77	4.038	4.029	(0.662)	92727	4.95876	5.0	
20	Bromochloromethane	128	4.168	4.178	(0.683)	38038	5.77307	5.8	
21	Chloroform	83	4.317	4.308	(0.707)	174966	5.21442	5.2	
22	Carbon Tetrachloride	117	4.456	4.447	(0.730)	136760	5.14573	5.1	
23	1,1,1-Trichloroethane	97	4.577	4.577	(0.750)	153900	5.32671	5.3	

Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3335.d
Report Date: 09-Aug-2021 07:18

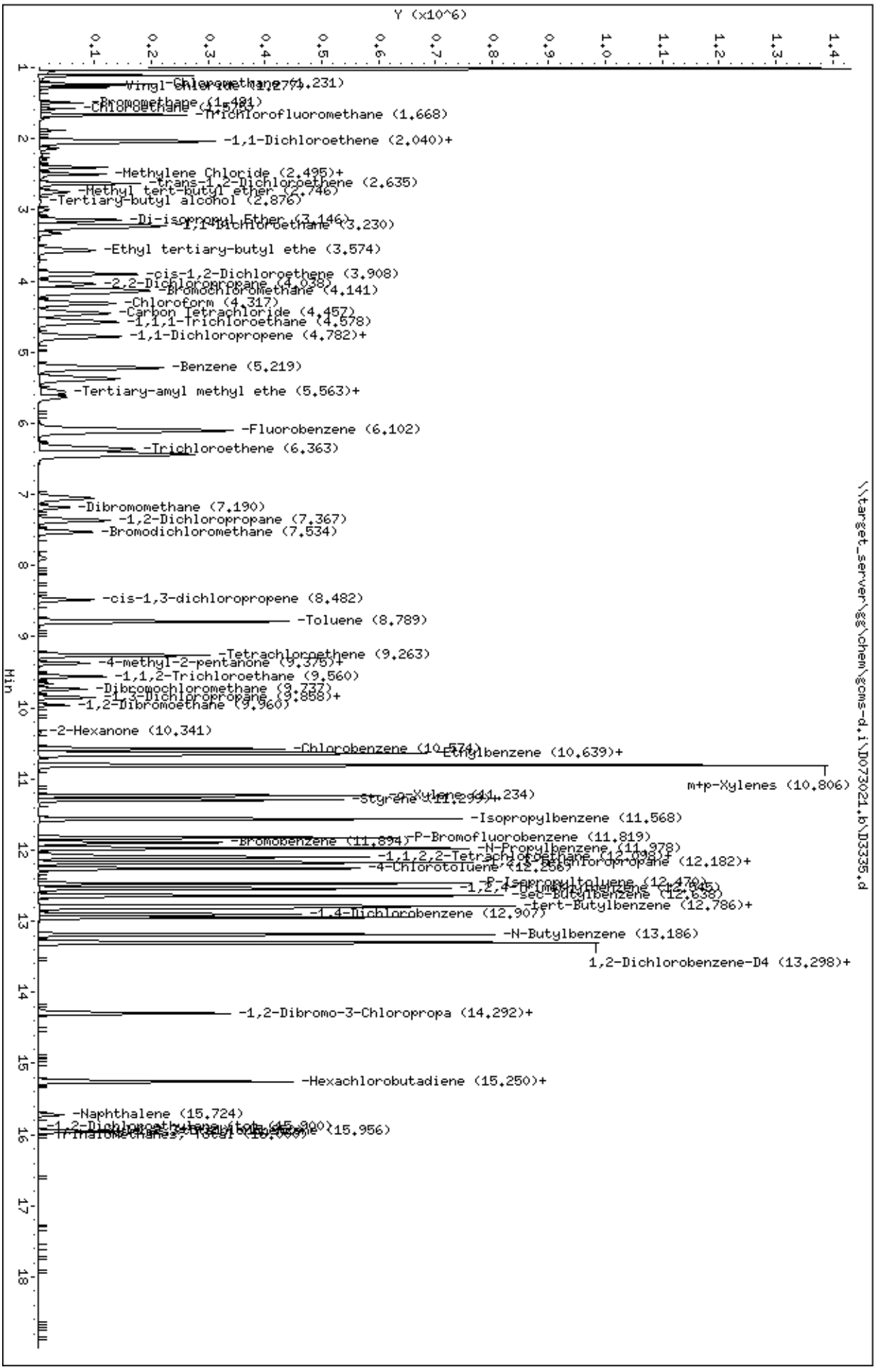
		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
	24	1,1-Dichloropropene	75	4.782	4.782	(0.784)	119511	5.61394	5.6	
	25	2-Butanone	43	4.847	4.847	(0.794)	6348	5.75494	5.8	
	26	Benzene	78	5.219	5.219	(0.855)	362543	5.75158	5.8	
	27	Tertiary-amyl methyl ether	73	5.563	5.554	(0.912)	51297	3.86085	3.9	
	28	1,2-Dichloroethane	62	5.637	5.637	(0.924)	74608	5.90478	5.9	
*	29	Fluorobenzene	96	6.102	6.102	(1.000)	623727	10.0000		
	30	Trichloroethene	95	6.436	6.437	(1.055)	168837	9.02641	9.0(R)	
	31	Dibromomethane	93	7.189	7.180	(1.178)	32002	5.30828	5.3	
	32	1,2-Dichloropropane	63	7.366	7.357	(1.207)	72353	5.51242	5.5	
	33	Bromodichloromethane	83	7.524	7.534	(1.233)	92295	5.36468	5.4	
	34	cis-1,3-dichloropropene	75	8.482	8.481	(1.390)	69221	4.30631	4.3	
	35	Toluene	92	8.788	8.789	(1.440)	221968	5.03023	5.0	
	36	Tetrachloroethene	164	9.262	9.263	(1.518)	79714	5.34010	5.3	
	37	4-methyl-2-pentanone	43	9.365	9.365	(1.535)	9166	3.92738	3.9	
	38	trans-1,3-Dichloropropene	75	9.383	9.374	(1.538)	51178	4.43665	4.4	
	39	1,1,2-Trichloroethane	83	9.560	9.560	(1.567)	36030	5.67993	5.7	
	40	Dibromochloromethane	129	9.737	9.737	(1.596)	49622	4.34408	4.3	
	41	1,3-Dichloropropane	76	9.857	9.858	(1.615)	66868	5.66355	5.7	
	42	2-Chloroethylvinylether	63	9.857	9.858	(1.615)	6996	5.48710	5.5	
	43	1,2-Dibromoethane	107	9.960	9.960	(1.632)	36182	5.72605	5.7	
	44	2-Hexanone	43	10.341	10.341	(1.695)	4309	3.74713	3.7	
	45	Chlorobenzene	112	10.573	10.574	(1.733)	231546	5.01095	5.0	
	46	Ethylbenzene	91	10.638	10.639	(1.743)	466636	5.55952	5.6	
	47	1,1,1,2-Tetrachloroethane	131	10.666	10.667	(1.748)	75980	5.55912	5.6	
	48	m+p-Xylenes	106	10.806	10.806	(1.771)	370945	12.3429	12.3	
	49	o-Xylene	106	11.233	11.234	(1.841)	155745	5.04269	5.0	
	50	Styrene	104	11.298	11.299	(1.852)	233405	5.11273	5.1	
	51	Bromoform	173	11.289	11.289	(1.850)	21574	4.74796	4.7	
	52	Isopropylbenzene	105	11.568	11.568	(1.896)	460643	5.43568	5.4	
$	53	P-Bromofluorobenzene	95	11.819	11.819	(1.937)	183748	10.1261	10.1	
	54	Bromobenzene	156	11.903	11.894	(1.951)	90419	5.61275	5.6	
	55	N-Propylbenzene	91	11.977	11.977	(1.963)	590199	6.03976	6.0	
	56	1,1,2,2-Tetrachloroethane	83	12.061	12.061	(1.977)	41473	5.64371	5.6	
	57	2-Chlorotoluene	91	12.098	12.098	(1.983)	322069	5.90402	5.9	
	58	1,2,3-Trichloropropane	75	12.163	12.163	(1.993)	32752	5.70512	5.7	
	59	1,3,5-Trimethylbenzene	105	12.182	12.182	(1.996)	386927	6.04884	6.0	
	60	4-Chlorotoluene	91	12.256	12.256	(2.009)	327497	5.94508	5.9	
	61	tert-Butylbenzene	119	12.786	12.786	(2.095)	433719	6.21958	6.2	
	62	1,2,4-Trimethylbenzene	105	12.544	12.544	(2.056)	382514	5.94195	5.9	
	63	sec-Butylbenzene	105	12.637	12.637	(2.071)	537480	6.12318	6.1	
	64	P-Isopropyltoluene	119	12.470	12.470	(2.044)	335123	5.95175	6.0	
	65	1,3-Dichlorobenzene	146	12.814	12.814	(2.100)	206306	5.76040	5.8	
	66	1,4-Dichlorobenzene	146	12.907	12.907	(2.115)	186948	5.70583	5.7	
	67	N-Butylbenzene	91	13.186	13.186	(2.161)	414817	5.54292	5.5	
$	68	1,2-Dichlorobenzene-D4	152	13.297	13.297	(2.179)	177338	10.3276	10.3	
	69	1,2-Dichlorobenzene	146	13.306	13.307	(2.181)	162031	5.66102	5.7	
	70	1,2-Dibromo-3-Chloropropane	157	14.255	14.255	(2.336)	3472	4.87268	4.9	
	71	1,3,5-Trichlorobenzene	180	14.292	14.292	(2.342)	122469	5.20747	5.2	
	72	Hexachlorobutadiene	225	15.249	15.250	(2.499)	72808	5.32761	5.3	
	73	1,2,4-Trichlorobenzene	180	15.259	15.259	(2.501)	68186	3.80574	3.8	
	74	Naphthalene	128	15.723	15.724	(2.577)	41222	2.61665	2.6(R)	
	75	1,2,3-Trichlorobenzene	180	15.956	15.956	(2.615)	49188	4.00400	4.0	
M	76	1,2-Dichloroethylene (total)	96				183181	11.8568	11.8	
M	77	Xylenes (total)	106				526690	17.3856	17.4	

Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3335.d
Report Date: 09-Aug-2021 07:18

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/l)	REVIEW CODE
M 78 Trihalomethanes, Total	100				338457	19.6711	19.7	

QC Flag Legend

R - Spike/Surrogate failed recovery limits.


Data File: \\target_server\gg\chem\gcms-d.i\D073021.b\D3335.d
Date : 30-JUL-2021 16:56
Client ID:
Sample Info: WG303440-7,SD4724
Purge Volume: 25.0
Column phase: RTX-VMS
Instrument: gcms-d.i
Operator: JSS
Column diameter: 0.18
\\target_server\gg\chem\gcms-d.i\D073021.b\D3335.d
Y (x10^6)
Min
Vinyl Chloride (1.277)
Bromomethane (1.481)
Chloroethane
Trichlorofluoromethane (1.668)
1,1-Dichloroethene (2.040)+
Methylene Chloride (2.495)+
trans-1,2-Dichloroethene (2.635)
Methyl tert-butyl ether (2.746)
Tertiary-butyl alcohol (2.876)
Di-isopropyl Ether (3.146)
1,1-Dichloroethane (3.230)
Ethyl tertiary-butyl ethe (3.574)
cis-1,2-Dichloroethene (3.908)
2,2-Dichloropropane (4.038)
Bromochloromethane (4.141)
Chloroform (4.317)
Carbon Tetrachloride (4.457)
1,1,1-Trichloroethane (4.578)
1,1-Dichloropropene (4.782)+
Benzene (5.219)
Tertiary-amyl methyl ethe (5.563)+
Fluorobenzene (6.102)
Trichloroethene (6.363)
Dibromomethane (7.190)
1,2-Dichloropropane (7.367)
Bromodichloromethane (7.534)
cis-1,3-dichloropropene (8.482)
Toluene (8.789)
Tetrachloroethene (9.263)
4-methyl-2-pentanone (9.375)+
1,1,2-Trichloroethane (9.560)
Dibromochloromethane (9.727)
1,3-Dichloropropane (9.858)+
1,2-Dibromoethane (9.960)
2-Hexanone (10.341)
Chlorobenzene (10.574)
Ethylbenzene (10.639)+
m+p-Xylenes (10.806)
o-Xylene (11.234)
Styrene (11.299)+
Isopropylbenzene (11.568)
Bromobenzene (11.894)
P-Bromofluorobenzene (11.819)
N-Propylbenzene (11.978)
1,1,2,2-Tetrachloroethane (12.093)+
4-Chlorotoluene (12.256)
1,3-Dichloropropane (12.182)+
P-Isopropyltoluene (12.470)
1,2,4-Trimethylbenzene (12.545)
sec-Butylbenzene (12.638)
tert-Butylbenzene (12.786)+
1,4-Dichlorobenzene (12.907)
N-Butylbenzene (13.186)
1,2-Dichlorobenzene-D4 (13.298)+
1,2-Dibromo-3-Chloropropa (14.292)+
Hexachlorobutadiene (15.250)+
Naphthalene (15.724)
1,2,3-Trichlorobenzene (15.956)

Logbooks and Supporting Documents

GCMS-D INSTRUMENT RUNLOG WG ✓

KATAHDIN ANALYTICAL SERVICES

DATE/TIME OF BFB INJECTION: 7-29-21

Method - Check One:	8260	8260 - 10 mL	8260 SIM	624	524 ✓
STD IDs: * BFB STD: V2269	CAL STD: V2273	GAS STD: V2274	XTRAs STD:	LCS/MS STD: V2264	
SURR STD: V2277	IS STD: V2277				

					Prep Method			Criteria			pH Paper Lot #:			KI Paper Lot #	
SAMPLE NAME	DATAFILE	DF	ALS #	METHOD	5030	5035	1311	KAS	DoD	QAPP	Y/N	ANALYST	pH	TRC	COMMENTS
WG303293-11	DB911	1	-1	VOA BFB							Y	JJ	AA	NA	
VSTD010 -4	D3305	1	1	D5465(70)							N				
* 005 -3	06	1	2								Y				poor prep
002 -2	07	1	3								N				
0.50 -1	08	1	4								N				poor prep
* 060 -7	09	1	5								Y				
* 040 -6	10	1	6								Y				
* 020 -5	11	1	7								Y				Curve OK
Rinse	12	1	8								N				JJ 7-30-21
* VSTD002 -2	13	1	9								Y				
* 0.50 -1	14	1	10								Y				
* 010 -4	15	1	11								Y				
LCS	16	1	12								N				
LCSD	17	1	13								N				
VBLK	18	1	14								N				
VBLK	19	1	15								N				
VSTD0.50 TST	20	1	16								N				

* Refer to page 1 for standard preparation instructions.

Katahdin Analytical Services 1000133

WG ✓

KATAHDIN ANALYTICAL SERVICES

GCMS-D INSTRUMENT RUNLOG

7:15

DATE/TIME OF BFB INJECTION: 7-30-21

Method - Check One:	8260	8260 - 10 mL	8260 SIM	624	524 ✓
STD IDs: * BFB STD: V2269	CAL STD: V2273	GAS STD: V2274	XTRAs STD: V2276	LCS/MS STD: V2278	
SURR STD: V2277	IS STD: V2277				

SAMPLE NAME	DATAFILE	DF	ALS #	METHOD	Prep Method: 5030	5035	1311	Criteria: KAS	DoD	QAPP	pH Paper Lot #: Y/N	ANALYST	pH	KI Paper Lot #: TRC	COMMENTS
WG303440-3	D3912	1	-1	VOA BFB							Y	JJ	NA	NA	
VSTD010 -4	D3321	1	1	DOA25(70)	X						N				
VSTD010 -4	22	1	2								Y				
LCS/Ind(-5) -1	23	1	3								Y				Ind(-5)
LCSD -5	24	1	4								Y				
VBLK	25	1	5								N				
WG303440-2	26	1	6								Y				tog Lis
504724-7 A	27	1	7						X		Y		4	NA	
-1 A	28	1	8								Y				
-3 A	29	1	9								Y				
-4 A	30	1	10								Y				
-5 A	31	1	11								Y				
-6 A	32	1	12								Y				
-2 A	33	1	13								Y				
-6 -2 MS B	34	1	14								Y				
-7 -2 MSD C	35	1	15								Y				
CCV 1 -7	36	1	16								Y		WA	NA	17:35 ✓
2	37	1	17								NN				not used
3	38	1	18								N				not used
Rinse	39	1	19		↓						N				—

8-1-21

* Refer to page 1 for standard preparation instructions.

Katahdin Analytical Services 1000134

8270 SIM
POLYNUCLEAR AROMATIC HYDROCARBONS DATA

QC Summary Section

Katahdin
ANALYTICAL SERVICES

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** LO-58 Nike Missile Battery Launch Site **Matrix:** AQ
Lab Code: KAS **SDG:** SO4724

Client Sample ID	Lab Sample ID	Col. ID	2MN	#	FLO	#	PYR	#
DW-01-EFF-SUMMER202	SO4724-1		63.0		58.9		81.4	
DW-01-INF-SUMMER202	SO4724-2		72.4		73.5		87.2	
DW-01-MID-SUMMER202	SO4724-3		64.1		61.1		87.7	
DW-02R-EFF-SUMMER20	SO4724-4		70.6		71.1		83.4	
DW-02R-INF-SUMMER20	SO4724-5		76.1		75.8		87.2	
DW-FD-SUMMER2021	SO4724-6		68.3		66.1		68.4	
Method Blank	WG303222-1		70.0		70.8		82.4	
Laboratory Control S	WG303222-2		83.6		72.2		86.5	
Matrix Spike	WG303222-5		71.4		62.5		69.3	
Matrix Spike Duplica	WG303222-6		65.1		61.2		70.4	

		QC Limits
2MN	2-METHYLNAPHTHALENE-D10	43-92
FLO	FLUORENE-D10	29-101
PYR	PYRENE-D10	53-166

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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Katahdin
ANALYTICAL SERVICES

Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site
Lab File ID : N3626.D
Instrument ID : GCMS-N
Matrix : AQ

SDG : SO4724
Lab Sample ID : WG303222-1
Date Extracted : 27-JUL-21
Date Analyzed : 28-JUL-21
Time Analyzed : 20:12

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG303222-2	N3625.D	07/28/21	19:37
DW-01-EFF-SUMMER2021	SO4724-1	N3636.D	07/29/21	01:53
DW-01-MID-SUMMER2021	SO4724-3	N3637.D	07/29/21	02:27
DW-01-INF-SUMMER2021	SO4724-2	N3643.D	07/29/21	13:17
Matrix Spike	WG303222-5	N3644.D	07/29/21	13:49
Matrix Spike Duplica	WG303222-6	N3645.D	07/29/21	14:21
DW-02R-EFF-SUMMER2021	SO4724-4	N3646.D	07/29/21	14:53
DW-02R-INF-SUMMER2021	SO4724-5	N3647.D	07/29/21	15:25
DW-FD-SUMMER2021	SO4724-6	N3648.D	07/29/21	15:57

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ANALYTICAL SERVICES

Form 5
Semivolatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site
Lab File ID : ND198.D
Instrument ID : GCMS-N

SDG : SO4724
Date Analyzed : 28-JUL-21
Time Analyzed : 15:17

m/e	Ion Abundance Criteria	% Relative Abundance		
51	30.0 - 60.0% of mass 198	42.7		
68	Less than 2.0% of mass 69	0.7	1.64	1
69	Less than 100.0% of mass 198	42.8		
70	Less than 2.0% of mass 69	0.3	0.62	1
127	40.0 - 60.0% of mass 198	59.9		
197	Less than 1.0% of mass 198	0.4		
198	Base Peak, 100% relative abundance	100		
199	5.0 - 9.0% of mass 198	6.7		
275	10.0 - 30.0% of mass 198	21.4		
365	1.0 - 100.0% of mass 198	2.6		
441	0.0 - 100.0% of mass 443	10.4	73.64	2
442	40.0 - 100.0% of mass 198	70.9		
443	17.0 - 23.0% of mass 442	14.1	19.85	3

1-Value is % mass 69
2-Value is % mass 443
3-Value is % mass 442

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Initial Calibration	WG303306-4	N3618.D	07/28/21	15:35
Initial Calibration	WG303306-3	N3619.D	07/28/21	16:07
Initial Calibration	WG303306-2	N3620.D	07/28/21	16:39
Initial Calibration	WG303306-5	N3621.D	07/28/21	17:15
Initial Calibration	WG303306-6	N3622.D	07/28/21	17:52
Initial Calibration	WG303306-7	N3623.D	07/28/21	18:27
Independent Source	WG303306-8	N3624.D	07/28/21	19:02
Laboratory Control S	WG303222-2	N3625.D	07/28/21	19:37
Method Blank	WG303222-1	N3626.D	07/28/21	20:12
DW-01-EFF-SUMMER2021	SO4724-1	N3636.D	07/29/21	01:53
DW-01-MID-SUMMER2021	SO4724-3	N3637.D	07/29/21	02:27
Continuing Calibrati	WG303306-9	N3638.D	07/29/21	03:02

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Katahdin
ANALYTICAL SERVICES

Form 5
Semivolatile Organic Instrument Performance Check

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site
Lab File ID : ND198.D
Instrument ID : GCMS-N

SDG : SO4724
Date Analyzed : 29-JUL-21
Time Analyzed : 12:26

m/e	Ion Abundance Criteria	% Relative Abundance		
51	30.0 - 60.0% of mass 198	40.5		
68	Less than 2.0% of mass 69	0.4	0.90	1
69	Less than 100.0% of mass 198	41.2		
70	Less than 2.0% of mass 69	0.2	0.49	1
127	40.0 - 60.0% of mass 198	58.2		
197	Less than 1.0% of mass 198	0.2		
198	Base Peak, 100% relative abundance	100		
199	5.0 - 9.0% of mass 198	6.9		
275	10.0 - 30.0% of mass 198	21.9		
365	1.0 - 100.0% of mass 198	2.9		
441	0.0 - 100.0% of mass 443	11.6	74.53	2
442	40.0 - 100.0% of mass 198	80.5		
443	17.0 - 23.0% of mass 442	15.5	19.29	3

1-Value is % mass 69
2-Value is % mass 443
3-Value is % mass 442

This check applies to the following samples, LCS, MS, MSD and standards:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Continuing Calibrati	WG303383-2	N3642.D	07/29/21	12:44
DW-01-INF-SUMMER2021	SO4724-2	N3643.D	07/29/21	13:17
Matrix Spike	WG303222-5	N3644.D	07/29/21	13:49
Matrix Spike Duplica	WG303222-6	N3645.D	07/29/21	14:21
DW-02R-EFF-SUMMER2021	SO4724-4	N3646.D	07/29/21	14:53
DW-02R-INF-SUMMER2021	SO4724-5	N3647.D	07/29/21	15:25
DW-FD-SUMMER2021	SO4724-6	N3648.D	07/29/21	15:57
Continuing Calibrati	WG303383-3	N3652.D	07/29/21	18:12

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Katahdin
ANALYTICAL SERVICES

Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Lau
Lab ID : WG303306-4
Lab File ID : N3618.D

SDG: SO4724
Analytical Date: 07/28/21 15:35
Instrument ID: GCMS-N

		1,4-DICHLOROBENZENE-D4			NAPHTHALENE-D8			ACENAPHTHENE-D10		
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	56073		7.39		190665		9.02		102028		11.37	
	Upper Limit	112146		7.56		381330		9.19		204056		11.54	
	Lower Limit	28036.5		7.22		95332.5		8.86		51014		11.20	
Client Sample ID	Lab Sample ID												
Laboratory Control S	WG303222-2	60059		7.39		207662		9.02		113688		11.36	
Method Blank	WG303222-1	59337		7.40		221580		9.03		114900		11.37	
DW-01-EFF-SUMMEF	SO4724-1	63883		7.40		216747		9.03		124772		11.37	
DW-01-MID-SUMMEI	SO4724-3	59719		7.40		198337		9.03		113723		11.37	
Continuing Calibrati	WG303306-9	62005		7.39		217432		9.02		117588		11.36	
Continuing Calibrati	WG303383-2	49892		7.39		168736		9.02		86041		11.36	
DW-01-INF-SUMMER	SO4724-2	51126		7.40		171494		9.03		90759		11.37	
Matrix Spike	WG303222-5	59979		7.40		207764		9.03		110298		11.37	
Matrix Spike Duplica	WG303222-6	55559		7.39		191726		9.03		101387		11.37	
DW-02R-EFF-SUMMI	SO4724-4	57902		7.40		194192		9.03		104810		11.37	
DW-02R-INF-SUMME	SO4724-5	54131		7.40		189955		9.03		96170		11.37	
DW-FD-SUMMER202	SO4724-6	52569		7.40		184278		9.03		94217		11.37	
Continuing Calibrati	WG303383-3	53952		7.39		190257		9.02		97067		11.36	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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ANALYTICAL SERVICES

Form 8
Internal Standard Area and RT Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Lau
Lab ID : WG303306-4
Lab File ID : N3618.D

SDG: SO4724
Analytical Date: 07/28/21 15:35
Instrument ID: GCMS-N

		PHENANTHRENE-D10				CHRYSENE-D12				PERYLENE-D12			
		Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
	Std .	145626		13.35		67868		17.14		51613		20.15	
	Upper Limit	291252		13.52		135736		17.31		103226		20.32	
	Lower Limit	72813		13.18		33934		16.97		25806.5		19.98	
Client Sample ID	Lab Sample ID												
Laboratory Control S	WG303222-2	169228		13.35		72506		17.14		45910		20.13	
Method Blank	WG303222-1	165454		13.35		69785		17.14		42876		20.14	
DW-01-EFF-SUMMEF	SO4724-1	180112		13.35		67980		17.15		43672		20.14	
DW-01-MID-SUMMEI	SO4724-3	158684		13.35		62777		17.14		41551		20.14	
Continuing Calibrati	WG303306-9	178035		13.35		91062		17.14		58767		20.15	
Continuing Calibrati	WG303383-2	113950		13.35		45765		17.14		31679		20.15	
DW-01-INF-SUMMER	SO4724-2	124341		13.35		52104		17.14		32581		20.14	
Matrix Spike	WG303222-5	171308		13.35		85910		17.14		58428		20.14	
Matrix Spike Duplica	WG303222-6	146181		13.35		65796		17.14		46677		20.14	
DW-02R-EFF-SUMMI	SO4724-4	149215		13.35		66253		17.14		44953		20.14	
DW-02R-INF-SUMME	SO4724-5	129516		13.35		52812		17.15		33660		20.14	
DW-FD-SUMMER202	SO4724-6	134926		13.35		58151		17.15		39188		20.14	
Continuing Calibrati	WG303383-3	133618		13.35		70935		17.14		47088		20.14	

Area Upper Limit = +100% of internal standard area
Area Lower Limit = - 50% of internal standard area
RT Upper Limit = + 10 seconds of internal standard RT
RT Lower Limit = - 10 seconds of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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Sample Data Section

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

* Compound recovery or percent RPD (relative percent difference) was outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

C Indicates that the flagged compound did not meet DoD criteria in the corresponding daily calibration verification (CV).

L Indicates that the flagged compound did not meet DoD criteria in the corresponding Laboratory Control Sample (LCS) and/or Laboratory Control Sample Duplicate (LCSD) prepared and/or analyzed concurrently with the sample.

M Indicates that the flagged compound did not meet DoD criteria in the Matrix Spike and/or Matrix Spike Duplicate prepared and/or analyzed concurrently with the native sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-1
Client ID: DW-01-EFF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: N3636.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 29-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 02-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.093	ug/L	1	.2	0.19	0.060	0.093
2-Methylnaphthalene	U	0.093	ug/L	1	.2	0.19	0.072	0.093
1-Methylnaphthalene	U	0.093	ug/L	1	.2	0.19	0.064	0.093
Acenaphthylene	U	0.093	ug/L	1	.2	0.19	0.050	0.093
Acenaphthene	U	0.093	ug/L	1	.2	0.19	0.060	0.093
Fluorene	U	0.093	ug/L	1	.2	0.19	0.057	0.093
Phenanthrene	U	0.093	ug/L	1	.2	0.19	0.048	0.093
Anthracene	U	0.093	ug/L	1	.2	0.19	0.041	0.093
Fluoranthene	U	0.093	ug/L	1	.2	0.19	0.068	0.093
Pyrene	U	0.093	ug/L	1	.2	0.19	0.055	0.093
Benzo(a)anthracene	U	0.093	ug/L	1	.2	0.19	0.043	0.093
Chrysene	U	0.093	ug/L	1	.2	0.19	0.034	0.093
Benzo(b)Fluoranthene	U	0.093	ug/L	1	.2	0.19	0.083	0.093
Benzo(k)fluoranthene	U	0.093	ug/L	1	.2	0.19	0.046	0.093
Benzo(a)pyrene	U	0.093	ug/L	1	.2	0.19	0.062	0.093
Indeno(1,2,3-cd)pyrene	U	0.093	ug/L	1	.2	0.19	0.048	0.093
Dibenzo(a,h)anthracene	U	0.093	ug/L	1	.2	0.19	0.065	0.093
Benzo(g,h,i)perylene	U	0.093	ug/L	1	.2	0.19	0.061	0.093
2-Methylnaphthalene-D10		63.0	%					
Fluorene-D10		58.9	%					
Pyrene-D10		81.4	%					

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Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3636.D
Report Date: 02-Aug-2021 10:46

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3636.D
Lab Smp Id: SO4724-1 Client Smp ID: W-01-EFF-SUMMER2021
Inj Date : 29-JUL-2021 01:53
Operator : JCG Inst ID: gcms-n.i
Smp Info : SO4724-1
Misc Info : WG303306,WG303222,WG303306-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 09:00 cgomez Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27 Cal File: N3623.D
Als bottle: 20
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: sw8270sim+1mn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

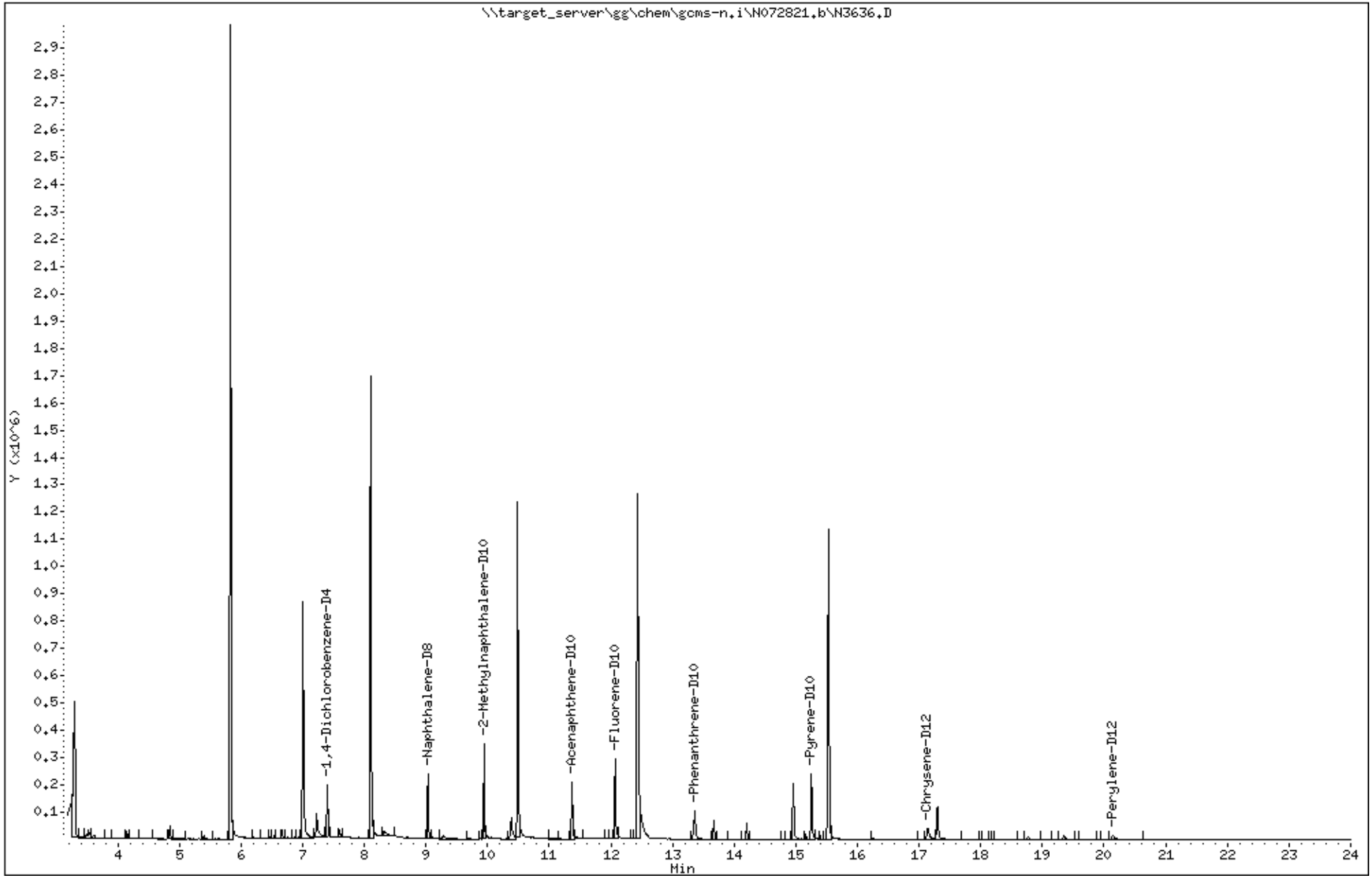
Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.070	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	7.400	7.390	(1.000)	63883	0.80000	(aQ)	
*	27 Naphthalene-D8	136	9.033	9.022	(1.000)	216747	0.80000	(a)	
$	33 2-Methylnaphthalene-D10	152	9.938	9.937	(1.100)	181688	1.25993	1.18	
*	48 Acenaphthene-D10	164	11.370	11.369	(1.000)	124772	0.80000	(a)	
$	56 Fluorene-D10	174	12.067	12.067	(1.061)	172780	1.17837	1.10	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	180112	0.80000	(a)	
$	73 Pyrene-D10	212	15.251	15.262	(0.889)	209754	1.62793	1.52	
*	78 Chrysene-D12	240	17.150	17.139	(1.000)	67980	0.80000	(a)	
*	85 Perylene-D12	264	20.139	20.139	(1.000)	43672	0.80000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3636.D
Date : 29-JUL-2021 01:53
Client ID: W-01-EFF-SUMMER2021
Instrument: gcms-n.i
Sample Info: S04724-1
Volume Injected (uL): 1.0
Operator: JCG
Column phase: ZB5-MS
Column diameter: 0.25



Katahdin Analytical Services 2000014

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-2
Client ID: DW-01-INF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: N3643.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 29-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 02-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.093	ug/L	1	.2	0.19	0.060	0.093
2-Methylnaphthalene	U	0.093	ug/L	1	.2	0.19	0.072	0.093
1-Methylnaphthalene	U	0.093	ug/L	1	.2	0.19	0.064	0.093
Acenaphthylene	U	0.093	ug/L	1	.2	0.19	0.050	0.093
Acenaphthene	U	0.093	ug/L	1	.2	0.19	0.060	0.093
Fluorene	U	0.093	ug/L	1	.2	0.19	0.057	0.093
Phenanthrene	U	0.093	ug/L	1	.2	0.19	0.048	0.093
Anthracene	U	0.093	ug/L	1	.2	0.19	0.041	0.093
Fluoranthene	U	0.093	ug/L	1	.2	0.19	0.068	0.093
Pyrene	U	0.093	ug/L	1	.2	0.19	0.055	0.093
Benzo(a)anthracene	U	0.093	ug/L	1	.2	0.19	0.043	0.093
Chrysene	U	0.093	ug/L	1	.2	0.19	0.034	0.093
Benzo(b)Fluoranthene	U	0.093	ug/L	1	.2	0.19	0.083	0.093
Benzo(k)fluoranthene	U	0.093	ug/L	1	.2	0.19	0.046	0.093
Benzo(a)pyrene	U	0.093	ug/L	1	.2	0.19	0.062	0.093
Indeno(1,2,3-cd)pyrene	U	0.093	ug/L	1	.2	0.19	0.048	0.093
Dibenzo(a,h)anthracene	U	0.093	ug/L	1	.2	0.19	0.065	0.093
Benzo(g,h,i)perylene	U	0.093	ug/L	1	.2	0.19	0.061	0.093
2-Methylnaphthalene-D10		72.4	%					
Fluorene-D10		73.5	%					
Pyrene-D10		87.2	%					

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Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\N3643.D
Report Date: 02-Aug-2021 10:51

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072921.b\N3643.D
Lab Smp Id: SO4724-2 Client Smp ID: W-01-INF-SUMMER2021
Inj Date : 29-JUL-2021 13:17
Operator : JCG Inst ID: gcms-n.i
Smp Info : SO4724-2
Misc Info : WG303383,WG303222,WG303306-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N072921.b\NSPSIM94.m
Meth Date : 30-Jul-2021 08:11 gcms-n.i Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27 Cal File: N3623.D
Als bottle: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: sw8270sim+1mn.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

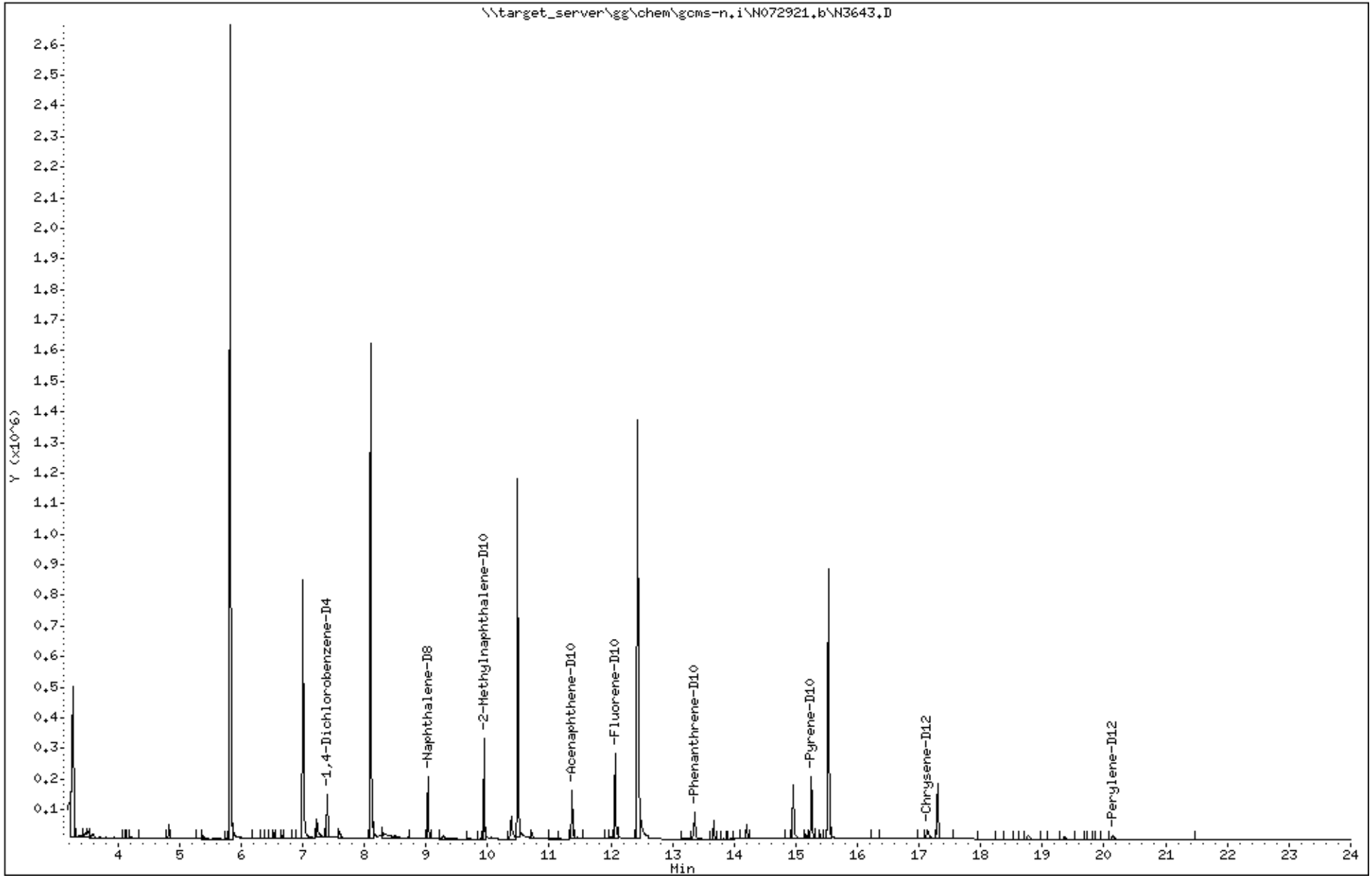
Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.070	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	7.400	7.390	(1.000)	51126	0.80000	(aQ)	
*	27 Naphthalene-D8	136	9.033	9.022	(1.000)	171494	0.80000	(a)	
$	33 2-Methylnaphthalene-D10	152	9.937	9.937	(1.100)	165176	1.44767	1.35	
*	48 Acenaphthene-D10	164	11.370	11.369	(1.000)	90759	0.80000	(a)	
$	56 Fluorene-D10	174	12.067	12.067	(1.061)	156719	1.46939	1.37	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	124341	0.80000	(a)	
$	73 Pyrene-D10	212	15.251	15.262	(0.890)	172186	1.74355	1.63	
*	78 Chrysene-D12	240	17.139	17.139	(1.000)	52104	0.80000	(a)	
*	85 Perylene-D12	264	20.139	20.139	(1.000)	32581	0.80000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\N3643.D
Date : 29-JUL-2021 13:17
Client ID: W-01-INF-SUMMER2021
Instrument: gcms-n.i
Sample Info: S04724-2
Volume Injected (uL): 1.0
Operator: JCG
Column phase: ZB5-MS
Column diameter: 0.25



Katahdin Analytical Services 2000017

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-3
Client ID: DW-01-MID-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: N3637.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 29-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 02-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.093	ug/L	1	.2	0.19	0.060	0.093
2-Methylnaphthalene	U	0.093	ug/L	1	.2	0.19	0.072	0.093
1-Methylnaphthalene	U	0.093	ug/L	1	.2	0.19	0.064	0.093
Acenaphthylene	U	0.093	ug/L	1	.2	0.19	0.050	0.093
Acenaphthene	U	0.093	ug/L	1	.2	0.19	0.060	0.093
Fluorene	U	0.093	ug/L	1	.2	0.19	0.057	0.093
Phenanthrene	U	0.093	ug/L	1	.2	0.19	0.048	0.093
Anthracene	U	0.093	ug/L	1	.2	0.19	0.041	0.093
Fluoranthene	U	0.093	ug/L	1	.2	0.19	0.068	0.093
Pyrene	U	0.093	ug/L	1	.2	0.19	0.055	0.093
Benzo(a)anthracene	U	0.093	ug/L	1	.2	0.19	0.043	0.093
Chrysene	U	0.093	ug/L	1	.2	0.19	0.034	0.093
Benzo(b)Fluoranthene	U	0.093	ug/L	1	.2	0.19	0.083	0.093
Benzo(k)fluoranthene	U	0.093	ug/L	1	.2	0.19	0.046	0.093
Benzo(a)pyrene	U	0.093	ug/L	1	.2	0.19	0.062	0.093
Indeno(1,2,3-cd)pyrene	U	0.093	ug/L	1	.2	0.19	0.048	0.093
Dibenzo(a,h)anthracene	U	0.093	ug/L	1	.2	0.19	0.065	0.093
Benzo(g,h,i)perylene	U	0.093	ug/L	1	.2	0.19	0.061	0.093
2-Methylnaphthalene-D10		64.1	%					
Fluorene-D10		61.1	%					
Pyrene-D10		87.7	%					

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Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3637.D
Report Date: 02-Aug-2021 10:46

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3637.D
Lab Smp Id: SO4724-3 Client Smp ID: W-01-MID-SUMMER2021
Inj Date : 29-JUL-2021 02:27
Operator : JCG Inst ID: gcms-n.i
Smp Info : SO4724-3
Misc Info : WG303306,WG303222,WG303306-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 09:00 cgomez Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27 Cal File: N3623.D
Als bottle: 21
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: sw8270sim+1mn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

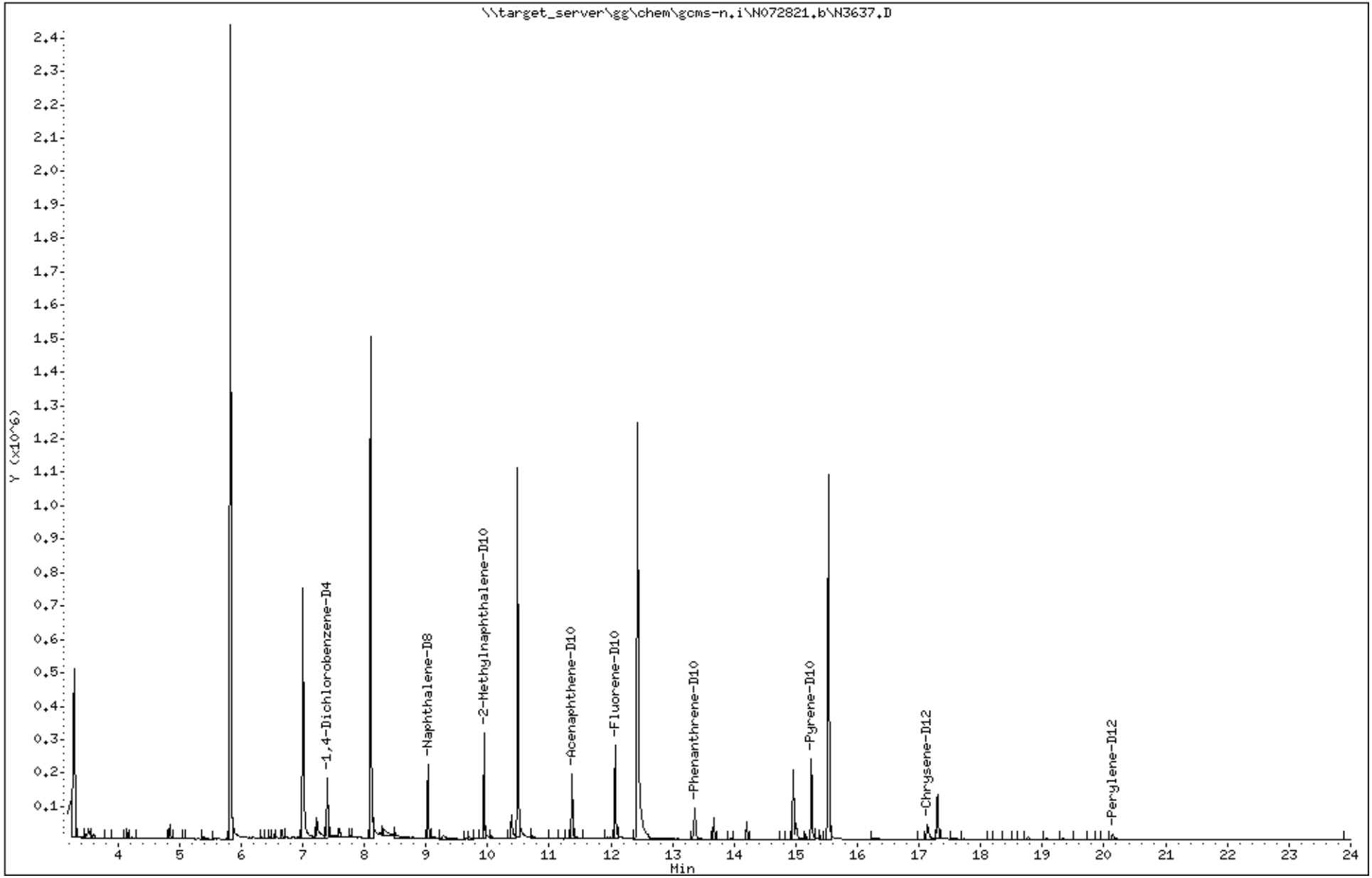
Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.070	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	7.400	7.390	(1.000)	59719	0.80000	(aQ)	
*	27 Naphthalene-D8	136	9.033	9.022	(1.000)	198337	0.80000	(a)	
$	33 2-Methylnaphthalene-D10	152	9.937	9.937	(1.100)	169088	1.28139	1.20	
*	48 Acenaphthene-D10	164	11.369	11.369	(1.000)	113723	0.80000	(a)	
$	56 Fluorene-D10	174	12.067	12.067	(1.061)	163373	1.22247	1.14	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	158684	0.80000	(a)	
$	73 Pyrene-D10	212	15.251	15.262	(0.890)	208657	1.75363	1.64	
*	78 Chrysene-D12	240	17.139	17.139	(1.000)	62777	0.80000	(a)	
*	85 Perylene-D12	264	20.139	20.139	(1.000)	41551	0.80000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3637.D
Date : 29-JUL-2021 02:27
Client ID: W-01-MID-SUMMER2021
Instrument: gcms-n.i
Sample Info: S04724-3
Volume Injected (uL): 1.0
Operator: JCG
Column phase: ZB5-MS
Column diameter: 0.25



Katahdin Analytical Services 2000020

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-4
Client ID: DW-02R-EFF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: N3646.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 29-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 02-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.096	ug/L	1	.2	0.19	0.062	0.096
2-Methylnaphthalene	U	0.096	ug/L	1	.2	0.19	0.074	0.096
1-Methylnaphthalene	U	0.096	ug/L	1	.2	0.19	0.065	0.096
Acenaphthylene	U	0.096	ug/L	1	.2	0.19	0.052	0.096
Acenaphthene	U	0.096	ug/L	1	.2	0.19	0.062	0.096
Fluorene	U	0.096	ug/L	1	.2	0.19	0.059	0.096
Phenanthrene	U	0.096	ug/L	1	.2	0.19	0.049	0.096
Anthracene	U	0.096	ug/L	1	.2	0.19	0.042	0.096
Fluoranthene	U	0.096	ug/L	1	.2	0.19	0.070	0.096
Pyrene	U	0.096	ug/L	1	.2	0.19	0.057	0.096
Benzo(a)anthracene	U	0.096	ug/L	1	.2	0.19	0.044	0.096
Chrysene	U	0.096	ug/L	1	.2	0.19	0.035	0.096
Benzo(b)Fluoranthene	U	0.096	ug/L	1	.2	0.19	0.086	0.096
Benzo(k)fluoranthene	U	0.096	ug/L	1	.2	0.19	0.047	0.096
Benzo(a)pyrene	U	0.096	ug/L	1	.2	0.19	0.063	0.096
Indeno(1,2,3-cd)pyrene	U	0.096	ug/L	1	.2	0.19	0.050	0.096
Dibenzo(a,h)anthracene	U	0.096	ug/L	1	.2	0.19	0.067	0.096
Benzo(g,h,i)perylene	U	0.096	ug/L	1	.2	0.19	0.062	0.096
2-Methylnaphthalene-D10		70.6	%					
Fluorene-D10		71.1	%					
Pyrene-D10		83.4	%					

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Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\N3646.D
Report Date: 02-Aug-2021 10:51

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072921.b\N3646.D
Lab Smp Id: SO4724-4 Client Smp ID: W-02R-EFF-SUMMER202
Inj Date : 29-JUL-2021 14:53
Operator : JCG Inst ID: gcms-n.i
Smp Info : SO4724-4
Misc Info : WG303383,WG303222,WG303306-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N072921.b\NSPSIM94.m
Meth Date : 30-Jul-2021 08:11 gcms-n.i Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27 Cal File: N3623.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: sw8270sim+1mn.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

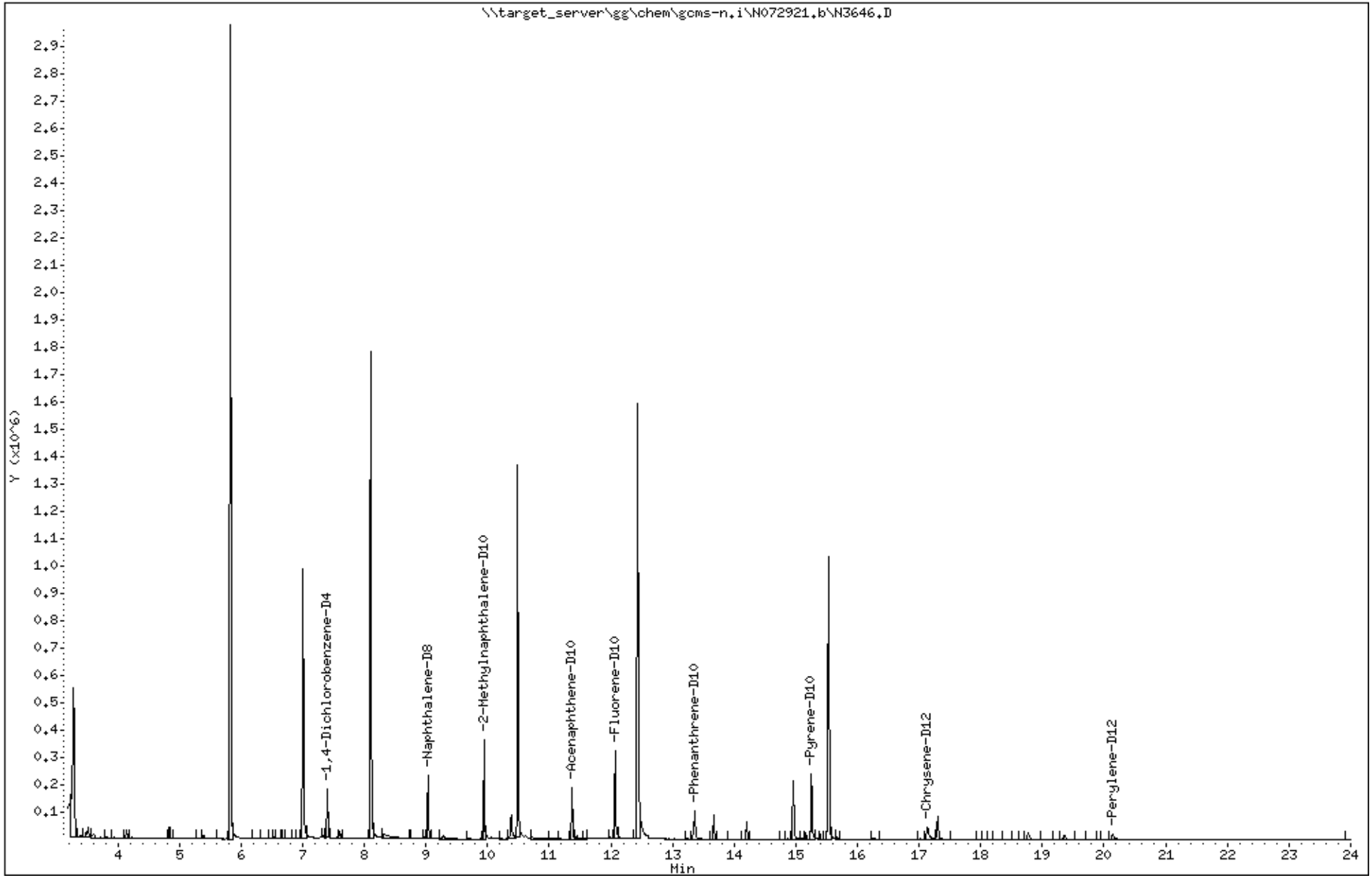
Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.040	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	7.400	7.390	(1.000)	57902	0.80000	(aQ)	
*	27 Naphthalene-D8	136	9.033	9.022	(1.000)	194192	0.80000	(a)	
$	33 2-Methylnaphthalene-D10	152	9.937	9.937	(1.100)	182581	1.41318	1.36	
*	48 Acenaphthene-D10	164	11.370	11.369	(1.000)	104810	0.80000	(a)	
$	56 Fluorene-D10	174	12.067	12.067	(1.061)	175266	1.42299	1.37	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	149215	0.80000	(a)	
$	73 Pyrene-D10	212	15.251	15.262	(0.890)	209587	1.66903	1.60	
*	78 Chrysene-D12	240	17.139	17.139	(1.000)	66253	0.80000	(a)	
*	85 Perylene-D12	264	20.139	20.139	(1.000)	44953	0.80000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\N3646.D
Date : 29-JUL-2021 14:53
Client ID: W-02R-EFF-SUMMER202
Instrument: gcms-n.i
Sample Info: S04724-4
Volume Injected (uL): 1.0
Operator: JCG
Column phase: ZB5-MS
Column diameter: 0.25



Katahdin Analytical Services 2000023

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-5
Client ID: DW-02R-INF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: N3647.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 29-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 02-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.095	ug/L	1	.2	0.19	0.061	0.095
2-Methylnaphthalene	U	0.095	ug/L	1	.2	0.19	0.073	0.095
1-Methylnaphthalene	U	0.095	ug/L	1	.2	0.19	0.065	0.095
Acenaphthylene	U	0.095	ug/L	1	.2	0.19	0.051	0.095
Acenaphthene	U	0.095	ug/L	1	.2	0.19	0.061	0.095
Fluorene	U	0.095	ug/L	1	.2	0.19	0.058	0.095
Phenanthrene	U	0.095	ug/L	1	.2	0.19	0.048	0.095
Anthracene	U	0.095	ug/L	1	.2	0.19	0.042	0.095
Fluoranthene	U	0.095	ug/L	1	.2	0.19	0.070	0.095
Pyrene	U	0.095	ug/L	1	.2	0.19	0.056	0.095
Benzo(a)anthracene	U	0.095	ug/L	1	.2	0.19	0.044	0.095
Chrysene	U	0.095	ug/L	1	.2	0.19	0.034	0.095
Benzo(b)Fluoranthene	U	0.095	ug/L	1	.2	0.19	0.085	0.095
Benzo(k)fluoranthene	U	0.095	ug/L	1	.2	0.19	0.047	0.095
Benzo(a)pyrene	U	0.095	ug/L	1	.2	0.19	0.063	0.095
Indeno(1,2,3-cd)pyrene	U	0.095	ug/L	1	.2	0.19	0.050	0.095
Dibenzo(a,h)anthracene	U	0.095	ug/L	1	.2	0.19	0.067	0.095
Benzo(g,h,i)perylene	U	0.095	ug/L	1	.2	0.19	0.062	0.095
2-Methylnaphthalene-D10		76.1	%					
Fluorene-D10		75.8	%					
Pyrene-D10		87.2	%					

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Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\N3647.D
Report Date: 02-Aug-2021 10:51

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072921.b\N3647.D
Lab Smp Id: SO4724-5 Client Smp ID: W-02R-INF-SUMMER202
Inj Date : 29-JUL-2021 15:25
Operator : JCG Inst ID: gcms-n.i
Smp Info : SO4724-5
Misc Info : WG303383,WG303222,WG303306-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N072921.b\NSPSIM94.m
Meth Date : 30-Jul-2021 08:11 gcms-n.i Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27 Cal File: N3623.D
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: sw8270sim+1mn.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

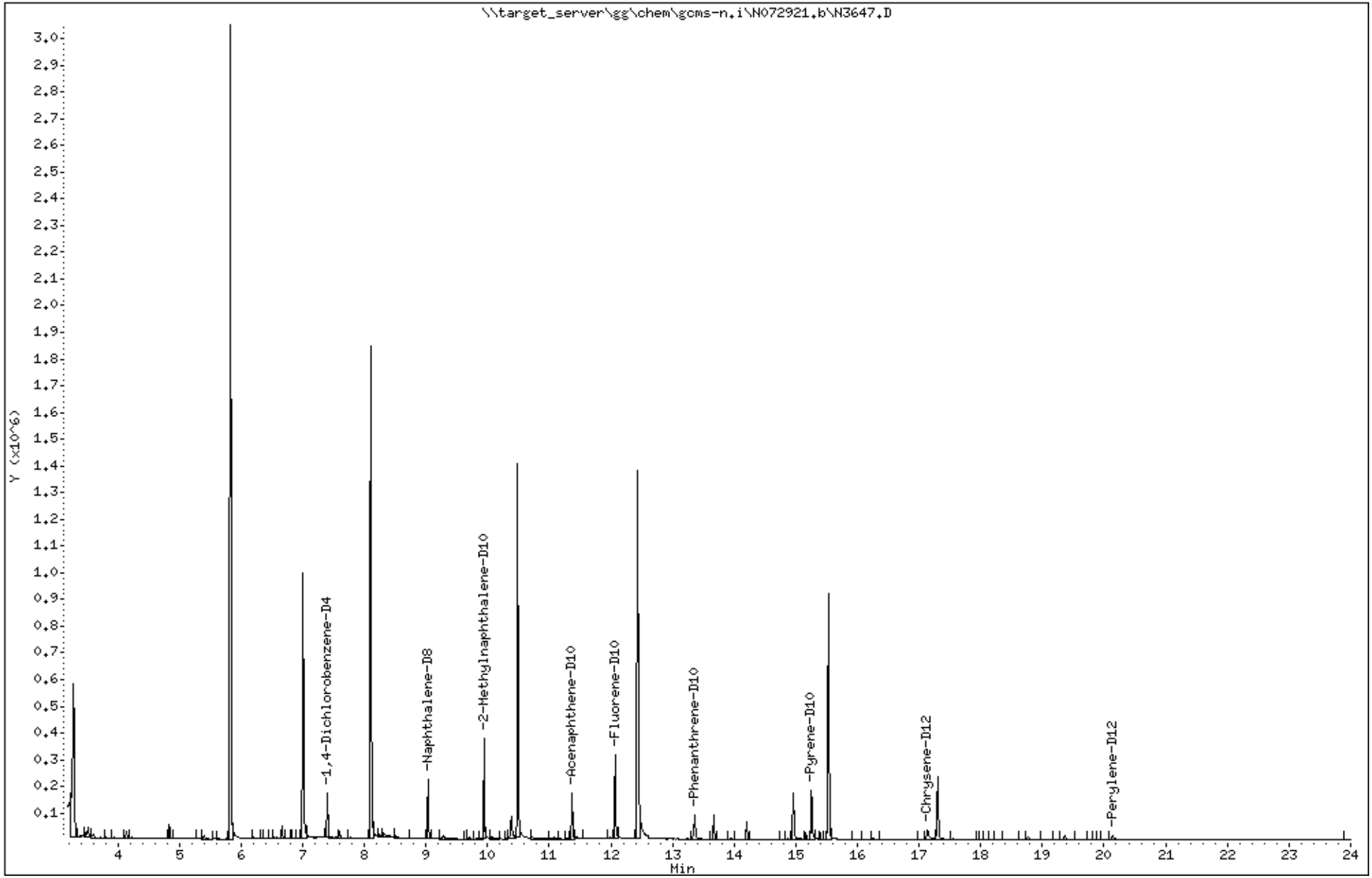
Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.050	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	7.400	7.390	(1.000)	54131	0.80000	(aQ)	
*	27 Naphthalene-D8	136	9.033	9.022	(1.000)	189955	0.80000	(a)	
$	33 2-Methylnaphthalene-D10	152	9.938	9.937	(1.100)	192447	1.52277	1.45	
*	48 Acenaphthene-D10	164	11.370	11.369	(1.000)	96170	0.80000	(a)	
$	56 Fluorene-D10	174	12.067	12.067	(1.061)	171284	1.51559	1.44	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	129516	0.80000	(a)	
$	73 Pyrene-D10	212	15.251	15.262	(0.889)	174485	1.74314	1.66	
*	78 Chrysene-D12	240	17.150	17.139	(1.000)	52812	0.80000	(a)	
*	85 Perylene-D12	264	20.139	20.139	(1.000)	33660	0.80000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\N3647.D
Date : 29-JUL-2021 15:25
Client ID: W-02R-INF-SUMMER202
Instrument: gcms-n.i
Sample Info: S04724-5
Volume Injected (uL): 1.0
Operator: JCG
Column phase: ZB5-MS
Column diameter: 0.25



Katahdin Analytical Services 2000026

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ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-6
Client ID: DW-FD-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: N3648.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 29-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA
Report Date: 02-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.095	ug/L	1	.2	0.19	0.061	0.095
2-Methylnaphthalene	U	0.095	ug/L	1	.2	0.19	0.073	0.095
1-Methylnaphthalene	U	0.095	ug/L	1	.2	0.19	0.065	0.095
Acenaphthylene	U	0.095	ug/L	1	.2	0.19	0.051	0.095
Acenaphthene	U	0.095	ug/L	1	.2	0.19	0.061	0.095
Fluorene	U	0.095	ug/L	1	.2	0.19	0.058	0.095
Phenanthrene	U	0.095	ug/L	1	.2	0.19	0.048	0.095
Anthracene	U	0.095	ug/L	1	.2	0.19	0.042	0.095
Fluoranthene	U	0.095	ug/L	1	.2	0.19	0.070	0.095
Pyrene	U	0.095	ug/L	1	.2	0.19	0.056	0.095
Benzo(a)anthracene	U	0.095	ug/L	1	.2	0.19	0.044	0.095
Chrysene	U	0.095	ug/L	1	.2	0.19	0.034	0.095
Benzo(b)Fluoranthene	U	0.095	ug/L	1	.2	0.19	0.085	0.095
Benzo(k)fluoranthene	U	0.095	ug/L	1	.2	0.19	0.047	0.095
Benzo(a)pyrene	U	0.095	ug/L	1	.2	0.19	0.063	0.095
Indeno(1,2,3-cd)pyrene	U	0.095	ug/L	1	.2	0.19	0.050	0.095
Dibenzo(a,h)anthracene	U	0.095	ug/L	1	.2	0.19	0.067	0.095
Benzo(g,h,i)perylene	U	0.095	ug/L	1	.2	0.19	0.062	0.095
2-Methylnaphthalene-D10		68.3	%					
Fluorene-D10		66.1	%					
Pyrene-D10		68.4	%					

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Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\N3648.D
Report Date: 02-Aug-2021 10:51

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072921.b\N3648.D
Lab Smp Id: SO4724-6 Client Smp ID: DW-FD-SUMMER2021
Inj Date : 29-JUL-2021 15:57
Operator : JCG Inst ID: gcms-n.i
Smp Info : SO4724-6
Misc Info : WG303383,WG303222,WG303306-4
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N072921.b\NSPSIM94.m
Meth Date : 30-Jul-2021 08:11 gcms-n.i Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27 Cal File: N3623.D
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: sw8270sim+1mn.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

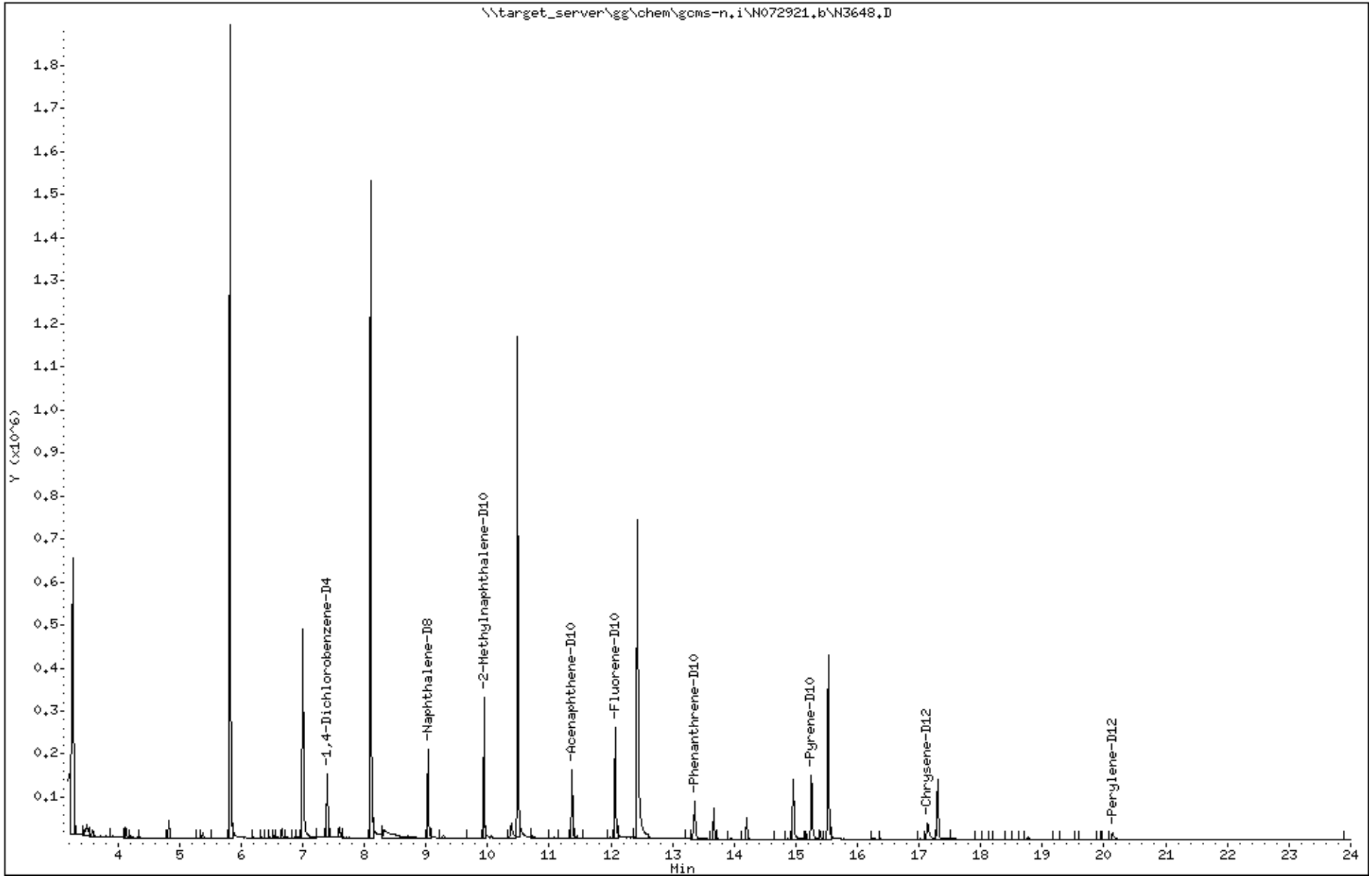
Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.050	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	7.400	7.390	(1.000)	52569	0.80000	(aQ)	
*	27 Naphthalene-D8	136	9.033	9.022	(1.000)	184278	0.80000	(a)	
$	33 2-Methylnaphthalene-D10	152	9.937	9.937	(1.100)	167510	1.36628	1.30	
*	48 Acenaphthene-D10	164	11.369	11.369	(1.000)	94217	0.80000	(a)	
$	56 Fluorene-D10	174	12.067	12.067	(1.061)	146298	1.32134	1.26	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	134926	0.80000	(a)	
$	73 Pyrene-D10	212	15.251	15.262	(0.889)	150907	1.36917	1.30	
*	78 Chrysene-D12	240	17.150	17.139	(1.000)	58151	0.80000	(a)	
*	85 Perylene-D12	264	20.139	20.139	(1.000)	39188	0.80000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\N3648.D
Date : 29-JUL-2021 15:57
Client ID: DW-FD-SUMMER2021
Instrument: gcms-n.i
Sample Info: S04724-6
Volume Injected (uL): 1.0
Operator: JCG
Column phase: ZB5-MS
Column diameter: 0.25



Katahdin Analytical Services 2000029

Standards Data Section

Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SO4724
Project : LO-58 Nike Missile Battery Launch Site
Instrument ID: GCMS-N
Lab File IDs : N3620.D N3619.D N3618.D N3621.D N3622.D N3623.D
Column ID:
Calibration Date(s): 28-JUL-21 15:35, 28-JUL-21 18:27

	0.200000(Level 1	0.500000(Level 2	2.0000 Level 3	7.0000 Level 4	10.0000 Level 5	15.0000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
Naphthalene	1.02355	0.94751	1.09469	1.11856	1.00950	1.03036	AVG		1.03736		5.93777	15.00000	O
2-Methylnaphthalene	0.90018	0.74933	0.77426	0.75785	0.67430	0.68498	AVG		0.75682		10.7153	15.00000	O
1-Methylnaphthalene	0.75290	0.64417	0.69734	0.70856	0.63161	0.64724	AVG		0.68030		6.93498	15.00000	O
Acenaphthylene	2.12770	1.94121	2.14214	2.18884	1.98367	2.00841	AVG		2.06533		4.85916	15.00000	O
Acenaphthene	1.32966	1.21069	1.28021	1.32810	1.18306	1.24902	AVG		1.26345		4.78815	15.00000	O
Fluorene	1.40044	1.26464	1.34501	1.40140	1.26852	1.35184	AVG		1.33864		4.52744	15.00000	O
Phenanthrene	1.04442	1.02259	1.12476	1.19588	1.10730	1.12736	AVG		1.10372		5.67363	15.00000	O
Anthracene	1.63108	1.30451	1.26975	1.29719	1.18323	1.13094	AVG		1.30278		13.4152	15.00000	O
Fluoranthene	1.13920	0.99642	1.05835	1.13206	1.01873	1.03162	AVG		1.06273		5.64165	15.00000	O
Pyrene	2.67166	2.40601	2.36732	2.63612	2.29363	2.07568	AVG		2.40840		9.22355	15.00000	O
Benzo(a)anthracene	1.28977	1.10884	1.31308	1.35810	1.27346	1.24544	AVG		1.26478		6.74911	15.00000	O
Chrysene	1.92218	1.68787	1.59403	1.55897	1.41197	1.34135	AVG		1.58606		13.0537	15.00000	O
Benzo(b)fluoranthene	1.14773	1.00338	1.10104	1.29337	1.25425	1.36514	AVG		1.19415		11.2294	15.00000	O
Benzo(k)fluoranthene	2.20861	1.87297	1.89924	2.01410	1.77215	1.83724	AVG		1.93405		8.08710	15.00000	O
Benzo(a)pyrene	1.24975	1.12246	1.19279	1.23475	1.14552	1.22427	AVG		1.19493		4.29173	15.00000	O
Indeno(1,2,3-cd)pyrene	9449	21307	60711	193930	268280	468012	LNR	0.000e+00	0.31440		0.99743	0.99000	O
Dibenzo(a,h)anthracene	0.61222	0.54574	0.66978	0.70599	0.62606	0.67280	AVG		0.63876		8.90016	15.00000	O
Benzo(g,h,i)perylene	0.90035	0.78844	0.84013	0.83848	0.74164	0.76017	AVG		0.81153		7.28750	15.00000	O
2-Methylnaphthalene-D10	0.52345	0.48991	0.58885	0.56694	0.50733	0.51704	AVG		0.53225		7.09490	15.00000	
Fluorene-D10	0.99900	0.88623	0.94993	0.99091	0.89092	0.92375	AVG		0.94012		5.15308	15.00000	
Pyrene-D10	1.68962	1.48498	1.49980	1.65890	1.44982	1.31465	AVG		1.51629		9.17222	15.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
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sales@katahdinlab.com

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3624.D
Report Date: 29-Jul-2021 08:58

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: 021497
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: WG303306-8
Level: LOW Operator: JCG
Data Type: MS DATA SampleType: INDCHECK
SpikeList File: SIM_IND_CHK5.spk Quant Type: ISTD
Sublist File: all.sub
Method File: \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Misc Info: WG303306,WG303306,WG303306-4

SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
2	1,4-Dioxane	5.00	4.68	93.66	80-120
3	N-Nitrosodimethyla	5.00	4.44	88.81	80-120
4	Pyridine	5.00	5.19	103.81	80-120
5	Benzaldehyde	5.00	1.53	30.62*	80-120
7	Bis(2-Chloroethyl)	5.00	4.81	96.12	80-120
6	Phenol	5.00	5.15	103.04	80-120
8	2-Chlorophenol	5.00	4.80	96.12	80-120
9	1,3-Dichlorobenzen	5.00	4.70	93.92	80-120
11	1,4-Dichlorobenzen	5.00	4.80	96.04	80-120
12	1,2-Dichlorobenzen	5.00	4.74	94.85	80-120
14	2,2'-Oxybis(1-chlo	5.00	3.40	68.11*	80-120
13	2-Methylphenol	5.00	5.09	101.75	80-120
15	Acetophenone	5.00	4.82	96.42	80-120
16	N-Nitroso-di-n-pro	5.00	4.56	91.13	80-120
18	Hexachloroethane	5.00	4.80	95.92	80-120
17	3&4-Methylphenol	5.00	4.96	99.11	80-120
19	Nitrobenzene	5.00	5.10	102.01	80-120
20	Isophorone	5.00	4.87	97.35	80-120
21	2-Nitrophenol	5.00	4.76	95.32	80-120
22	2,4-Dimethylphenol	5.00	4.46	89.24	80-120
23	bis(2-Chloroethoxy	5.00	4.54	90.80	80-120
24	Benzoic acid	5.00	6.89	137.76*	80-120
25	2,4-Dichlorophenol	5.00	4.81	96.28	80-120
26	1,2,4-Trichloroben	5.00	5.04	100.81	80-120
28	Naphthalene	5.00	4.83	96.67	80-120
29	4-Chloroaniline	5.00	4.70	94.11	80-120
30	Hexachlorobutadien	5.00	4.81	96.17	80-120
31	Caprolactam	5.00	4.59	91.85	80-120
34	2-Methylnaphthalen	5.00	4.42	88.36	80-120
32	4-Chloro-3-Methylp	5.00	4.76	95.28	80-120
35	1-Methylnaphthalen	5.00	4.77	95.32	80-120
37	1,2,4,5-Tetrachlor	5.00	4.80	96.09	80-120
36	Hexachlorocyclopen	5.00	3.70	73.91*	80-120
39	2,4,6-Trichlorophe	5.00	4.77	95.44	80-120
40	2,4,5-Trichlorophe	5.00	4.76	95.30	80-120
42	2-Chloronaphthalen	5.00	5.00	100.09	80-120
41	1,1'-Biphenyl	5.00	4.83	96.56	80-120
43	2-Nitroaniline	5.00	4.70	94.08	80-120
44	Dimethyl Phthalate	5.00	5.06	101.22	80-120
46	Acenaphthylene	5.00	4.26	85.27	80-120

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3624.D
Report Date: 29-Jul-2021 08:58

	SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
45	2,6-Dinitrotoluene	5.00	4.93	98.59	80-120
49	Acenaphthene	5.00	4.77	95.50	80-120
47	3-Nitroaniline	5.00	3.92	78.36*	80-120
50	2,4-Dinitrophenol	5.00	5.04	100.75	80-120
52	Dibenzofuran	5.00	4.82	96.40	80-120
53	2,4-Dinitrotoluene	5.00	4.50	90.07	80-120
54	2,3,4,6-Tetrachlor	5.00	4.09	81.75	80-120
51	4-Nitrophenol	5.00	2.98	59.61*	80-120
55	Diethylphthalate	5.00	4.96	99.28	80-120
57	Fluorene	5.00	4.69	93.86	80-120
58	4-Chlorophenyl-phe	5.00	4.71	94.19	80-120
60	4,6-Dinitro-2-Meth	5.00	4.96	99.16	80-120
59	4-Nitroaniline	5.00	4.44	88.82	80-120
61	N-Nitrosodiphenyla	5.00	3.93	78.62*	80-120
62	4-Bromophenyl-phen	5.00	4.35	87.00	80-120
63	Hexachlorobenzene	5.00	4.27	85.38	80-120
64	Atrazine	5.00	4.62	92.39	80-120
65	Pentachlorophenol	5.00	5.03	100.64	80-120
67	Phenanthrene	5.00	4.82	96.39	80-120
68	Anthracene	5.00	4.59	91.83	80-120
69	Carbazole	5.00	5.18	103.51	80-120
70	Di-n-butylphthalat	5.00	4.99	99.77	80-120
72	Fluoranthene	5.00	4.90	97.95	80-120
74	Pyrene	5.00	4.32	86.50	80-120
75	Butylbenzylphthala	5.00	4.68	93.62	80-120
77	Benzo(a)anthracene	5.00	4.40	87.98	80-120
79	Chrysene	5.00	4.68	93.65	80-120
76	3,3'-Dichlorobenzi	5.00	2.98	59.56*	80-120
80	bis(2-Ethylhexyl)p	5.00	4.63	92.59	80-120
81	Di-n-octylphthalat	5.00	4.64	92.78	80-120
82	Benzo(b)fluoranthe	5.00	4.73	94.53	80-120
83	Benzo(k)fluoranthe	5.00	4.87	97.40	80-120
84	Benzo(a)pyrene	5.00	3.92	78.37*	80-120
86	Indeno(1,2,3-cd)py	5.00	4.49	89.83	80-120
87	Dibenzo(a,h)anthra	5.00	4.71	94.12	80-120
88	Benzo(g,h,i)peryle	5.00	4.42	88.34	80-120

	SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1	1,4-Dioxane-d8	2.00	0.000	*	26-115
$ 33	2-Methylnaphthale	2.00	0.000	*	43-92
$ 38	2,4-Dibromophenol	4.00	0.000	*	10-130
$ 56	Fluorene-D10	2.00	0.000	*	29-101
$ 71	Flouranthene-d10	2.00	0.000	*	30-150
$ 73	Pyrene-D10	2.00	0.000	*	53-166

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3618.D
Report Date: 29-Jul-2021 10:25

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3618.D
Lab Smp Id: WG303306-4
Inj Date : 28-JUL-2021 15:35
Operator : JCG   Inst ID: gcms-n.i
Smp Info : WG303306-4
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 09:00 cgomez   Quant Type: ISTD
Cal Date : 28-JUL-2021 15:35   Cal File: N3618.D
Als bottle: 2   Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
$	1 1,4-Dioxane-d8	96	3.480	3.427	(0.471)	65098	2.00000	2.01	
	2 1,4-Dioxane	88	3.522	3.480	(0.477)	69646	2.00000	1.98	
	3 N-Nitrosodimethylamine	74	3.963	3.921	(0.536)	93379	2.00000	1.96	
	4 Pyridine	79	4.015	3.952	(0.543)	135853	2.00000	1.98	
	5 Benzaldehyde	77	6.837	6.826	(0.925)	102234	2.00000	2.33	
	6 Phenol	94	7.028	7.017	(0.951)	458516	4.50000	4.62	
	7 Bis(2-Chloroethyl)ether	93	7.068	7.068	(0.956)	173865	2.00000	1.99	
	8 2-Chlorophenol	128	7.149	7.138	(0.967)	440452	4.50000	4.40	
	9 1,3-Dichlorobenzene	146	7.320	7.319	(0.990)	211765	2.00000	2.01	
*	10 1,4-Dichlorobenzene-D4	152	7.390	7.390	(1.000)	56073	0.80000	(aQ)	
	11 1,4-Dichlorobenzene	146	7.410	7.410	(1.003)	213195	2.00000	2.01	
	12 1,2-Dichlorobenzene	146	7.601	7.601	(1.029)	203247	2.00000	2.03	
	13 2-Methylphenol	108	7.773	7.772	(1.052)	355166	4.50000	4.22	
	14 2,2'-Oxybis(1-chloropropane)	45	7.762	7.752	(1.050)	226641	2.00000	2.01(Q)	
	15 Acetophenone	105	7.913	7.903	(0.877)	216881	2.00000	2.16	
	16 N-Nitroso-di-n-propylamine	70	7.924	7.933	(1.072)	110591	2.00000	1.96	
	17 3&4-Methylphenol	108	7.974	7.984	(1.079)	377501	4.50000	4.48	
	18 Hexachloroethane	117	8.034	8.024	(1.087)	76020	2.00000	2.02	
	19 Nitrobenzene	77	8.115	8.115	(0.899)	173788	2.00000	2.12	
	20 Isophorone	82	8.434	8.445	(0.935)	330611	2.00000	2.24	
	21 2-Nitrophenol	139	8.541	8.541	(0.947)	220222	4.50000	4.67	

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3618.D
Report Date: 29-Jul-2021 10:25

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
	22 2,4-Dimethylphenol	107	8.648	8.648	(0.959)	408094	4.50000	4.80	
	23 bis(2-Chloroethoxy)methane	93	8.744	8.744	(0.969)	201164	2.00000	2.10	
	24 Benzoic acid	105	8.787	8.851	(0.974)	151061	4.50000	5.44	
	25 2,4-Dichlorophenol	162	8.883	8.883	(0.985)	332867	4.50000	4.82	
	26 1,2,4-Trichlorobenzene	180	8.969	8.969	(0.994)	146232	2.00000	2.12	
*	27 Naphthalene-D8	136	9.022	9.022	(1.000)	190665	0.80000	(a)	
	28 Naphthalene	128	9.055	9.054	(1.004)	521800	2.00000	2.11	
	29 4-Chloroaniline	127	9.161	9.161	(1.015)	171853	2.00000	2.19	
	30 Hexachlorobutadiene	225	9.247	9.247	(1.025)	71403	2.00000	2.11	
	31 Caprolactam	113	9.613	9.652	(1.065)	46163	2.00000	1.88	
	32 4-Chloro-3-Methylphenol	107	9.849	9.859	(1.092)	341338	4.50000	4.82	
$	33 2-Methylnaphthalene-D10	152	9.938	9.937	(1.101)	280684	2.00000	2.21	
	34 2-Methylnaphthalene	142	9.977	9.977	(1.106)	369063	2.00000	2.05	
	35 1-Methylnaphthalene	142	10.105	10.105	(1.120)	332394	2.00000	2.05	
	36 Hexachlorocyclopentadiene	237	10.213	10.213	(0.898)	58021	2.00000	1.78	
	37 1,2,4,5-Tetrachlorobenzene	216	10.213	10.213	(0.898)	139567	2.00000	2.10	
$	38 2,4-Dibromophenol	252	10.371	10.371	(0.912)	67031	2.00000	2.01	
	39 2,4,6-Trichlorophenol	196	10.390	10.390	(0.914)	212915	4.50000	4.87	
	40 2,4,5-Trichlorophenol	196	10.449	10.459	(0.919)	266202	4.50000	4.61	
	41 1,1'-Biphenyl	154	10.607	10.607	(0.933)	403459	2.00000	2.13	
	42 2-Chloronaphthalene	164	10.618	10.629	(0.934)	106393	2.00000	2.06	
	43 2-Nitroaniline	65	10.781	10.792	(0.948)	75306	2.00000	1.86	
	44 Dimethyl Phthalate	163	11.043	11.053	(0.971)	794663	4.50000	4.41	
	45 2,6-Dinitrotoluene	165	11.108	11.119	(0.977)	87579	2.00000	2.09	
	46 Acenaphthylene	152	11.174	11.173	(0.983)	546395	2.00000	2.07	
	47 3-Nitroaniline	138	11.337	11.359	(0.997)	47117	2.00000	2.42(M)	M9
*	48 Acenaphthene-D10	164	11.370	11.369	(1.000)	102028	0.80000	(a)	
	49 Acenaphthene	153	11.402	11.413	(1.003)	326542	2.00000	2.03	
	50 2,4-Dinitrophenol	184	11.490	11.489	(1.011)	58308	4.50000	4.35	
	51 4-Nitrophenol	109	11.642	11.664	(1.024)	79125	4.50000	4.16(QMH)	M6
	52 Dibenzofuran	168	11.642	11.642	(1.024)	437511	2.00000	2.07	
	53 2,4-Dinitrotoluene	165	11.653	11.653	(1.025)	100982	2.00000	1.84	
	54 2,3,4,6-Tetrachlorophenol	232	11.849	11.849	(1.042)	169546	4.50000	4.52	
	55 Diethylphthalate	149	11.991	12.001	(1.055)	826831	4.50000	4.40	
$	56 Fluorene-D10	174	12.067	12.067	(1.061)	242299	2.00000	2.02	
	57 Fluorene	166	12.100	12.110	(1.064)	343071	2.00000	2.01	
	58 4-Chlorophenyl-phenylether	204	12.122	12.121	(1.066)	158260	2.00000	1.99	
	59 4-Nitroaniline	138	12.209	12.187	(1.074)	41972	2.00000	1.88	
	60 4,6-Dinitro-2-Methylphenol	198	12.209	12.208	(0.914)	93022	4.50000	4.36	
	61 N-Nitrosodiphenylamine	169	12.285	12.285	(0.920)	277946	2.00000	2.10	
	62 4-Bromophenyl-phenylether	248	12.773	12.773	(0.957)	79256	2.00000	1.92	
	63 Hexachlorobenzene	284	12.854	12.854	(0.963)	71372	2.00000	1.99	
	64 Atrazine	200	13.039	13.039	(0.977)	78580	2.00000	2.21	
	65 Pentachlorophenol	266	13.154	13.142	(0.985)	100004	4.50000	5.19	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	145626	0.80000	(a)	
	67 Phenanthrene	178	13.385	13.385	(1.003)	409485	2.00000	2.04	
	68 Anthracene	178	13.454	13.454	(1.008)	462271	2.00000	1.95	
	69 Carbazole	167	13.685	13.685	(1.025)	315739	2.00000	2.17	
	70 Di-n-butylphthalate	149	14.197	14.196	(1.063)	1388993	4.50000	4.51	
$	71 Flouranthene-d10	212	14.963	14.963	(1.121)	284004	2.00000	2.01	
	72 Fluoranthene	202	14.985	14.985	(1.122)	385310	2.00000	1.99	
$	73 Pyrene-D10	212	15.263	15.262	(0.891)	254471	2.00000	1.98	
	74 Pyrene	202	15.285	15.285	(0.892)	401663	2.00000	1.96	
	75 Butylbenzylphthalate	149	16.262	16.262	(0.949)	514310	4.50000	4.38	

LCG

11:00 am, Aug 02, 2021

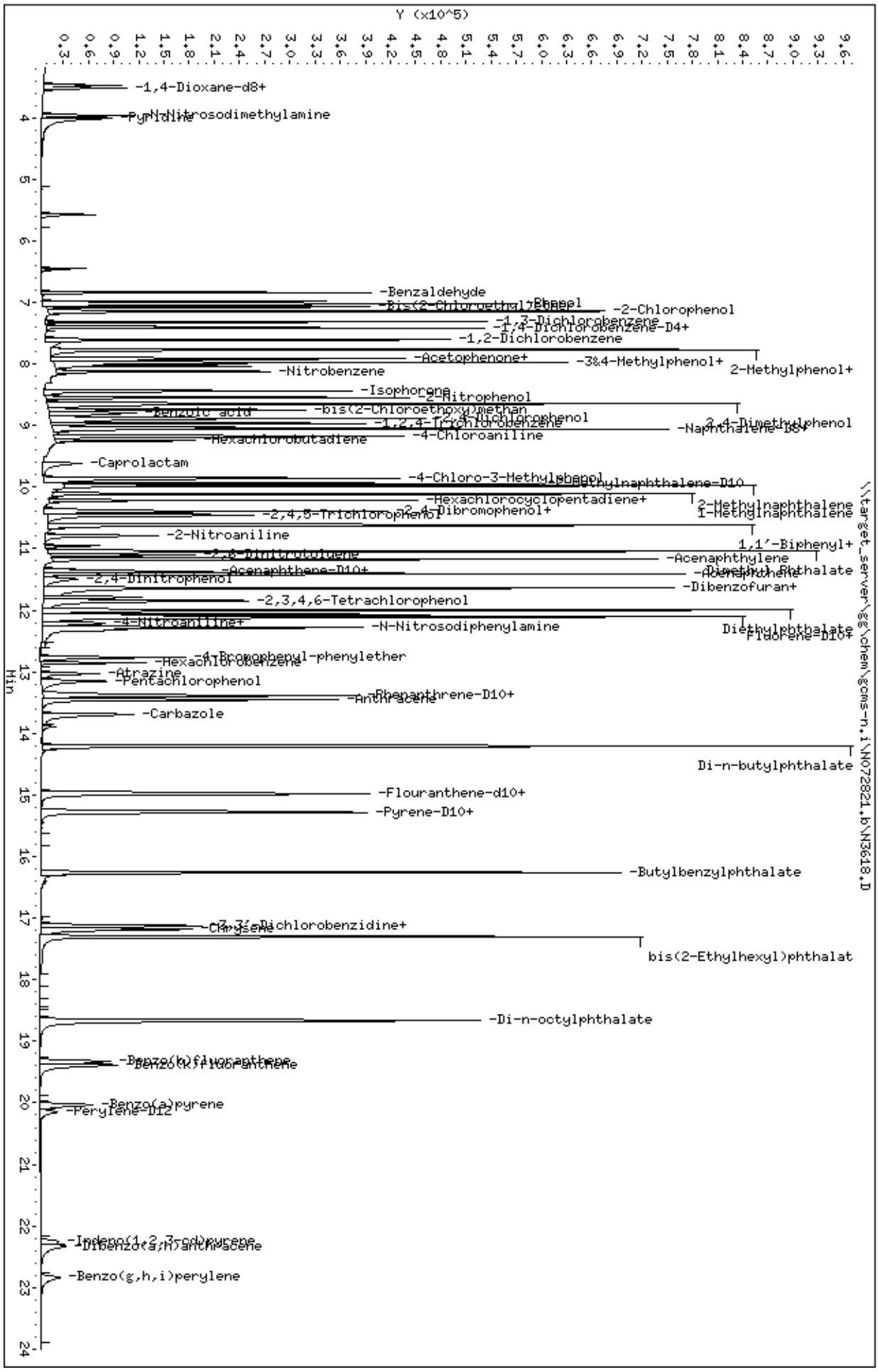
Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3618.D
Report Date: 29-Jul-2021 10:25

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	76 3,3'-Dichlorobenzidine	252	17.150	17.128	(1.001)	47369	2.00000	2.17	
	77 Benzo(a)anthracene	228	17.128	17.117	(0.999)	222791	2.00000	2.08	
*	78 Chrysene-D12	240	17.139	17.139	(1.000)	67868	0.80000	(a)	
	79 Chrysene	228	17.183	17.183	(1.003)	270459	2.00000	2.01	
	80 bis(2-Ethylhexyl)phthalate	149	17.306	17.305	(1.010)	785214	4.50000	4.60	
	81 Di-n-octylphthalate	149	18.669	18.657	(1.089)	1168758	4.50000	4.73	
	82 Benzo(b)fluoranthene	252	19.331	19.320	(0.959)	142070	2.00000	1.84	
	83 Benzo(k)fluoranthene	252	19.387	19.376	(0.962)	245064	2.00000	1.96(H)	
	84 Benzo(a)pyrene	252	20.027	20.016	(0.994)	153909	2.00000	2.00	
*	85 Perylene-D12	264	20.151	20.139	(1.000)	51613	0.80000	(a)	
	86 Indeno(1,2,3-cd)pyrene	276	22.250	22.227	(1.298)	60711	2.00000	2.28(M)	M3
	87 Dibenzo(a,h)anthracene	278	22.329	22.306	(1.108)	86423	2.00000	2.10	
	88 Benzo(g,h,i)perylene	276	22.834	22.811	(1.133)	108404	2.00000	2.07	
M	89 Total PAHs	100				5387825	36.0000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

11:00 am, Aug 02, 2021


Data File: \\target_server\gg\chem\gcms-n,i\N072821,b\N3618,D
Date : 28-JUL-2021 15:35
Client ID:
Sample Info: WG303306-4
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
Y (x10^5)
Min
\\target_server\gg\chem\gcms-n,i\N072821,b\N3618,D
-1,4-Dioxane-d8+
-Pyridine
-N-Nitrosodimethylamine
-Benzaldehyde
-Phenol
-2-Chlorophenol
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-Acetophenone+
-3&4-Methylphenol+
2-Methylphenol+
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-Benzoic acid
-bis(2-Chloroethoxy)methan
-2,4-Dichlorophenol
-1,2,4-Trichlorobenzene
2,4-Dimethylphenol
-Naphthalene-D8+
-Hexachlorobutadiene
-4-Chloroaniline
-Caprolactam
-4-Chloro-3-Methylphenol
-2-Methylnaphthalene-D10
-Hexachlorocyclopentadiene+
2-Methylnaphthalene
-2,4,5-Trichlorophenol
-2,4-Dibromophenol+
1-Methylnaphthalene
-2-Nitroaniline
1,1'-Biphenyl+
-2,6-Dinitrotoluene
-Acenaphthylene
-Acenaphthene-D10+
-Acenaphthene
-2,4-Dinitrophenol
-Dibenzofuran+
-2,3,4,6-Tetrachlorophenol
-4-Nitroaniline+
-N-Nitrosodiphenylamine
Diethylphthalate
Fluorene-D10+
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
Di-n-butylphthalate
-Flouranthene-d10+
-Pyrene-D10+
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-Chrysene
bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene
-Benzo(k)fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene
-Dibenzo(a,h)anthracene
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3619.D
Report Date: 29-Jul-2021 10:25

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3619.D
Lab Smp Id: WG303306-3
Inj Date : 28-JUL-2021 16:07
Operator : JCG   Inst ID: gcms-n.i
Smp Info : WG303306-3
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 09:00 cgomez   Quant Type: ISTD
Cal Date : 28-JUL-2021 16:07   Cal File: N3619.D
Als bottle: 3   Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
$	1 1,4-Dioxane-d8	96	3.501	3.427	(0.474)	15912	0.50000	0.479(a)	
	2 1,4-Dioxane	88	3.543	3.480	(0.479)	17133	0.50000	0.475(a)	
	3 N-Nitrosodimethylamine	74	3.994	3.921	(0.541)	22915	0.50000	0.470	
	4 Pyridine	79	4.131	3.952	(0.559)	24435	0.50000	0.350	
	5 Benzaldehyde	77	6.836	6.826	(0.925)	27881	0.50000	0.616	
	6 Phenol	94	7.028	7.017	(0.951)	212560	2.00000	2.09	
	7 Bis(2-Chloroethyl)ether	93	7.078	7.068	(0.958)	42643	0.50000	0.476	
	8 2-Chlorophenol	128	7.148	7.138	(0.967)	212933	2.00000	2.08	
	9 1,3-Dichlorobenzene	146	7.319	7.319	(0.990)	51682	0.50000	0.480	
*	10 1,4-Dichlorobenzene-D4	152	7.390	7.390	(1.000)	57441	0.80000	(a)	
	11 1,4-Dichlorobenzene	146	7.410	7.410	(1.003)	51368	0.50000	0.474	
	12 1,2-Dichlorobenzene	146	7.611	7.601	(1.030)	49534	0.50000	0.484	
	13 2-Methylphenol	108	7.772	7.772	(1.052)	165807	2.00000	1.92	
	14 2,2'-Oxybis(1-chloropropane)	45	7.762	7.752	(1.050)	55026	0.50000	0.477(Q)	
	15 Acetophenone	105	7.913	7.903	(0.876)	49109	0.50000	0.430	
	16 N-Nitroso-di-n-propylamine	70	7.933	7.933	(1.074)	24622	0.50000	0.426	
	17 3&4-Methylphenol	108	7.974	7.984	(1.079)	169723	2.00000	1.97	
	18 Hexachloroethane	117	8.034	8.024	(1.087)	18581	0.50000	0.482	
	19 Nitrobenzene	77	8.125	8.115	(0.899)	45422	0.50000	0.486	
	20 Isophorone	82	8.445	8.445	(0.935)	69548	0.50000	0.414	
	21 2-Nitrophenol	139	8.541	8.541	(0.946)	102417	2.00000	1.91	

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3619.D
Report Date: 29-Jul-2021 10:25

							AMOUNTS		
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	22 2,4-Dimethylphenol	107	8.648	8.648	(0.957)	181926	2.00000	1.88	
	23 bis(2-Chloroethoxy)methane	93	8.744	8.744	(0.968)	39680	0.50000	0.364	
	24 Benzoic acid	105	8.873	8.851	(0.982)	29597	2.00000	0.935(a)	
	25 2,4-Dichlorophenol	162	8.883	8.883	(0.983)	149039	2.00000	1.90	
	26 1,2,4-Trichlorobenzene	180	8.969	8.969	(0.993)	37723	0.50000	0.479	
*	27 Naphthalene-D8	136	9.033	9.022	(1.000)	217184	0.80000	(a)	
	28 Naphthalene	128	9.054	9.054	(1.002)	128615	0.50000	0.457	
	29 4-Chloroaniline	127	9.172	9.161	(1.015)	43071	0.50000	0.481(a)	
	30 Hexachlorobutadiene	225	9.258	9.247	(1.025)	17112	0.50000	0.443	
	31 Caprolactam	113	9.632	9.652	(1.066)	8919	0.50000	0.320	
	32 4-Chloro-3-Methylphenol	107	9.849	9.859	(1.090)	155133	2.00000	1.92	
$	33 2-Methylnaphthalene-D10	152	9.937	9.937	(1.100)	66500	0.50000	0.460(a)	
	34 2-Methylnaphthalene	142	9.977	9.977	(1.104)	101714	0.50000	0.495	
	35 1-Methylnaphthalene	142	10.105	10.105	(1.119)	87439	0.50000	0.473	
	36 Hexachlorocyclopentadiene	237	10.213	10.213	(0.898)	12633	0.50000	0.369	
	37 1,2,4,5-Tetrachlorobenzene	216	10.213	10.213	(0.898)	33921	0.50000	0.488	
$	38 2,4-Dibromophenol	252	10.371	10.371	(0.912)	16339	0.50000	0.468(aQ)	
	39 2,4,6-Trichlorophenol	196	10.390	10.390	(0.914)	82128	2.00000	1.79	
	40 2,4,5-Trichlorophenol	196	10.449	10.459	(0.919)	134647	2.00000	2.22	
	41 1,1'-Biphenyl	154	10.607	10.607	(0.933)	98734	0.50000	0.497	
	42 2-Chloronaphthalene	164	10.629	10.629	(0.935)	26154	0.50000	0.482	
	43 2-Nitroaniline	65	10.781	10.792	(0.948)	16857	0.50000	0.398	
	44 Dimethyl Phthalate	163	11.043	11.053	(0.971)	350419	2.00000	1.85	
	45 2,6-Dinitrotoluene	165	11.108	11.119	(0.977)	19467	0.50000	0.444	
	46 Acenaphthylene	152	11.173	11.173	(0.983)	129742	0.50000	0.470	
	47 3-Nitroaniline	138	11.337	11.359	(0.997)	12223	0.50000	0.599(M)	M9
*	48 Acenaphthene-D10	164	11.369	11.369	(1.000)	106937	0.80000	(a)	
	49 Acenaphthene	153	11.402	11.413	(1.003)	80917	0.50000	0.479	
	50 2,4-Dinitrophenol	184	11.489	11.489	(1.011)	17778	2.00000	1.33	
	51 4-Nitrophenol	109	11.642	11.664	(1.024)	30462	2.00000	1.58(QM)	M6
	52 Dibenzofuran	168	11.642	11.642	(1.024)	106340	0.50000	0.480	
	53 2,4-Dinitrotoluene	165	11.653	11.653	(1.025)	21632	0.50000	0.377(Q)	
	54 2,3,4,6-Tetrachlorophenol	232	11.849	11.849	(1.042)	70891	2.00000	1.80	
	55 Diethylphthalate	149	11.991	12.001	(1.055)	367925	2.00000	1.87	
$	56 Fluorene-D10	174	12.067	12.067	(1.061)	59232	0.50000	0.471(a)	
	57 Fluorene	166	12.100	12.110	(1.064)	84523	0.50000	0.472	
	58 4-Chlorophenyl-phenylether	204	12.121	12.121	(1.066)	39431	0.50000	0.473	
	59 4-Nitroaniline	138	12.230	12.187	(1.076)	11124	0.50000	0.475	
	60 4,6-Dinitro-2-Methylphenol	198	12.198	12.208	(0.914)	32248	2.00000	1.57(Q)	
	61 N-Nitrosodiphenylamine	169	12.285	12.285	(0.920)	65012	0.50000	0.490	
	62 4-Bromophenyl-phenylether	248	12.773	12.773	(0.957)	20598	0.50000	0.500	
	63 Hexachlorobenzene	284	12.854	12.854	(0.963)	17530	0.50000	0.489	
	64 Atrazine	200	13.027	13.039	(0.976)	16485	0.50000	0.463	
	65 Pentachlorophenol	266	13.142	13.142	(0.984)	35691	2.00000	1.85(M)	M9
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	145729	0.80000	(a)	
	67 Phenanthrene	178	13.373	13.385	(1.002)	93138	0.50000	0.463	
	68 Anthracene	178	13.442	13.454	(1.007)	118816	0.50000	0.501	
	69 Carbazole	167	13.685	13.685	(1.025)	78289	0.50000	0.537(M)	M9
	70 Di-n-butylphthalate	149	14.196	14.196	(1.063)	588740	2.00000	1.91	
$	71 Flouranthene-d10	212	14.951	14.963	(1.120)	66811	0.50000	0.472(a)	
	72 Fluoranthene	202	14.974	14.985	(1.122)	90755	0.50000	0.469	
$	73 Pyrene-D10	212	15.251	15.262	(0.889)	59389	0.50000	0.490(a)	
	74 Pyrene	202	15.285	15.285	(0.891)	96224	0.50000	0.500	
	75 Butylbenzylphthalate	149	16.262	16.262	(0.948)	215176	2.00000	1.94	

11:01 am, Aug 02, 2021

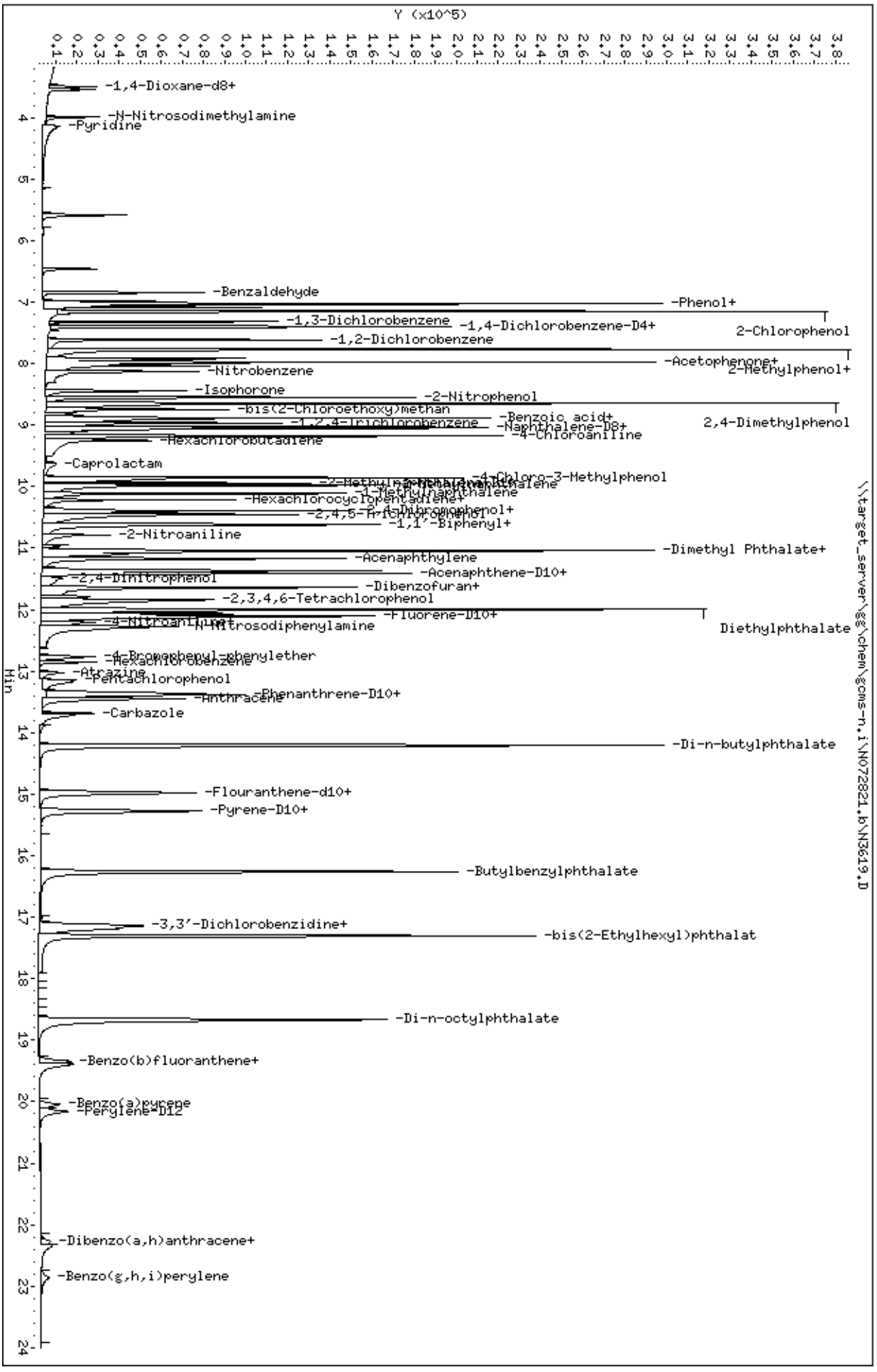
Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3619.D
Report Date: 29-Jul-2021 10:25

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	76	3,3'-Dichlorobenzidine	252	17.161	17.128	(1.001)	10480	0.50000	0.459(Q)	
	77	Benzo(a)anthracene	228	17.128	17.117	(0.999)	44346	0.50000	0.438	
*	78	Chrysene-D12	240	17.150	17.139	(1.000)	63989	0.80000	(a)	
	79	Chrysene	228	17.194	17.183	(1.003)	67503	0.50000	0.532	
	80	bis(2-Ethylhexyl)phthalate	149	17.305	17.305	(1.009)	316747	2.00000	1.97	
	81	Di-n-octylphthalate	149	18.668	18.657	(1.089)	463594	2.00000	1.99	
	82	Benzo(b)fluoranthene	252	19.342	19.320	(0.959)	29204	0.50000	0.420	
	83	Benzo(k)fluoranthene	252	19.398	19.376	(0.962)	54514	0.50000	0.484(M)	M6
	84	Benzo(a)pyrene	252	20.038	20.016	(0.994)	32670	0.50000	0.470	
*	85	Perylene-D12	264	20.162	20.139	(1.000)	46569	0.80000	(a)	
	86	Indeno(1,2,3-cd)pyrene	276	22.272	22.227	(1.299)	21307	0.50000	0.847(H)	
	87	Dibenzo(a,h)anthracene	278	22.340	22.306	(1.108)	15884	0.50000	0.427	
	88	Benzo(g,h,i)perylene	276	22.856	22.811	(1.134)	22948	0.50000	0.486	
M	89	Total PAHs	100				1300259	9.00000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

11:01 am, Aug 02, 2021


Data File: \\target_server\gg\chem\gcms-n,i\N072821,b\N3619,D
Date : 28-JUL-2021 16:07
Client ID:
Sample Info: WG303306-3
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N072821,b\N3619,D
Y (x10^5)
Min
-1,4-Dioxane-d8+
-N-Nitrosodimethylamine
-Pyridine
-Benzaldehyde
-Phenol+
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
2-Chlorophenol
-1,2-Dichlorobenzene
-Acetophenone+
2-Methylphenol+
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-bis(2-Chloroethoxy)methan
-Benzoic acid+
-Naphthalene-D8+
2,4-Dimethylphenol
-1,2,4-Trichlorobenzene
-4-Chloroaniline
-Hexachlorobutadiene
-Caprolactam
-4-Chloro-3-Methylphenol
-2-Methylnaphthalene
-1-Methylnaphthalene
-Hexachlorocyclopentadiene+
-2,4,5-Trichlorophenol
-1,1'-Biphenyl+
-2-Nitroaniline
-Dimethyl Phthalate+
-Acenaphthylene
-Acenaphthene-D10+
-2,4-Dinitrophenol
-Dibenzofuran+
-2,3,4,6-Tetrachlorophenol
-Fluorene-D10+
-4-Nitroaniline
-N-Nitrosodiphenylamine
Diethylphthalate
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
-Di-n-butylphthalate
-Flouranthene-d10+
-Pyrene-D10+
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene+
-Benzo(a)pyrene
-Perylene-D12
-Dibenzo(a,h)anthracene+
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3620.D
Report Date: 29-Jul-2021 10:25

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3620.D
Lab Smp Id: WG303306-2
Inj Date : 28-JUL-2021 16:39
Operator : JCG   Inst ID: gcms-n.i
Smp Info : WG303306-2
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 09:00 cgomez   Quant Type: ISTD
Cal Date : 28-JUL-2021 16:39   Cal File: N3620.D
Als bottle: 4   Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
$	1 1,4-Dioxane-d8	96	3.511	3.427	(0.475)	6779	0.20000	0.215(a)	
	2 1,4-Dioxane	88	3.553	3.480	(0.480)	7761	0.20000	0.227(a)	
	3 N-Nitrosodimethylamine	74	4.005	3.921	(0.541)	9958	0.20000	0.216	
	4 Pyridine	79	4.288	3.952	(0.579)	8863	0.20000	0.134(a)	
	5 Benzaldehyde	77	6.846	6.826	(0.925)	11386	0.20000	0.265	
	6 Phenol	94	7.028	7.017	(0.950)	101665	1.00000	1.06	
	7 Bis(2-Chloroethyl)ether	93	7.078	7.068	(0.956)	17375	0.20000	0.205	
	8 2-Chlorophenol	128	7.158	7.138	(0.967)	104556	1.00000	1.08	
	9 1,3-Dichlorobenzene	146	7.330	7.319	(0.990)	21237	0.20000	0.208	
*	10 1,4-Dichlorobenzene-D4	152	7.400	7.390	(1.000)	54379	0.80000	(a)	
	11 1,4-Dichlorobenzene	146	7.420	7.410	(1.003)	21097	0.20000	0.206	
	12 1,2-Dichlorobenzene	146	7.611	7.601	(1.029)	20062	0.20000	0.207	
	13 2-Methylphenol	108	7.772	7.772	(1.050)	79454	1.00000	0.974(a)	
	14 2,2'-Oxybis(1-chloropropane)	45	7.772	7.752	(1.050)	22413	0.20000	0.205	
	15 Acetophenone	105	7.923	7.903	(0.877)	18929	0.20000	0.167(a)	
	16 N-Nitroso-di-n-propylamine	70	7.944	7.933	(1.073)	10785	0.20000	0.197(a)	
	17 3&4-Methylphenol	108	7.974	7.984	(1.078)	68759	1.00000	0.842(a)	
	18 Hexachloroethane	117	8.034	8.024	(1.086)	7627	0.20000	0.209	
	19 Nitrobenzene	77	8.135	8.115	(0.901)	21180	0.20000	0.228	
	20 Isophorone	82	8.445	8.445	(0.935)	29343	0.20000	0.176(a)	
	21 2-Nitrophenol	139	8.552	8.541	(0.947)	48083	1.00000	0.901(a)	

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3620.D
Report Date: 29-Jul-2021 10:25

							AMOUNTS		
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	22 2,4-Dimethylphenol	107	8.648	8.648	(0.957)	91052	1.00000	0.946	
	23 bis(2-Chloroethoxy)methane	93	8.744	8.744	(0.968)	14476	0.20000	0.134(a)	
	24 Benzoic acid	105	9.001	8.851	(0.996)	3206	1.00000	0.102(aQ)	
	25 2,4-Dichlorophenol	162	8.894	8.883	(0.985)	73008	1.00000	0.935	
	26 1,2,4-Trichlorobenzene	180	8.969	8.969	(0.993)	14257	0.20000	0.182(a)	
*	27 Naphthalene-D8	136	9.033	9.022	(1.000)	215731	0.80000	(a)	
	28 Naphthalene	128	9.054	9.054	(1.002)	55203	0.20000	0.197(a)	
	29 4-Chloroaniline	127	9.172	9.161	(1.015)	16007	0.20000	0.180(a)	
	30 Hexachlorobutadiene	225	9.258	9.247	(1.025)	8608	0.20000	0.224	
	31 Caprolactam	113	9.641	9.652	(1.067)	2698	0.20000	0.0973(aQ)	
	32 4-Chloro-3-Methylphenol	107	9.848	9.859	(1.090)	75758	1.00000	0.945(a)	
$	33 2-Methylnaphthalene-D10	152	9.937	9.937	(1.100)	28231	0.20000	0.197(a)	
	34 2-Methylnaphthalene	142	9.976	9.977	(1.104)	48549	0.20000	0.238	
	35 1-Methylnaphthalene	142	10.114	10.105	(1.120)	40606	0.20000	0.221	
	36 Hexachlorocyclopentadiene	237	10.212	10.213	(0.898)	4005	0.20000	0.117(aQ)	
	37 1,2,4,5-Tetrachlorobenzene	216	10.212	10.213	(0.898)	14784	0.20000	0.213	
$	38 2,4-Dibromophenol	252	10.370	10.371	(0.912)	6623	0.20000	0.190(a)	
	39 2,4,6-Trichlorophenol	196	10.389	10.390	(0.914)	34754	1.00000	0.760(a)	
	40 2,4,5-Trichlorophenol	196	10.448	10.459	(0.919)	72447	1.00000	1.20	
	41 1,1'-Biphenyl	154	10.606	10.607	(0.933)	42917	0.20000	0.217	
	42 2-Chloronaphthalene	164	10.628	10.629	(0.935)	11530	0.20000	0.213	
	43 2-Nitroaniline	65	10.780	10.792	(0.948)	3837	0.20000	0.0909(a)	
	44 Dimethyl Phthalate	163	11.042	11.053	(0.971)	178890	1.00000	0.950(a)	
	45 2,6-Dinitrotoluene	165	11.107	11.119	(0.977)	7740	0.20000	0.177(a)	
	46 Acenaphthylene	152	11.173	11.173	(0.983)	56690	0.20000	0.206	
	47 3-Nitroaniline	138	11.336	11.359	(0.997)	5319	0.20000	0.262(QM)	M9
*	48 Acenaphthene-D10	164	11.369	11.369	(1.000)	106575	0.80000	(a)	
	49 Acenaphthene	153	11.401	11.413	(1.003)	35427	0.20000	0.210	
	50 2,4-Dinitrophenol	184	11.499	11.489	(1.012)	6683	1.00000	0.509(aM)	M9
	51 4-Nitrophenol	109	11.652	11.664	(1.025)	14374	1.00000	0.756(aM)	M9
	52 Dibenzofuran	168	11.641	11.642	(1.024)	46115	0.20000	0.209	
	53 2,4-Dinitrotoluene	165	11.652	11.653	(1.025)	7329	0.20000	0.128(aMH)	M9
	54 2,3,4,6-Tetrachlorophenol	232	11.848	11.849	(1.042)	34611	1.00000	0.884(aM)	M9
	55 Diethylphthalate	149	11.990	12.001	(1.055)	188080	1.00000	0.959(a)	
$	56 Fluorene-D10	174	12.066	12.067	(1.061)	26617	0.20000	0.212(a)	
	57 Fluorene	166	12.099	12.110	(1.064)	37313	0.20000	0.209	
	58 4-Chlorophenyl-phenylether	204	12.121	12.121	(1.066)	17376	0.20000	0.209	
	59 4-Nitroaniline	138	12.273	12.187	(1.080)	5814	0.20000	0.249(Q)	
	60 4,6-Dinitro-2-Methylphenol	198	12.208	12.208	(0.914)	13450	1.00000	0.629(aQ)	
	61 N-Nitrosodiphenylamine	169	12.284	12.285	(0.920)	27407	0.20000	0.197(aQM)	M9
	62 4-Bromophenyl-phenylether	248	12.772	12.773	(0.957)	10388	0.20000	0.240	
	63 Hexachlorobenzene	284	12.853	12.854	(0.963)	9293	0.20000	0.247	
	64 Atrazine	200	13.026	13.039	(0.976)	6812	0.20000	0.182(aM)	M9
	65 Pentachlorophenol	266	13.153	13.142	(0.985)	17052	1.00000	0.842(aM)	M9
*	66 Phenanthrene-D10	188	13.349	13.350	(1.000)	153023	0.80000	(a)	
	67 Phenanthrene	178	13.372	13.385	(1.002)	39955	0.20000	0.189(a)	
	68 Anthracene	178	13.442	13.454	(1.007)	62398	0.20000	0.250	
	69 Carbazole	167	13.684	13.685	(1.025)	35968	0.20000	0.235(M)	M9
	70 Di-n-butylphthalate	149	14.196	14.196	(1.063)	305806	1.00000	0.946(a)	
$	71 Flouranthene-d10	212	14.951	14.963	(1.120)	31786	0.20000	0.214(a)	
	72 Fluoranthene	202	14.973	14.985	(1.122)	43581	0.20000	0.214	
$	73 Pyrene-D10	212	15.250	15.262	(0.889)	28996	0.20000	0.223(a)	
	74 Pyrene	202	15.273	15.285	(0.891)	45849	0.20000	0.222	
	75 Butylbenzylphthalate	149	16.272	16.262	(0.949)	115233	1.00000	0.970(a)	

11:01 am, Aug 02, 2021

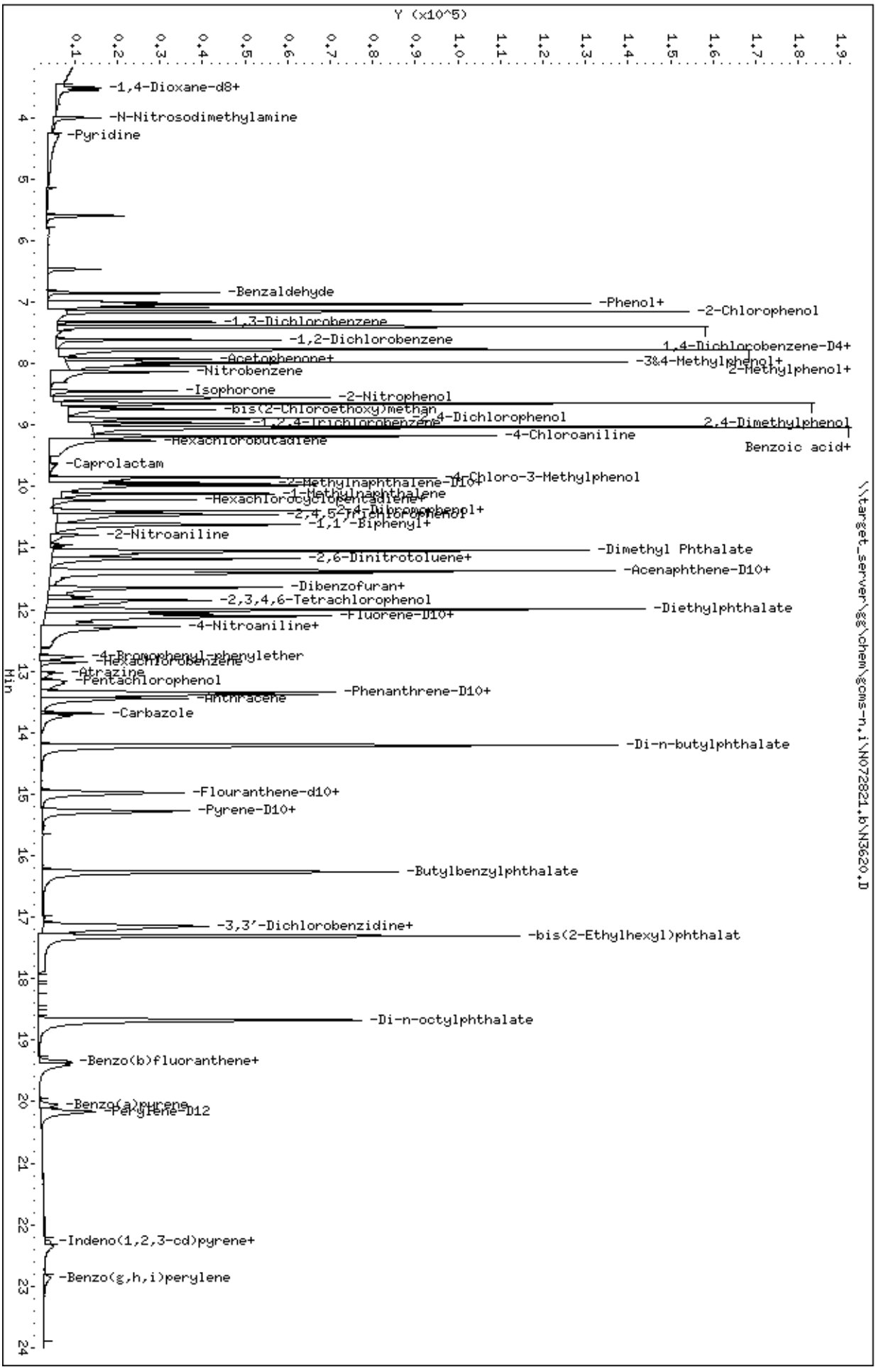
Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3620.D
Report Date: 29-Jul-2021 10:25

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
	76	3,3'-Dichlorobenzidine	252	17.171	17.128	(1.001)	3187	0.20000	0.127(aQ)	
	77	Benzo(a)anthracene	228	17.138	17.117	(0.999)	22134	0.20000	0.204	
*	78	Chrysene-D12	240	17.149	17.139	(1.000)	68645	0.80000	(a)	
	79	Chrysene	228	17.194	17.183	(1.003)	32987	0.20000	0.242	
	80	bis(2-Ethylhexyl)phthalate	149	17.305	17.305	(1.009)	167316	1.00000	0.968(a)	
	81	Di-n-octylphthalate	149	18.679	18.657	(1.089)	238601	1.00000	0.955(a)	
	82	Benzo(b)fluoranthene	252	19.341	19.320	(0.959)	13691	0.20000	0.192(a)	
	83	Benzo(k)fluoranthene	252	19.397	19.376	(0.962)	26346	0.20000	0.228(M)	M6
	84	Benzo(a)pyrene	252	20.049	20.016	(0.994)	14908	0.20000	0.209	
*	85	Perylene-D12	264	20.161	20.139	(1.000)	47715	0.80000	(a)	
	86	Indeno(1,2,3-cd)pyrene	276	22.272	22.227	(1.299)	9449	0.20000	0.350	
	87	Dibenzo(a,h)anthracene	278	22.350	22.306	(1.109)	7303	0.20000	0.192(a)	
	88	Benzo(g,h,i)perylene	276	22.867	22.811	(1.134)	10740	0.20000	0.222	
M	89	Total PAHs	100				603129	3.60000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

11:01 am, Aug 02, 2021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Sample Info: WG303306-2
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N072821,b\N3620,D
Y (x10^5)
Min
-1,4-Dioxane-d8+
-N-Nitrosodimethylamine
-Pyridine
-Benzaldehyde
-Phenol+
-2-Chlorophenol
-1,3-Dichlorobenzene
-1,2-Dichlorobenzene
1,4-Dichlorobenzene-D4+
-Acetophenone+
-3&4-Methylphenol+
2-Methylphenol+
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-bis(2-Chloroethoxy)methan
-2,4-Dichlorophenol
2,4-Dimethylphenol
-1,2,4-Trichlorobenzene
-4-Chloroaniline
-Hexachlorobutadiene
Benzoic acid+
-Caprolactam
-4-Chloro-3-Methylphenol
-2-Methylnaphthalene-D10+
-1-Methylnaphthalene
-Hexachlorocyclopentadiene+
2,4,6-Trichlorophenol
-1,1'-Biphenyl+
-2-Nitroaniline
-Dimethyl Phthalate
-2,6-Dinitrotoluene+
-Acenaphthene-D10+
-Dibenzofuran+
-2,3,4,6-Tetrachlorophenol
-Diethylphthalate
-Fluorene-D10+
-4-Nitroaniline+
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
-Di-n-butylphthalate
-Flouranthene-d10+
-Pyrene-D10+
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene+
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene+
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3621.D
Report Date: 29-Jul-2021 10:25

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3621.D
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Inj Date : 28-JUL-2021 17:15
Operator : JCG   Inst ID: gcms-n.i
Smp Info : WG303306-5
Misc Info :
Comment   :
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Meth Date : 29-Jul-2021 09:00 cgomez   Quant Type: ISTD
Cal Date : 28-JUL-2021 17:15   Cal File: N3621.D
Als bottle: 5   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
$	1 1,4-Dioxane-d8	96	3.448	3.427	(0.467)	222352	7.00000	7.22	
	2 1,4-Dioxane	88	3.490	3.480	(0.472)	237737	7.00000	7.11	
	3 N-Nitrosodimethylamine	74	3.942	3.921	(0.533)	328985	7.00000	7.28	
	4 Pyridine	79	3.973	3.952	(0.538)	516338	7.00000	7.74(Q)	
	5 Benzaldehyde	77	6.826	6.826	(0.924)	304868	7.00000	7.53	
	6 Phenol	94	7.017	7.017	(0.950)	643359	7.00000	6.83	
	7 Bis(2-Chloroethyl)ether	93	7.068	7.068	(0.956)	597644	7.00000	7.20	
	8 2-Chlorophenol	128	7.148	7.138	(0.967)	688742	7.00000	7.24	
	9 1,3-Dichlorobenzene	146	7.319	7.319	(0.990)	723041	7.00000	7.24	
*	10 1,4-Dichlorobenzene-D4	152	7.390	7.390	(1.000)	53222	0.80000	(aQ)	
	11 1,4-Dichlorobenzene	146	7.410	7.410	(1.003)	730928	7.00000	7.28	
	12 1,2-Dichlorobenzene	146	7.601	7.601	(1.029)	689391	7.00000	7.26	
	13 2-Methylphenol	108	7.772	7.772	(1.052)	602999	7.00000	7.55	
	14 2,2'-Oxybis(1-chloropropane)	45	7.752	7.752	(1.049)	770638	7.00000	7.21(Q)	
	15 Acetophenone	105	7.903	7.903	(0.876)	783746	7.00000	7.77	
	16 N-Nitroso-di-n-propylamine	70	7.923	7.933	(1.072)	409962	7.00000	7.66	
	17 3&4-Methylphenol	108	7.984	7.984	(1.080)	614432	7.00000	7.69	
	18 Hexachloroethane	117	8.024	8.024	(1.086)	259487	7.00000	7.27	
	19 Nitrobenzene	77	8.114	8.115	(0.899)	616917	7.00000	7.48	
	20 Isophorone	82	8.434	8.445	(0.935)	1156009	7.00000	7.79	
	21 2-Nitrophenol	139	8.541	8.541	(0.947)	356632	7.00000	7.52	

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3621.D
Report Date: 29-Jul-2021 10:25

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	22 2,4-Dimethylphenol	107	8.648	8.648	(0.959)	645617	7.00000	7.55	
	23 bis(2-Chloroethoxy)methane	93	8.744	8.744	(0.969)	706386	7.00000	7.35	
	24 Benzoic acid	105	8.808	8.851	(0.976)	346291	7.00000	12.4(Q)	
	25 2,4-Dichlorophenol	162	8.883	8.883	(0.985)	519469	7.00000	7.49	
	26 1,2,4-Trichlorobenzene	180	8.969	8.969	(0.994)	527889	7.00000	7.60	
*	27 Naphthalene-D8	136	9.022	9.022	(1.000)	191638	0.80000	(a)	
	28 Naphthalene	128	9.054	9.054	(1.004)	1875646	7.00000	7.55	
	29 4-Chloroaniline	127	9.161	9.161	(1.015)	643584	7.00000	8.15	
	30 Hexachlorobutadiene	225	9.247	9.247	(1.025)	248867	7.00000	7.31	
	31 Caprolactam	113	9.622	9.652	(1.067)	182209	7.00000	7.40(Q)	
	32 4-Chloro-3-Methylphenol	107	9.859	9.859	(1.093)	527295	7.00000	7.40	
$	33 2-Methylnaphthalene-D10	152	9.937	9.937	(1.101)	950660	7.00000	7.46	
	34 2-Methylnaphthalene	142	9.977	9.977	(1.106)	1270788	7.00000	7.01	
	35 1-Methylnaphthalene	142	10.105	10.105	(1.120)	1188130	7.00000	7.29	
	36 Hexachlorocyclopentadiene	237	10.213	10.213	(0.898)	229896	7.00000	7.13(Q)	
	37 1,2,4,5-Tetrachlorobenzene	216	10.213	10.213	(0.898)	469321	7.00000	7.16	
$	38 2,4-Dibromophenol	252	10.370	10.371	(0.912)	245599	7.00000	7.47(Q)	
	39 2,4,6-Trichlorophenol	196	10.390	10.390	(0.914)	338788	7.00000	7.84	
	40 2,4,5-Trichlorophenol	196	10.459	10.459	(0.920)	365616	7.00000	6.41	
	41 1,1'-Biphenyl	154	10.607	10.607	(0.933)	1323389	7.00000	7.06	
	42 2-Chloronaphthalene	164	10.618	10.629	(0.934)	370017	7.00000	7.24	
	43 2-Nitroaniline	65	10.781	10.792	(0.948)	286369	7.00000	7.18	
	44 Dimethyl Phthalate	163	11.053	11.053	(0.972)	1369649	7.00000	7.69	
	45 2,6-Dinitrotoluene	165	11.108	11.119	(0.977)	313261	7.00000	7.57	
	46 Acenaphthylene	152	11.173	11.173	(0.983)	1930326	7.00000	7.42	
	47 3-Nitroaniline	138	11.348	11.359	(0.998)	139161	7.00000	7.24(Q)	
*	48 Acenaphthene-D10	164	11.369	11.369	(1.000)	100788	0.80000	(a)	
	49 Acenaphthene	153	11.413	11.413	(1.004)	1171249	7.00000	7.36	
	50 2,4-Dinitrophenol	184	11.489	11.489	(1.011)	103428	7.00000	7.34	
	51 4-Nitrophenol	109	11.664	11.664	(1.026)	150426	7.00000	7.61(QM)	M6
	52 Dibenzofuran	168	11.642	11.642	(1.024)	1519001	7.00000	7.28	
	53 2,4-Dinitrotoluene	165	11.653	11.653	(1.025)	388925	7.00000	7.19(Q)	
	54 2,3,4,6-Tetrachlorophenol	232	11.849	11.849	(1.042)	291510	7.00000	7.87	
	55 Diethylphthalate	149	11.991	12.001	(1.055)	1419394	7.00000	7.66	
$	56 Fluorene-D10	174	12.067	12.067	(1.061)	873875	7.00000	7.38	
	57 Fluorene	166	12.099	12.110	(1.064)	1235885	7.00000	7.33	
	58 4-Chlorophenyl-phenylether	204	12.121	12.121	(1.066)	585905	7.00000	7.46	
	59 4-Nitroaniline	138	12.176	12.187	(1.071)	146245	7.00000	6.63(QM)	M9
	60 4,6-Dinitro-2-Methylphenol	198	12.208	12.208	(0.914)	166131	7.00000	7.26	
	61 N-Nitrosodiphenylamine	169	12.285	12.285	(0.920)	1016502	7.00000	7.45(Q)	
	62 4-Bromophenyl-phenylether	248	12.773	12.773	(0.957)	295097	7.00000	6.96	
	63 Hexachlorobenzene	284	12.854	12.854	(0.963)	251681	7.00000	6.82	
	64 Atrazine	200	13.039	13.039	(0.977)	277917	7.00000	7.59	
	65 Pentachlorophenol	266	13.142	13.142	(0.984)	141209	7.00000	7.12	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	150007	0.80000	(a)	
	67 Phenanthrene	178	13.385	13.385	(1.003)	1569665	7.00000	7.58	
	68 Anthracene	178	13.454	13.454	(1.008)	1702644	7.00000	6.97	
	69 Carbazole	167	13.685	13.685	(1.025)	1214454	7.00000	8.10	
	70 Di-n-butylphthalate	149	14.196	14.196	(1.063)	2498355	7.00000	7.88	
$	71 Flouranthene-d10	212	14.963	14.963	(1.121)	1072640	7.00000	7.37	
	72 Fluoranthene	202	14.985	14.985	(1.122)	1485894	7.00000	7.46	
$	73 Pyrene-D10	212	15.262	15.262	(0.891)	969107	7.00000	7.66	
	74 Pyrene	202	15.285	15.285	(0.892)	1539984	7.00000	7.66	
	75 Butylbenzylphthalate	149	16.262	16.262	(0.949)	929750	7.00000	8.05	

11:01 am, Aug 02, 2021

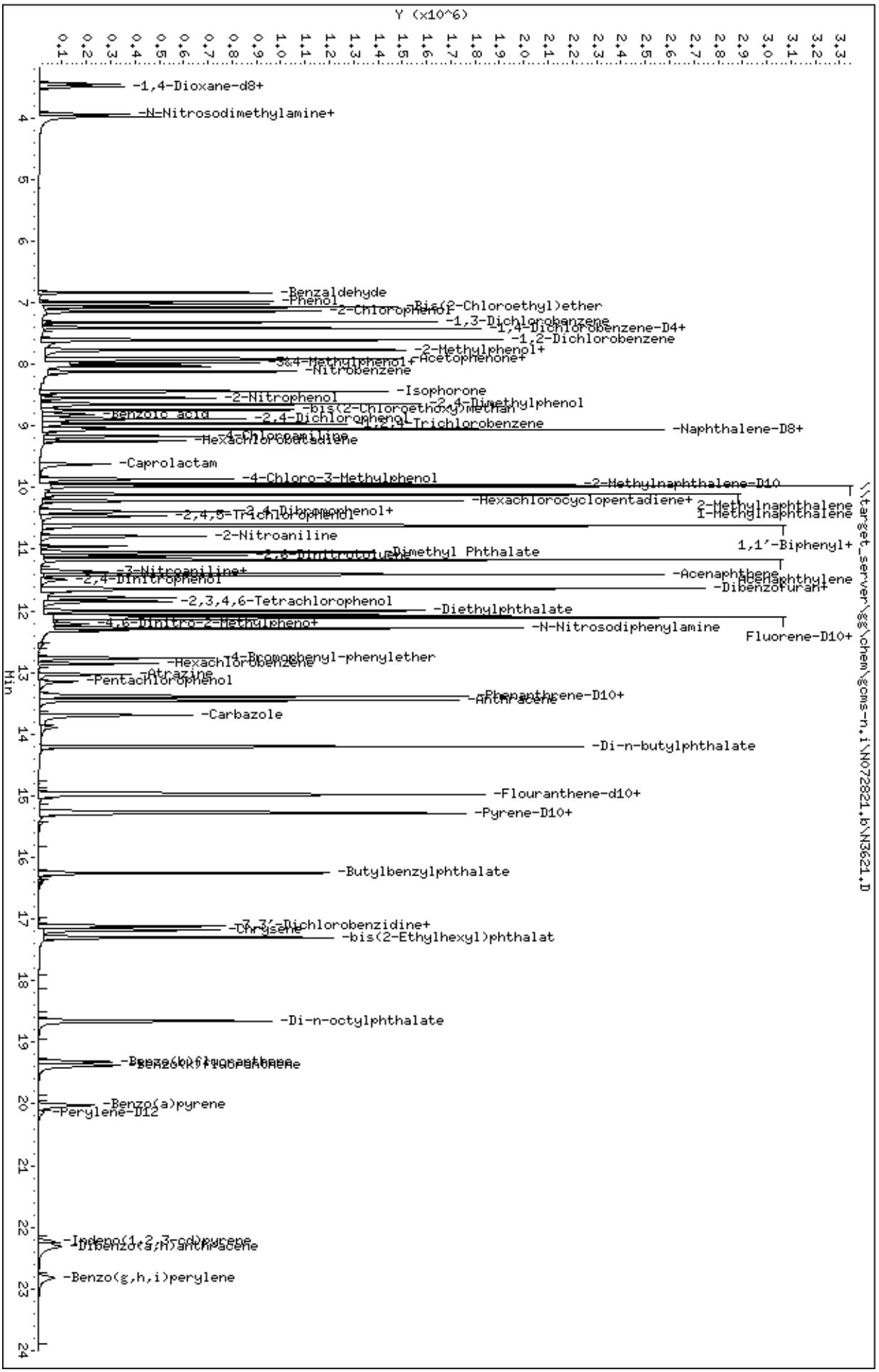
Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3621.D
Report Date: 29-Jul-2021 10:25

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	76 3,3'-Dichlorobenzidine	252	17.139	17.128	(1.000)	130935	7.00000	7.50(Q)	
	77 Benzo(a)anthracene	228	17.117	17.117	(0.999)	793382	7.00000	7.52	
*	78 Chrysene-D12	240	17.139	17.139	(1.000)	66764	0.80000	(a)	
	79 Chrysene	228	17.183	17.183	(1.003)	910728	7.00000	6.88	
	80 bis(2-Ethylhexyl)phthalate	149	17.305	17.305	(1.010)	1339280	7.00000	7.97	
	81 Di-n-octylphthalate	149	18.657	18.657	(1.089)	1831302	7.00000	7.54	
	82 Benzo(b)fluoranthene	252	19.320	19.320	(0.959)	475052	7.00000	7.58	
	83 Benzo(k)fluoranthene	252	19.376	19.376	(0.962)	739778	7.00000	7.29(H)	
	84 Benzo(a)pyrene	252	20.016	20.016	(0.994)	453523	7.00000	7.23	
*	85 Perylene-D12	264	20.139	20.139	(1.000)	41977	0.80000	(a)	
	86 Indeno(1,2,3-cd)pyrene	276	22.239	22.227	(1.298)	193930	7.00000	7.39(M)	M3
	87 Dibenzo(a,h)anthracene	278	22.306	22.306	(1.108)	259311	7.00000	7.74	
	88 Benzo(g,h,i)perylene	276	22.822	22.811	(1.133)	307972	7.00000	7.23	
M	89 Total PAHs	100				19103887	119.000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

11:01 am, Aug 02, 2021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Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
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Y (x10^6)
Min
-1,4-Dioxane-d8+
-N-Nitrosodimethylamine+
-Benzaldehyde
-Phenol
-2-Chlorophenol
-Bis(2-Chloroethyl)ether
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-2-Methylphenol+
-3&4-Methylphenol+
-Acetophenone+
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-2,4-Dimethylphenol
-bis(2-Chloroethoxy)methan
-Benzoic acid
-2,4-Dichlorophenol
-1,2,4-Trichlorobenzene
-Naphthalene-D8+
-4-Chloroaniline
-Hexachlorobutadiene
-Caprolactam
-4-Chloro-3-Methylphenol
-2-Methylnaphthalene-D10
-Hexachlorocyclopentadiene+
-2,4,6-Trichlorophenol+
-2,4,5-Trichlorophenol
2-Methylnaphthalene
1-Methylnaphthalene
-2-Nitroaniline
1,1'-Biphenyl+
-2,6-Dinitrotoluene
-Dimethyl Phthalate
-3-Nitroaniline+
-Acenaphthene
-2,4-Dinitrophenol
Acenaphthylene
-Dibenzofuran+
-2,3,4,6-Tetrachlorophenol
-Diethylphthalate
-4,6-Dinitro-2-Methylphenol+
-N-Nitrosodiphenylamine
Fluorene-D10+
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
-Di-n-butylphthalate
-Flouranthene-d10+
-Pyrene-D10+
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-Chrysene
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene
-Benzo(k)fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene
-Dibenzo(a,h)anthracene
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3622.D
Report Date: 29-Jul-2021 10:25

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3622.D
Lab Smp Id: WG303306-6
Inj Date : 28-JUL-2021 17:52
Operator : JCG   Inst ID: gcms-n.i
Smp Info : WG303306-6
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 09:00 cgomez   Quant Type: ISTD
Cal Date : 28-JUL-2021 17:52   Cal File: N3622.D
Als bottle: 6   Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
$	1 1,4-Dioxane-d8	96	3.459	3.427	(0.468)	310224	10.0000	9.46	
	2 1,4-Dioxane	88	3.501	3.480	(0.474)	333234	10.0000	9.36	
	3 N-Nitrosodimethylamine	74	3.942	3.921	(0.533)	463227	10.0000	9.63	
	4 Pyridine	79	3.973	3.952	(0.538)	662104	10.0000	9.26	
	5 Benzaldehyde	77	6.826	6.826	(0.924)	394233	10.0000	9.22	
	6 Phenol	94	7.017	7.017	(0.950)	911278	10.0000	9.08	
	7 Bis(2-Chloroethyl)ether	93	7.068	7.068	(0.956)	852276	10.0000	9.64	
	8 2-Chlorophenol	128	7.138	7.138	(0.966)	958396	10.0000	9.47	
	9 1,3-Dichlorobenzene	146	7.319	7.319	(0.990)	1014925	10.0000	9.55	
*	10 1,4-Dichlorobenzene-D4	152	7.390	7.390	(1.000)	56651	0.80000	(aQ)	
	11 1,4-Dichlorobenzene	146	7.410	7.410	(1.003)	1027686	10.0000	9.61	
	12 1,2-Dichlorobenzene	146	7.601	7.601	(1.029)	957786	10.0000	9.48	
	13 2-Methylphenol	108	7.772	7.772	(1.052)	845033	10.0000	9.94	
	14 2,2'-Oxybis(1-chloropropane)	45	7.752	7.752	(1.049)	1105416	10.0000	9.72	
	15 Acetophenone	105	7.903	7.903	(0.876)	1124126	10.0000	10.3	
	16 N-Nitroso-di-n-propylamine	70	7.923	7.933	(1.072)	567283	10.0000	9.95	
	17 3&4-Methylphenol	108	7.984	7.984	(1.080)	849307	10.0000	9.99	
	18 Hexachloroethane	117	8.024	8.024	(1.086)	359384	10.0000	9.46	
	19 Nitrobenzene	77	8.115	8.115	(0.899)	761767	10.0000	8.56	
	20 Isophorone	82	8.434	8.445	(0.935)	1605022	10.0000	10.0	
	21 2-Nitrophenol	139	8.541	8.541	(0.947)	514110	10.0000	10.0	

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3622.D
Report Date: 29-Jul-2021 10:25

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
	22 2,4-Dimethylphenol	107	8.648	8.648	(0.959)	893306	10.0000	9.67	
	23 bis(2-Chloroethoxy)methane	93	8.734	8.744	(0.968)	997501	10.0000	9.61	
	24 Benzoic acid	105	8.830	8.851	(0.979)	320760	10.0000	10.6	
	25 2,4-Dichlorophenol	162	8.883	8.883	(0.985)	726022	10.0000	9.69	
	26 1,2,4-Trichlorobenzene	180	8.969	8.969	(0.994)	727002	10.0000	9.69	
*	27 Naphthalene-D8	136	9.022	9.022	(1.000)	207016	0.80000	(a)	
	28 Naphthalene	128	9.054	9.054	(1.004)	2612279	10.0000	9.73	
	29 4-Chloroaniline	127	9.161	9.161	(1.015)	813230	10.0000	9.53	
	30 Hexachlorobutadiene	225	9.247	9.247	(1.025)	344519	10.0000	9.36	
	31 Caprolactam	113	9.632	9.652	(1.068)	250977	10.0000	9.44	
	32 4-Chloro-3-Methylphenol	107	9.849	9.859	(1.092)	737256	10.0000	9.58	
$	33 2-Methylnaphthalene-D10	152	9.937	9.937	(1.101)	1312809	10.0000	9.53	
	34 2-Methylnaphthalene	142	9.977	9.977	(1.106)	1744896	10.0000	8.91	
	35 1-Methylnaphthalene	142	10.105	10.105	(1.120)	1634413	10.0000	9.28	
	36 Hexachlorocyclopentadiene	237	10.213	10.213	(0.899)	333470	10.0000	9.78	
	37 1,2,4,5-Tetrachlorobenzene	216	10.213	10.213	(0.899)	648909	10.0000	9.36	
$	38 2,4-Dibromophenol	252	10.371	10.371	(0.913)	344923	10.0000	9.92	
	39 2,4,6-Trichlorophenol	196	10.390	10.390	(0.915)	478265	10.0000	10.5	
	40 2,4,5-Trichlorophenol	196	10.459	10.459	(0.921)	509716	10.0000	8.45	
	41 1,1'-Biphenyl	154	10.607	10.607	(0.934)	1816383	10.0000	9.17	
	42 2-Chloronaphthalene	164	10.618	10.629	(0.935)	503073	10.0000	9.30	
	43 2-Nitroaniline	65	10.781	10.792	(0.949)	399195	10.0000	9.46	
	44 Dimethyl Phthalate	163	11.053	11.053	(0.973)	1903442	10.0000	10.1	
	45 2,6-Dinitrotoluene	165	11.108	11.119	(0.978)	431414	10.0000	9.86	
	46 Acenaphthylene	152	11.173	11.173	(0.984)	2643140	10.0000	9.60	
	47 3-Nitroaniline	138	11.348	11.359	(0.999)	142754	10.0000	7.02	
*	48 Acenaphthene-D10	164	11.359	11.369	(1.000)	106596	0.80000	(a)	
	49 Acenaphthene	153	11.402	11.413	(1.004)	1576369	10.0000	9.36	
	50 2,4-Dinitrophenol	184	11.489	11.489	(1.012)	158695	10.0000	9.97	
	51 4-Nitrophenol	109	11.664	11.664	(1.027)	212345	10.0000	9.79(M)	M6
	52 Dibenzofuran	168	11.642	11.642	(1.025)	2078792	10.0000	9.41	
	53 2,4-Dinitrotoluene	165	11.653	11.653	(1.026)	535051	10.0000	9.35	
	54 2,3,4,6-Tetrachlorophenol	232	11.849	11.849	(1.043)	394232	10.0000	10.1	
	55 Diethylphthalate	149	11.991	12.001	(1.056)	1903915	10.0000	9.71	
$	56 Fluorene-D10	174	12.067	12.067	(1.062)	1187100	10.0000	9.48	
	57 Fluorene	166	12.100	12.110	(1.065)	1690238	10.0000	9.48	
	58 4-Chlorophenyl-phenylether	204	12.121	12.121	(1.067)	796690	10.0000	9.59	
	59 4-Nitroaniline	138	12.176	12.187	(1.072)	196511	10.0000	8.42(M)	M9
	60 4,6-Dinitro-2-Methylphenol	198	12.208	12.208	(0.914)	247444	10.0000	10.0	
	61 N-Nitrosodiphenylamine	169	12.285	12.285	(0.920)	1369091	10.0000	9.73	
	62 4-Bromophenyl-phenylether	248	12.773	12.773	(0.957)	405842	10.0000	9.28	
	63 Hexachlorobenzene	284	12.854	12.854	(0.963)	342524	10.0000	9.00	
	64 Atrazine	200	13.039	13.039	(0.977)	373430	10.0000	9.89	
	65 Pentachlorophenol	266	13.142	13.142	(0.984)	200499	10.0000	9.80	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	154667	0.80000	(a)	
	67 Phenanthrene	178	13.385	13.385	(1.003)	2140791	10.0000	10.0	
	68 Anthracene	178	13.454	13.454	(1.008)	2287574	10.0000	9.08	
	69 Carbazole	167	13.685	13.685	(1.025)	1237332	10.0000	8.00	
	70 Di-n-butylphthalate	149	14.196	14.196	(1.063)	3134415	10.0000	9.59	
$	71 Flouranthene-d10	212	14.963	14.963	(1.121)	1409954	10.0000	9.40	
	72 Fluoranthene	202	14.985	14.985	(1.122)	1969545	10.0000	9.58	
$	73 Pyrene-D10	212	15.262	15.262	(0.891)	1272866	10.0000	9.56	
	74 Pyrene	202	15.285	15.285	(0.892)	2013694	10.0000	9.52	
	75 Butylbenzylphthalate	149	16.251	16.262	(0.948)	1192850	10.0000	9.81	

11:01 am, Aug 02, 2021

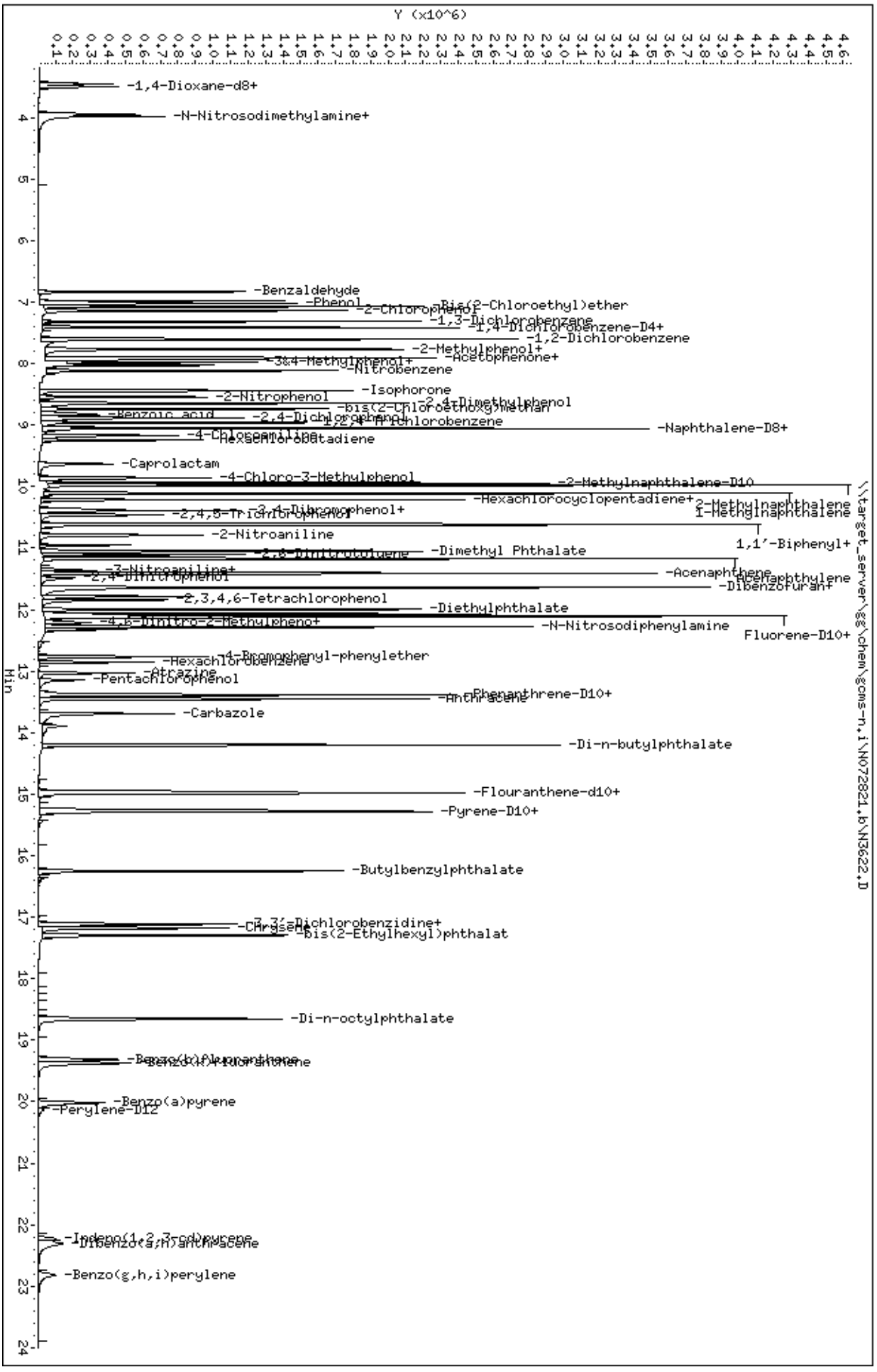
Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3622.D
Report Date: 29-Jul-2021 10:25

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	76	3,3'-Dichlorobenzidine	252	17.139	17.128	(1.000)	162559	10.0000	9.31	
	77	Benzo(a)anthracene	228	17.117	17.117	(0.999)	1118035	10.0000	10.1	
*	78	Chrysene-D12	240	17.139	17.139	(1.000)	70236	0.80000	(a)	
	79	Chrysene	228	17.183	17.183	(1.003)	1239640	10.0000	8.90	
	80	bis(2-Ethylhexyl)phthalate	149	17.294	17.305	(1.009)	1694391	10.0000	9.58	
	81	Di-n-octylphthalate	149	18.657	18.657	(1.089)	2455148	10.0000	9.61	
	82	Benzo(b)fluoranthene	252	19.320	19.320	(0.959)	734693	10.0000	10.5	
	83	Benzo(k)fluoranthene	252	19.376	19.376	(0.962)	1038060	10.0000	9.16(H)	
	84	Benzo(a)pyrene	252	20.016	20.016	(0.994)	671003	10.0000	9.59	
*	85	Perylene-D12	264	20.139	20.139	(1.000)	46861	0.80000	(a)	
	86	Indeno(1,2,3-cd)pyrene	276	22.227	22.227	(1.297)	268280	10.0000	9.72(M)	M3
	87	Dibenzo(a,h)anthracene	278	22.306	22.306	(1.108)	366721	10.0000	9.80	
	88	Benzo(g,h,i)perylene	276	22.822	22.811	(1.133)	434427	10.0000	9.14	
M	89	Total PAHs	100				26183798	180.000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

11:01 am, Aug 02, 2021


Data File: \\target_server\gg\chem\gcms-n,i\N072821,b\N3622,D
Date : 28-JUL-2021 17:52
Client ID:
Sample Info: WG303306-6
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N072821,b\N3622,D
Y (x10^6)
Min
-1,4-Dioxane-d8+
-N-Nitrosodimethylamine+
-Benzaldehyde
-Phenol
-2-Chlorophenol
-Bis(2-Chloroethyl)ether
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-2-Methylphenol+
-3&4-Methylphenol+
-Acetophenone+
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-2,4-Dimethylphenol
-Benzoic acid
-2,4-Dichlorophenol
-bis(2-Chloroethoxy)Methan
-1,2,4-Trichlorobenzene
-Naphthalene-D8+
-4-Chloroaniline
-Hexachlorobutadiene
-Caprolactam
-4-Chloro-3-Methylphenol
-2-Methylnaphthalene-D10
-Hexachlorocyclopentadiene+
-2-Methylnaphthalene
-2,4-Dibromophenol+
-2,4,6-Trichlorophenol
1-Methylnaphthalene
-2-Nitroaniline
1,1'-Biphenyl+
-2,6-Dinitrotoluene
-Dimethyl Phthalate
-3-Nitroaniline+
-Acenaphthene
-2,4-Dinitrophenol
Acenaphthylene
-Dibenzofuran+
-2,3,4,6-Tetrachlorophenol
-Diethylphthalate
-4,6-Dinitro-2-Methylphenol+
-N-Nitrosodiphenylamine
Fluorene-D10+
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
-Di-n-butylphthalate
-Flouranthene-d10+
-Pyrene-D10+
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-Chrysene
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene
-Benzo(k)fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene
-Dibenzo(a,h)anthracene
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3623.D
Report Date: 29-Jul-2021 10:25

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3623.D
Lab Smp Id: WG303306-7
Inj Date : 28-JUL-2021 18:27
Operator : JCG   Inst ID: gcms-n.i
Smp Info : WG303306-7
Misc Info :
Comment   :
Method   : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 09:00 cgomez   Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27   Cal File: N3623.D
Als bottle: 7   Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
$	1 1,4-Dioxane-d8	96	3.427	3.427	(0.464)	437722	15.0000	14.8	
	2 1,4-Dioxane	88	3.480	3.480	(0.471)	470574	15.0000	14.6	
	3 N-Nitrosodimethylamine	74	3.921	3.921	(0.531)	650358	15.0000	15.0	
	4 Pyridine	79	3.952	3.952	(0.535)	1004381	15.0000	15.1(A)	
	5 Benzaldehyde	77	6.826	6.826	(0.924)	570705	15.0000	15.2(A)	
	6 Phenol	94	7.017	7.017	(0.950)	1346313	15.0000	14.8	
	7 Bis(2-Chloroethyl)ether	93	7.068	7.068	(0.956)	1242953	15.0000	15.6(A)	
	8 2-Chlorophenol	128	7.138	7.138	(0.966)	1271325	15.0000	13.9	
	9 1,3-Dichlorobenzene	146	7.319	7.319	(0.990)	1449250	15.0000	15.1(A)	
*	10 1,4-Dichlorobenzene-D4	152	7.390	7.390	(1.000)	51237	0.80000	(aQ)	
	11 1,4-Dichlorobenzene	146	7.410	7.410	(1.003)	1472930	15.0000	15.2(A)	
	12 1,2-Dichlorobenzene	146	7.601	7.601	(1.029)	1364406	15.0000	14.9	
	13 2-Methylphenol	108	7.772	7.772	(1.052)	1213963	15.0000	15.8(A)	
	14 2,2'-Oxybis(1-chloropropane)	45	7.752	7.752	(1.049)	1559934	15.0000	15.2(A)	
	15 Acetophenone	105	7.903	7.903	(0.876)	1662613	15.0000	16.2(A)	
	16 N-Nitroso-di-n-propylamine	70	7.933	7.933	(1.074)	845427	15.0000	16.4(A)	
	17 3&4-Methylphenol	108	7.984	7.984	(1.080)	1245627	15.0000	16.2(A)	
	18 Hexachloroethane	117	8.024	8.024	(1.086)	511532	15.0000	14.9	
	19 Nitrobenzene	77	8.115	8.115	(0.899)	1131082	15.0000	13.5	
	20 Isophorone	82	8.445	8.445	(0.936)	2390577	15.0000	15.9(A)	
	21 2-Nitrophenol	139	8.541	8.541	(0.947)	743504	15.0000	15.4(A)	

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3623.D
Report Date: 29-Jul-2021 10:25

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	22 2,4-Dimethylphenol	107	8.648	8.648	(0.959)	1309243	15.0000	15.1(A)	
	23 bis(2-Chloroethoxy)methane	93	8.744	8.744	(0.969)	1469740	15.0000	15.1(A)	
	24 Benzoic acid	105	8.851	8.851	(0.981)	590592	15.0000	20.8(A)	
	25 2,4-Dichlorophenol	162	8.883	8.883	(0.985)	1062672	15.0000	15.1(A)	
	26 1,2,4-Trichlorobenzene	180	8.969	8.969	(0.994)	1077016	15.0000	15.3(A)	
*	27 Naphthalene-D8	136	9.022	9.022	(1.000)	194535	0.80000	(a)	
	28 Naphthalene	128	9.054	9.054	(1.004)	3758263	15.0000	14.9	
	29 4-Chloroaniline	127	9.161	9.161	(1.015)	1115751	15.0000	13.9	
	30 Hexachlorobutadiene	225	9.247	9.247	(1.025)	496192	15.0000	14.4	
	31 Caprolactam	113	9.652	9.652	(1.070)	379204	15.0000	15.2(A)	
	32 4-Chloro-3-Methylphenol	107	9.859	9.859	(1.093)	1094188	15.0000	15.1(A)	
$	33 2-Methylnaphthalene-D10	152	9.937	9.937	(1.101)	1885910	15.0000	14.6	
	34 2-Methylnaphthalene	142	9.977	9.977	(1.106)	2498487	15.0000	13.6	
	35 1-Methylnaphthalene	142	10.105	10.105	(1.120)	2360822	15.0000	14.3	
	36 Hexachlorocyclopentadiene	237	10.213	10.213	(1.000)	485404	15.0000	15.1(A)	
	37 1,2,4,5-Tetrachlorobenzene	216	10.213	10.213	(1.000)	928304	15.0000	14.2	
$	38 2,4-Dibromophenol	252	10.371	10.371	(1.000)	513225	15.0000	15.7	
	39 2,4,6-Trichlorophenol	196	10.390	10.390	(1.000)	707235	15.0000	16.4(A)	
	40 2,4,5-Trichlorophenol	196	10.459	10.459	(1.000)	766318	15.0000	13.5	
	41 1,1'-Biphenyl	154	10.607	10.607	(1.000)	2611592	15.0000	14.0	
	42 2-Chloronaphthalene	164	10.629	10.629	(1.000)	746143	15.0000	14.6	
	43 2-Nitroaniline	65	10.792	10.792	(1.000)	606884	15.0000	15.3(A)	
	44 Dimethyl Phthalate	163	11.053	11.053	(1.000)	2752373	15.0000	15.5(A)	
	45 2,6-Dinitrotoluene	165	11.119	11.119	(1.000)	687912	15.0000	16.7(A)	
	46 Acenaphthylene	152	11.173	11.173	(1.000)	3779288	15.0000	14.6	
	47 3-Nitroaniline	138	11.359	11.359	(1.000)	157739	15.0000	8.24	
*	48 Acenaphthene-D10	164	11.369	11.369	(1.000)	100359	0.80000	(aM)	M6
	49 Acenaphthene	153	11.413	11.413	(1.000)	2350312	15.0000	14.8	
	50 2,4-Dinitrophenol	184	11.489	11.489	(1.000)	276382	15.0000	15.0	
	51 4-Nitrophenol	109	11.664	11.664	(1.026)	342003	15.0000	15.0(QM)	M9
	52 Dibenzofuran	168	11.642	11.642	(1.000)	3055330	15.0000	14.7	
	53 2,4-Dinitrotoluene	165	11.653	11.653	(1.000)	825554	15.0000	15.3(A)	
	54 2,3,4,6-Tetrachlorophenol	232	11.849	11.849	(1.000)	596953	15.0000	16.2(A)	
	55 Diethylphthalate	149	12.001	12.001	(1.000)	2938884	15.0000	15.9(A)	
$	56 Fluorene-D10	174	12.067	12.067	(1.000)	1738247	15.0000	14.7(A)	
	57 Fluorene	166	12.110	12.110	(1.000)	2543795	15.0000	15.1(A)	
	58 4-Chlorophenyl-phenylether	204	12.121	12.121	(1.000)	1159941	15.0000	14.8	
	59 4-Nitroaniline	138	12.187	12.187	(1.000)	353803	15.0000	16.1(A)	
	60 4,6-Dinitro-2-Methylphenol	198	12.208	12.208	(0.914)	407060	15.0000	15.0	
	61 N-Nitrosodiphenylamine	169	12.285	12.285	(0.920)	1987844	15.0000	14.2	
	62 4-Bromophenyl-phenylether	248	12.773	12.773	(0.957)	595592	15.0000	13.7	
	63 Hexachlorobenzene	284	12.854	12.854	(0.963)	522554	15.0000	13.8	
	64 Atrazine	200	13.039	13.039	(0.977)	554495	15.0000	14.8	
	65 Pentachlorophenol	266	13.142	13.142	(0.984)	330138	15.0000	16.2(A)	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	153838	0.80000	(a)	
	67 Phenanthrene	178	13.385	13.385	(1.003)	3251841	15.0000	15.3(A)	
	68 Anthracene	178	13.454	13.454	(1.008)	3262146	15.0000	13.0	
	69 Carbazole	167	13.685	13.685	(1.025)	1634501	15.0000	10.6	
	70 Di-n-butylphthalate	149	14.196	14.196	(1.063)	4931983	15.0000	15.2(A)	
$	71 Flouranthene-d10	212	14.963	14.963	(1.121)	2208223	15.0000	14.8	
	72 Fluoranthene	202	14.985	14.985	(1.122)	2975679	15.0000	14.6	
$	73 Pyrene-D10	212	15.262	15.262	(0.891)	1966991	15.0000	13.0(A)	
	74 Pyrene	202	15.285	15.285	(0.892)	3105657	15.0000	12.9	
	75 Butylbenzylphthalate	149	16.262	16.262	(0.949)	1976271	15.0000	14.3	

11:01 am, Aug 02, 2021

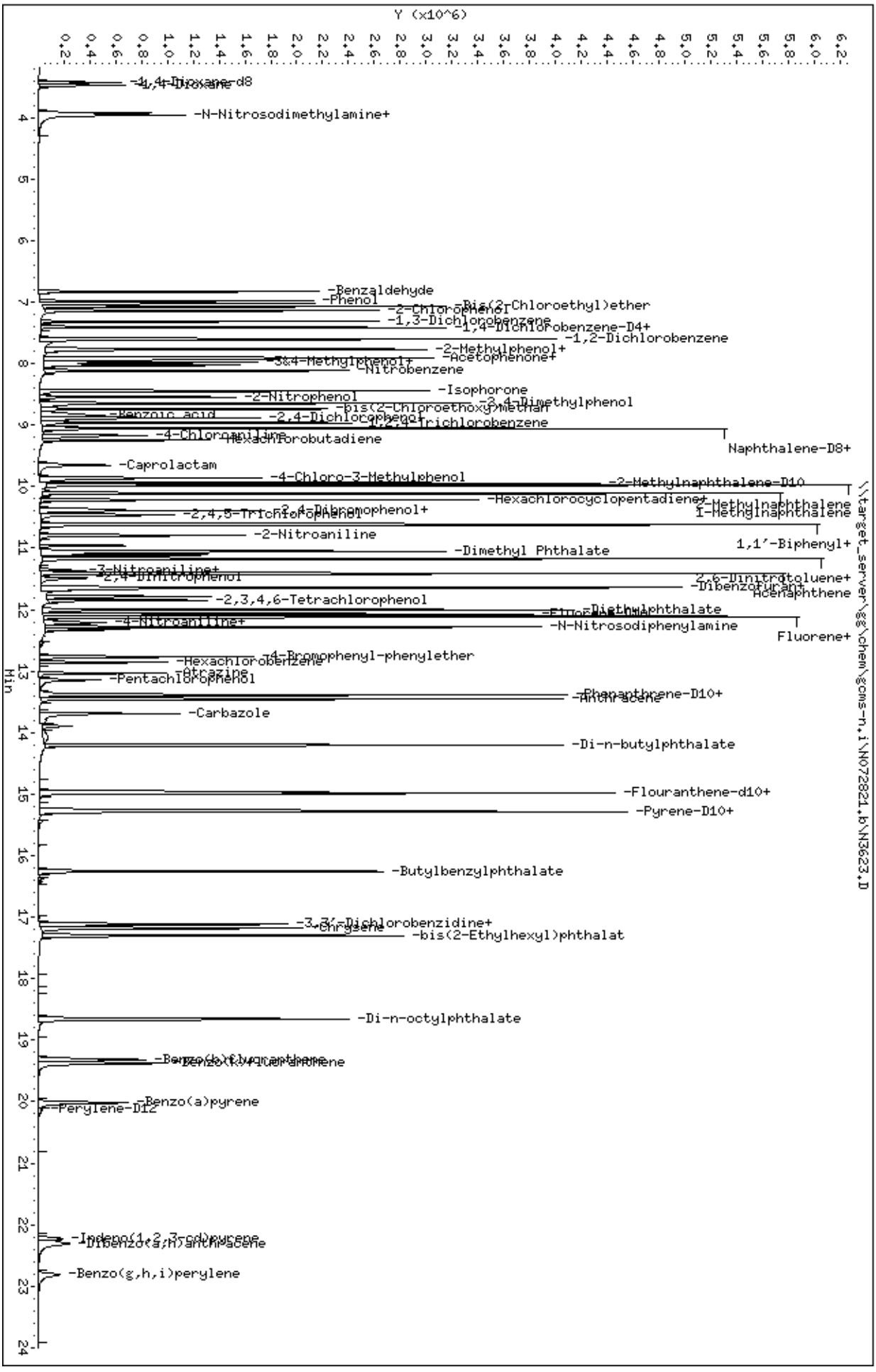
Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3623.D
Report Date: 29-Jul-2021 10:25

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
	76 3,3'-Dichlorobenzidine	252	17.128	17.128	(0.999)	263828	15.0000	15.2(A)	
	77 Benzo(a)anthracene	228	17.117	17.117	(0.999)	1863440	15.0000	14.8	
*	78 Chrysene-D12	240	17.139	17.139	(1.000)	79798	0.80000	(a)	
	79 Chrysene	228	17.183	17.183	(1.003)	2006945	15.0000	12.7	
	80 bis(2-Ethylhexyl)phthalate	149	17.305	17.305	(1.010)	2804566	15.0000	14.0	
	81 Di-n-octylphthalate	149	18.657	18.657	(1.089)	4181684	15.0000	14.4	
	82 Benzo(b)fluoranthene	252	19.320	19.320	(0.959)	1228596	15.0000	17.1(A)	
	83 Benzo(k)fluoranthene	252	19.376	19.376	(0.962)	1653484	15.0000	14.2(H)	
	84 Benzo(a)pyrene	252	20.016	20.016	(0.994)	1101823	15.0000	15.4(A)	
*	85 Perylene-D12	264	20.139	20.139	(1.000)	47999	0.80000	(a)	
	86 Indeno(1,2,3-cd)pyrene	276	22.227	22.227	(1.297)	468012	15.0000	14.9(M)	M3
	87 Dibenzo(a,h)anthracene	278	22.306	22.306	(1.108)	605503	15.0000	15.8(A)	
	88 Benzo(g,h,i)perylene	276	22.811	22.811	(1.133)	684135	15.0000	14.0	
M	89 Total PAHs	100				39498228	270.000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
A - Target compound detected but, quantitated amount exceeded maximum amount.
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

11:01 am, Aug 02, 2021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Client ID:
Sample Info: WG303306-7
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N072821,b\N3623.D
Y (x10^6)
Min
-1,4-Dioxane-d8
-N-Nitrosodimethylamine+
-Benzaldehyde
-Phenol
-2-Chlorophenol
-Bis(2-Chloroethyl)ether
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-2-Methylphenol+
-3&4-Methylphenol+
-Acetophenone+
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-2,4-Dimethylphenol
-Benzoic acid
-2,4-Dichlorophenol
-bis(2-Chloroethoxy)methan
1,2,4-Trichlorobenzene
-4-Chloroaniline
Hexachlorobutadiene
Naphthalene-D8+
-Caprolactam
-4-Chloro-3-Methylphenol
-2-Methylnaphthalene-D10
-Hexachlorocyclopentadiene+
2-Methylnaphthalene
1-Methylnaphthalene
-2,4-Dibromophenol+
-2,4,6-Trichlorophenol
-2-Nitroaniline
1,1'-Biphenyl+
-Dimethyl Phthalate
-3-Nitroaniline+
-2,4-Dinitrophenol
2,6-Dinitrotoluene+
-Dibenzofuran+
Acenaphthene
-2,3,4,6-Tetrachlorophenol
Diethylphthalate
-4-Nitroaniline+
-N-Nitrosodiphenylamine
Fluorene+
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
-Di-n-butylphthalate
-Flouranthene-d10+
-Pyrene-D10+
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-Chrysene
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene
-Benzo(k)fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene
-Dibenzo(a,h)anthracene
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3624.D
Report Date: 29-Jul-2021 08:58

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3624.D
Lab Smp Id: WG303306-8
Inj Date : 28-JUL-2021 19:02
Operator : JCG   Inst ID: gcms-n.i
Smp Info : WG303306-8
Misc Info : WG303306,WG303306,WG303306-4
Comment   :
Method   : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 08:33 gcms-n.i   Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27   Cal File: N3623.D
Als bottle: 8   QC Sample: INDCHECK
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: all.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
2	1,4-Dioxane	88	3.501	3.480	(0.474)	160313	4.68291	4.68	
3	N-Nitrosodimethylamine	74	3.942	3.921	(0.533)	205377	4.44056	4.44	
4	Pyridine	79	3.984	3.952	(0.539)	350481	5.19071	5.19	
5	Benzaldehyde	77	6.836	6.826	(0.925)	65439	1.53110	1.53(R)	
6	Phenol	94	7.017	7.017	(0.950)	497078	5.15224	5.15	
7	Bis(2-Chloroethyl)ether	93	7.068	7.068	(0.956)	408444	4.80607	4.81	
8	2-Chlorophenol	128	7.138	7.138	(0.966)	467675	4.80575	4.80	
9	1,3-Dichlorobenzene	146	7.319	7.319	(0.990)	480101	4.69592	4.70	
* 10	1,4-Dichlorobenzene-D4	152	7.390	7.390	(1.000)	54486	0.80000	(a)	
11	1,4-Dichlorobenzene	146	7.410	7.410	(1.003)	493724	4.80210	4.80	
12	1,2-Dichlorobenzene	146	7.601	7.601	(1.029)	460730	4.74249	4.74	
13	2-Methylphenol	108	7.772	7.772	(1.052)	415889	5.08768	5.09	
14	2,2'-Oxybis(1-chloropropane)	45	7.752	7.752	(1.049)	372546	3.40535	3.40(R)	
15	Acetophenone	105	7.903	7.903	(0.876)	492933	4.82087	4.82	
16	N-Nitroso-di-n-propylamine	70	7.923	7.933	(1.072)	249790	4.55647	4.56	
17	3&4-Methylphenol	108	7.974	7.984	(1.079)	405345	4.95574	4.96	
18	Hexachloroethane	117	8.024	8.024	(1.086)	175185	4.79578	4.80	
19	Nitrobenzene	77	8.115	8.115	(0.899)	426313	5.10057	5.10	
20	Isophorone	82	8.434	8.445	(0.935)	732141	4.86736	4.87	
21	2-Nitrophenol	139	8.541	8.541	(0.947)	229142	4.76595	4.76	

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3624.D
Report Date: 29-Jul-2021 08:58

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
	22 2,4-Dimethylphenol	107	8.648	8.648	(0.959)	387045	4.46197	4.46	
	23 bis(2-Chloroethoxy)methane	93	8.733	8.744	(0.968)	442408	4.53979	4.54	
	24 Benzoic acid	105	8.808	8.851	(0.976)	195120	6.88803	6.89(QR)	
	25 2,4-Dichlorophenol	162	8.883	8.883	(0.985)	338625	4.81405	4.81	
	26 1,2,4-Trichlorobenzene	180	8.958	8.969	(0.993)	355115	5.04044	5.04	
*	27 Naphthalene-D8	136	9.022	9.022	(1.000)	194346	0.80000	(a)	
	28 Naphthalene	128	9.054	9.054	(1.004)	1218037	4.83330	4.83	
	29 4-Chloroaniline	127	9.161	9.161	(1.015)	376982	4.70573	4.70	
	30 Hexachlorobutadiene	225	9.247	9.247	(1.025)	166074	4.80828	4.81	
	31 Caprolactam	113	9.613	9.652	(1.065)	114657	4.59230	4.59	
	32 4-Chloro-3-Methylphenol	107	9.859	9.859	(1.093)	344158	4.76391	4.76	
	34 2-Methylnaphthalene	142	9.977	9.977	(1.106)	812248	4.41786	4.42	
	35 1-Methylnaphthalene	142	10.105	10.105	(1.120)	787701	4.76623	4.77	
	36 Hexachlorocyclopentadiene	237	10.213	10.213	(0.899)	121844	3.69530	3.70(R)	
	37 1,2,4,5-Tetrachlorobenzene	216	10.213	10.213	(0.899)	322008	4.80466	4.80	
	39 2,4,6-Trichlorophenol	196	10.390	10.390	(0.915)	210818	4.77199	4.77	
	40 2,4,5-Trichlorophenol	196	10.459	10.459	(0.921)	277788	4.76514	4.76	
	41 1,1'-Biphenyl	154	10.607	10.607	(0.934)	924597	4.82787	4.83	
	42 2-Chloronaphthalene	164	10.618	10.629	(0.935)	261571	5.00451	5.00	
	43 2-Nitroaniline	65	10.781	10.792	(0.949)	191911	4.70397	4.70	
	44 Dimethyl Phthalate	163	11.043	11.053	(0.972)	921531	5.06087	5.06	
	45 2,6-Dinitrotoluene	165	11.108	11.119	(0.978)	208420	4.92927	4.93	
	46 Acenaphthylene	152	11.173	11.173	(0.984)	1134076	4.26326	4.26	
	47 3-Nitroaniline	138	11.337	11.359	(0.998)	77039	3.91792	3.92(R)	
*	48 Acenaphthene-D10	164	11.359	11.369	(1.000)	103039	0.80000	(a)	
	49 Acenaphthene	153	11.402	11.413	(1.004)	777014	4.77483	4.77	
	50 2,4-Dinitrophenol	184	11.489	11.489	(1.012)	69087	5.03733	5.04	
	51 4-Nitrophenol	109	11.685	11.664	(1.029)	56344	2.98031	2.98(QR)	
	52 Dibenzofuran	168	11.642	11.642	(1.025)	1028815	4.81996	4.82	
	53 2,4-Dinitrotoluene	165	11.653	11.653	(1.026)	249020	4.50325	4.50	
	54 2,3,4,6-Tetrachlorophenol	232	11.849	11.849	(1.043)	154778	4.08730	4.09	
	55 Diethylphthalate	149	11.991	12.001	(1.056)	940848	4.96423	4.96	
	57 Fluorene	166	12.100	12.110	(1.065)	809184	4.69323	4.69	
	58 4-Chlorophenyl-phenylether	204	12.121	12.121	(1.067)	378237	4.70958	4.71	
	59 4-Nitroaniline	138	12.154	12.187	(1.070)	100152	4.44109	4.44(QM)	M9
	60 4,6-Dinitro-2-Methylphenol	198	12.208	12.208	(0.914)	115185	4.95777	4.96	
	61 N-Nitrosodiphenylamine	169	12.285	12.285	(0.920)	562986	3.93113	3.93(R)	
	62 4-Bromophenyl-phenylether	248	12.773	12.773	(0.957)	193590	4.34980	4.35	
	63 Hexachlorobenzene	284	12.854	12.854	(0.963)	165467	4.26894	4.27	
	64 Atrazine	200	13.027	13.039	(0.976)	177618	4.61949	4.62	
	65 Pentachlorophenol	266	13.142	13.142	(0.984)	104821	5.03222	5.03	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	157470	0.80000	(a)	
	67 Phenanthrene	178	13.385	13.385	(1.003)	1047008	4.81930	4.82	
	68 Anthracene	178	13.442	13.454	(1.007)	1177473	4.59168	4.59	
	69 Carbazole	167	13.685	13.685	(1.025)	814788	5.17540	5.18	
	70 Di-n-butylphthalate	149	14.196	14.196	(1.063)	1660320	4.98870	4.99	
	72 Fluoranthene	202	14.985	14.985	(1.122)	1024532	4.89772	4.90	
	74 Pyrene	202	15.285	15.285	(0.892)	1032726	4.32515	4.32	
	75 Butylbenzylphthalate	149	16.251	16.262	(0.948)	642452	4.68091	4.68	
	76 3,3'-Dichlorobenzidine	252	17.139	17.128	(1.000)	73052	2.97807	2.98(R)	
	77 Benzo(a)anthracene	228	17.117	17.117	(0.999)	551596	4.39897	4.40	
*	78 Chrysene-D12	240	17.139	17.139	(1.000)	79313	0.80000	(a)	
	79 Chrysene	228	17.183	17.183	(1.003)	736280	4.68240	4.68	
	80 bis(2-Ethylhexyl)phthalate	149	17.305	17.305	(1.010)	924381	4.62964	4.63	

11:01 am, Aug 02, 2021

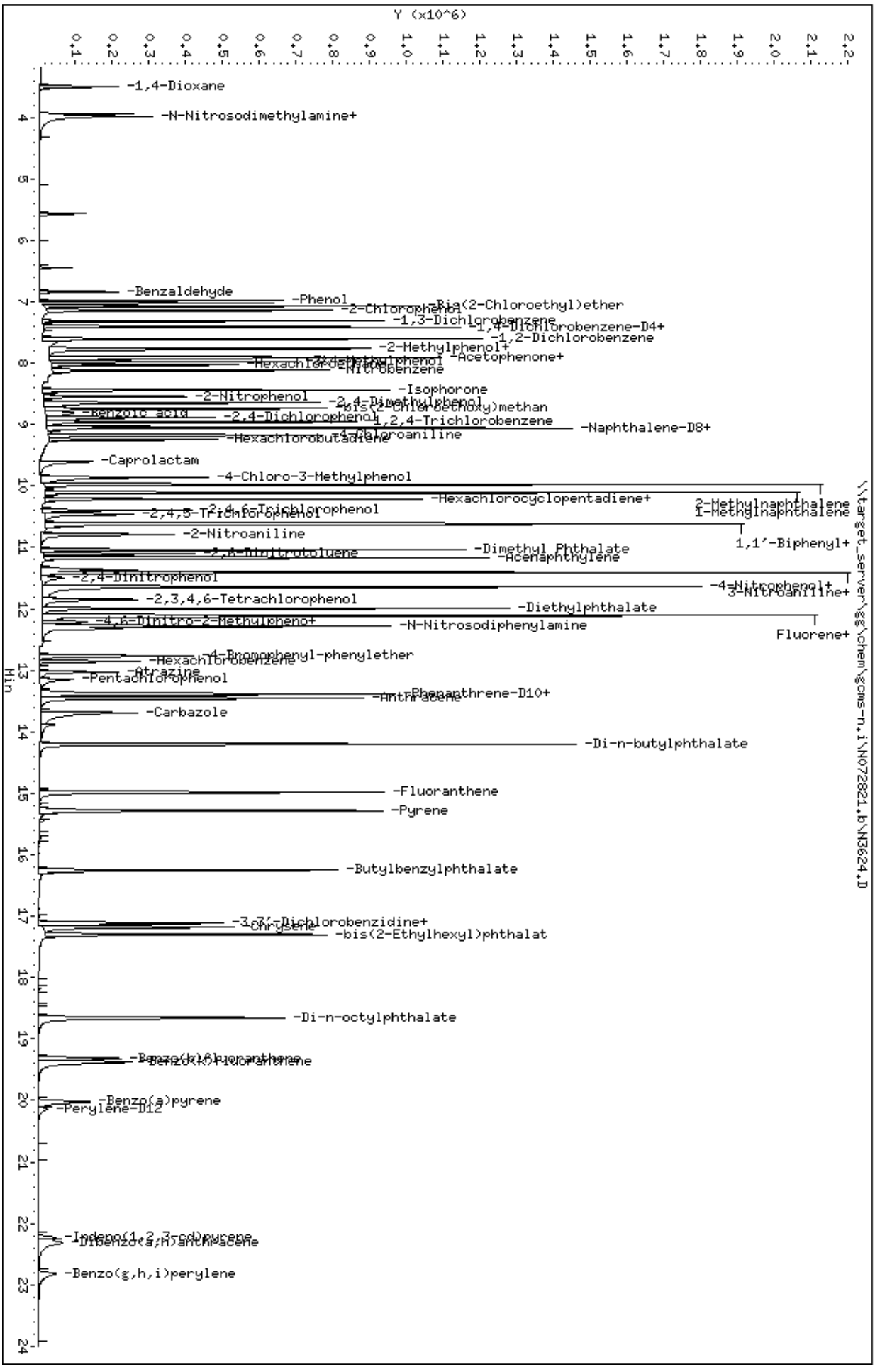
Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3624.D
Report Date: 29-Jul-2021 08:58

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
	81 Di-n-octylphthalate	149	18.657	18.657	(1.089)	1338883	4.63916	4.64	
	82 Benzo(b)fluoranthene	252	19.320	19.320	(0.959)	365518	4.72663	4.73	
	83 Benzo(k)fluoranthene	252	19.376	19.376	(0.962)	609964	4.87009	4.87(H)	
	84 Benzo(a)pyrene	252	20.016	20.016	(0.994)	303234	3.91867	3.92(R)	
*	85 Perylene-D12	264	20.139	20.139	(1.000)	51807	0.80000	(a)	
	86 Indeno(1,2,3-cd)pyrene	276	22.239	22.227	(1.298)	139995	4.49137	4.49(M)	M3
	87 Dibenzo(a,h)anthracene	278	22.317	22.306	(1.108)	194676	4.70624	4.71	
	88 Benzo(g,h,i)perylene	276	22.822	22.811	(1.133)	232137	4.41712	4.42	
M	89 Total PAHs	100				12953399	82.5940	82.6	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

11:01 am, Aug 02, 2021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Client ID:
Sample Info: WG303306-8
Volume Injected (uL): 1.0
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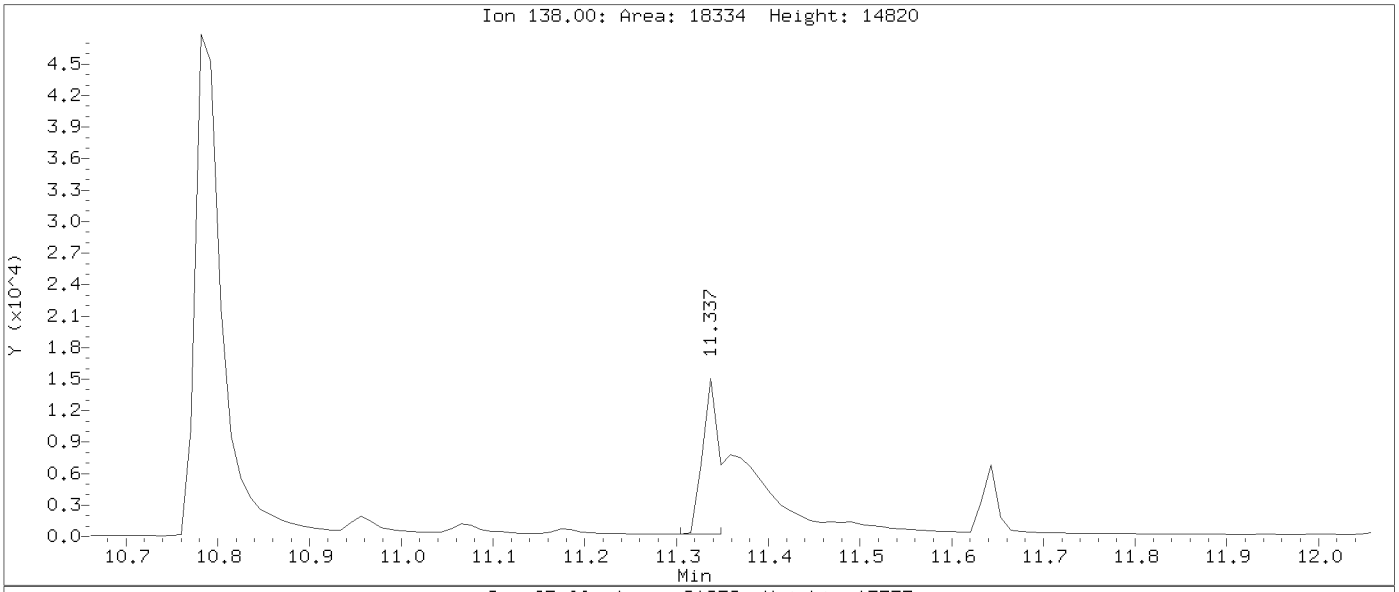
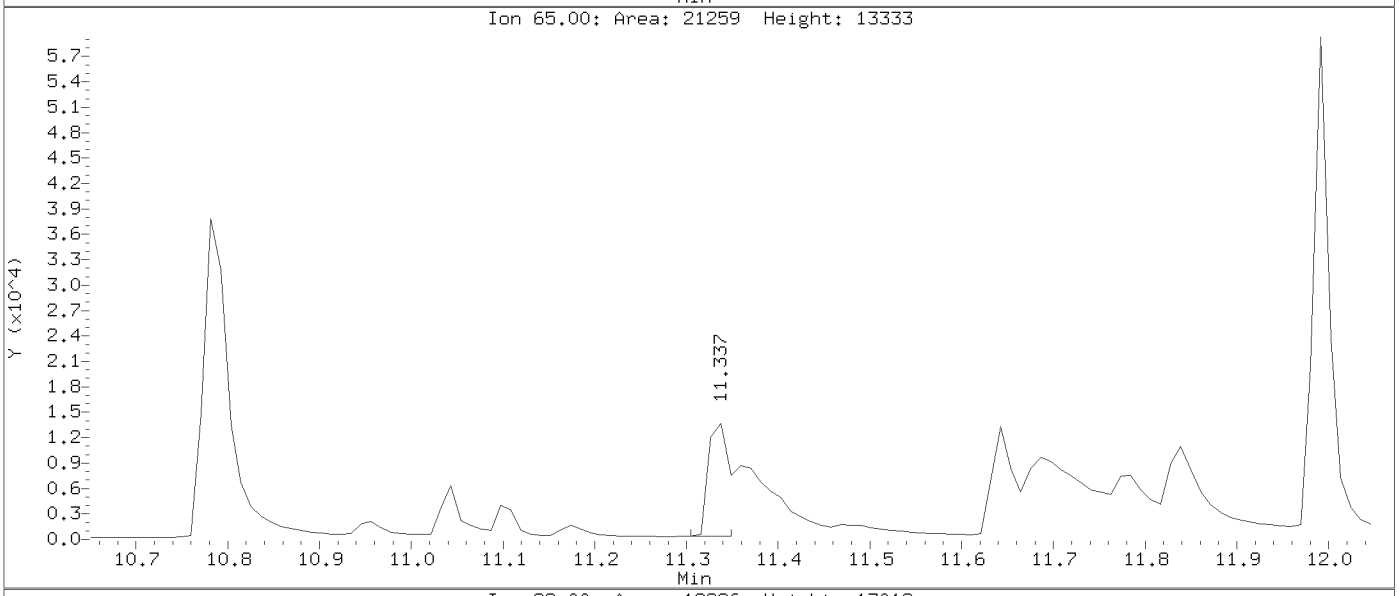
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N072821,b\N3624.D
Y (x10^6)
Min
-1,4-Dioxane
-N-Nitrosodimethylamine+
-Benzaldehyde
-Phenol
-2-Chlorophenol
-Bis(2-Chloroethyl)ether
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-2-Methylphenol+
-Acetophenone+
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-2,4-Dimethylphenol
-Benzoic acid
-2,4-Dichlorophenol
-1,2,4-Trichlorobenzene
-Naphthalene-D8+
-4-Chloroaniline
-Hexachlorobutadiene
-Caprolactam
-4-Chloro-3-Methylphenol
-Hexachlorocyclopentadiene+
2-Methylnaphthalene
1-Methylnaphthalene
-2,4,6-Trichlorophenol
-2,4,5-Trichlorophenol
-2-Nitroaniline
1,1'-Biphenyl+
-Dimethyl Phthalate
-Acenaphthylene
-2,6-Dinitrotoluene
-2,4-Dinitrophenol
-4-Nitrophenol+
3-Nitroaniline+
-2,3,4,6-Tetrachlorophenol
-Diethylphthalate
-4,6-Dinitro-2-Methylphenol+
-N-Nitrosodiphenylamine
Fluorene+
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
-Di-n-butylphthalate
-Fluoranthene
-Pyrene
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-Chrysene
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene
-Benzo(k)fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene
-Dibenzo(a,h)anthracene
-Benzo(g,h,i)perylene

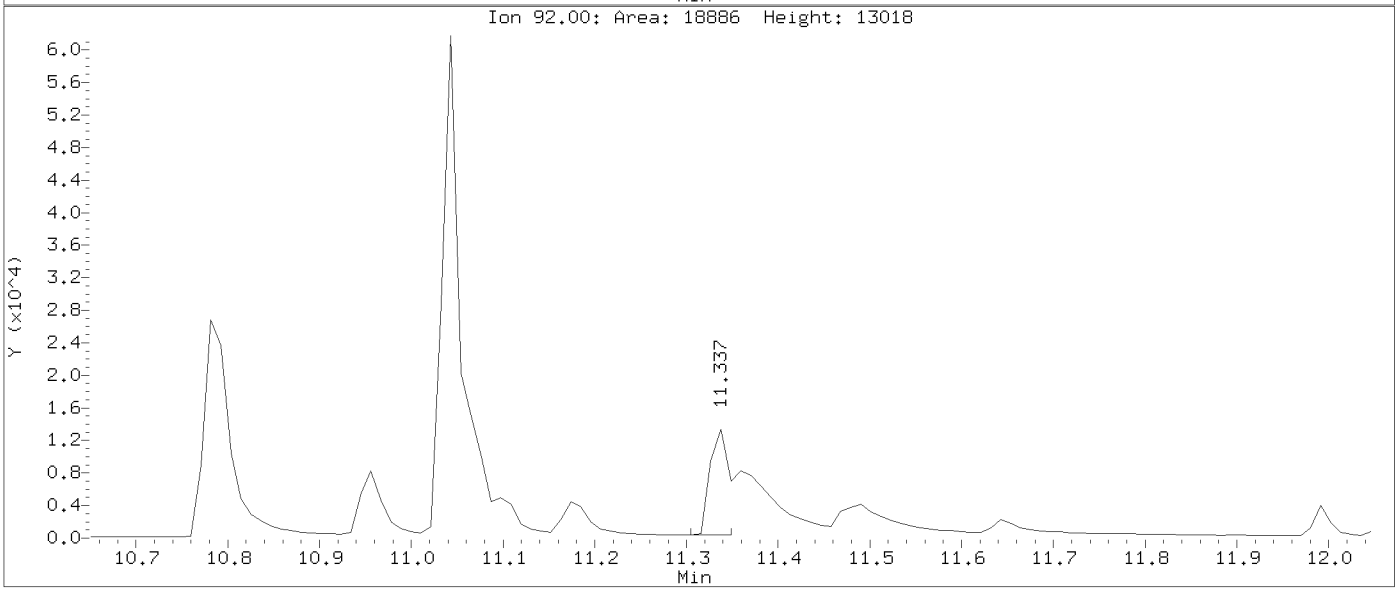
Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3618.D
Injection Date: 28-JUL-2021 15:35
Instrument: gcms-n.i
Client Sample ID:

Compound: 3-Nitroaniline
CAS Number: 99-09-2

BEFORE MANUAL INTEGRATION







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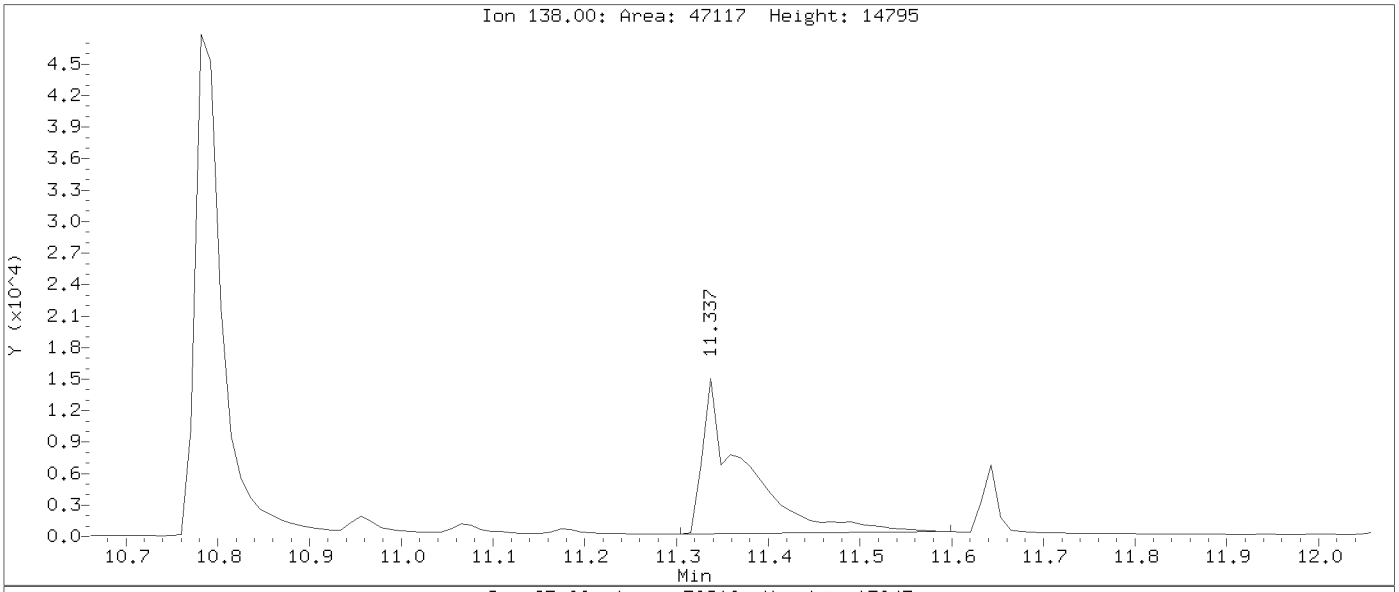
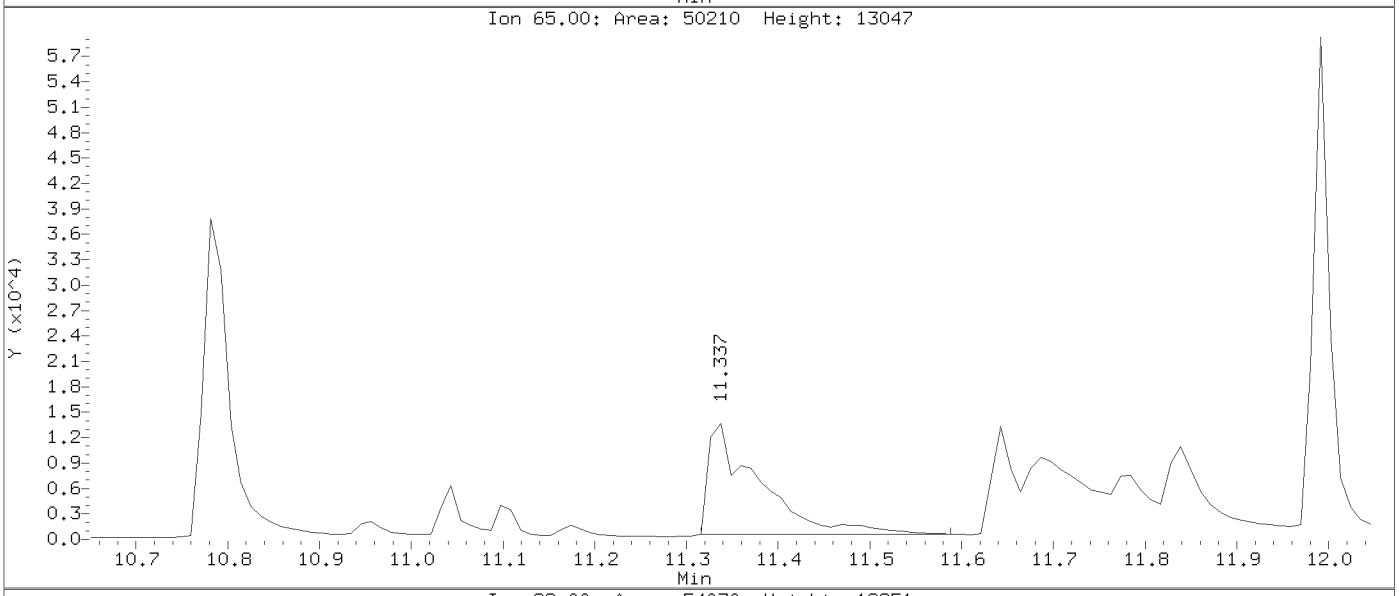
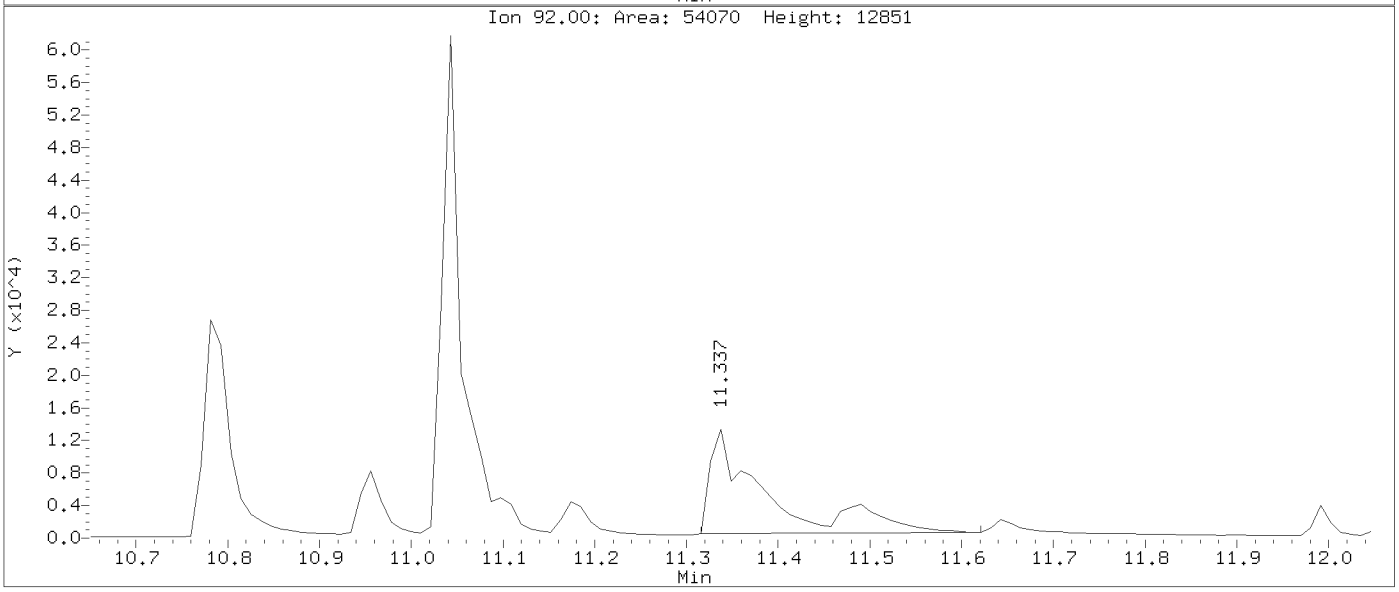
Injection Date: 28-JUL-2021 15:35
Instrument: gcms-n.i
Client Sample ID:

Compound: 3-Nitroaniline
CAS Number: 99-09-2

AFTER MANUAL INTEGRATION







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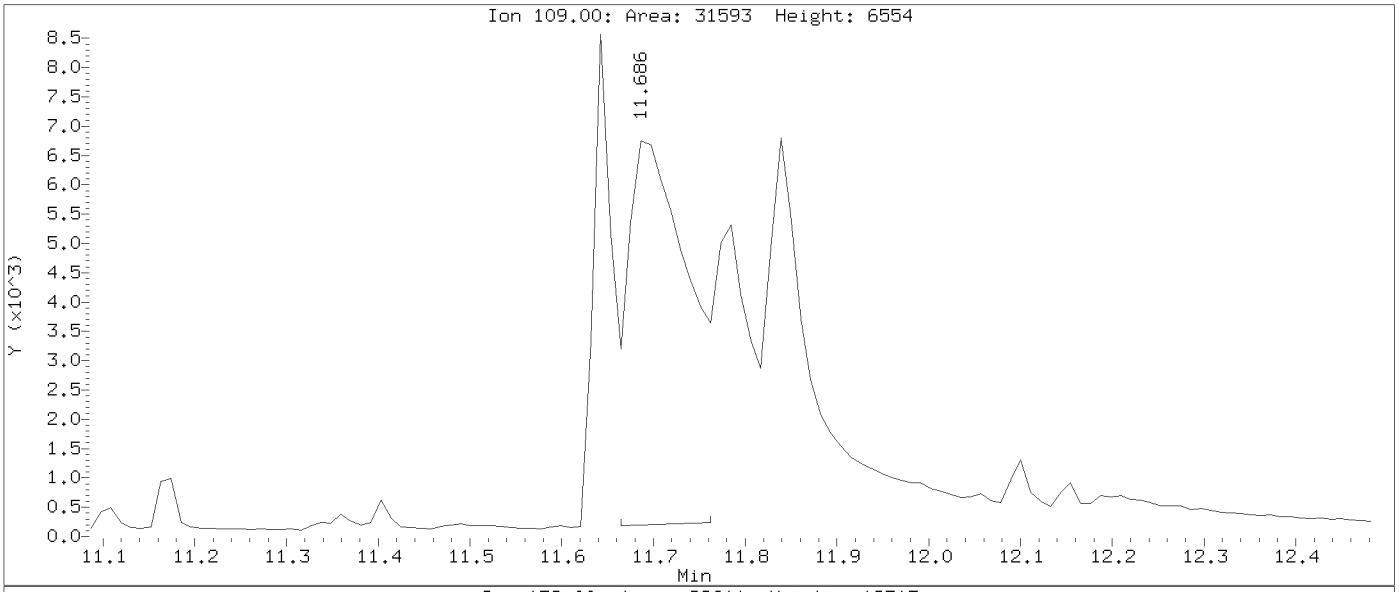
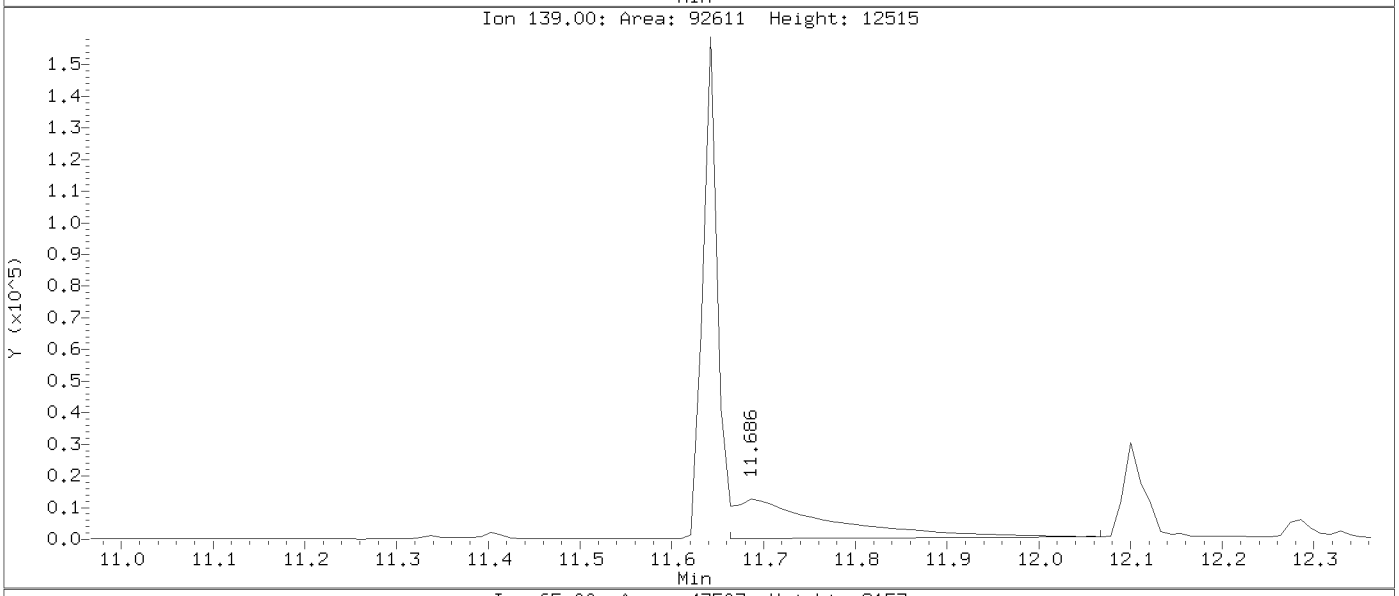
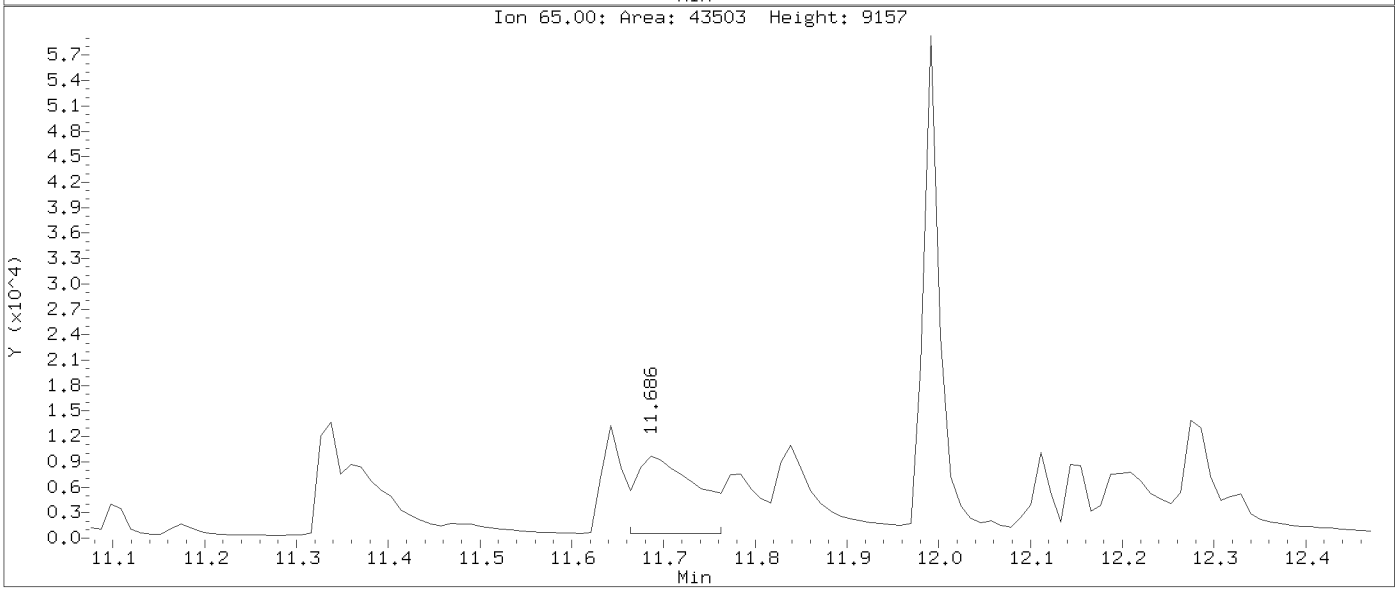
Injection Date: 28-JUL-2021 15:35
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitrophenol
CAS Number: 100-02-7







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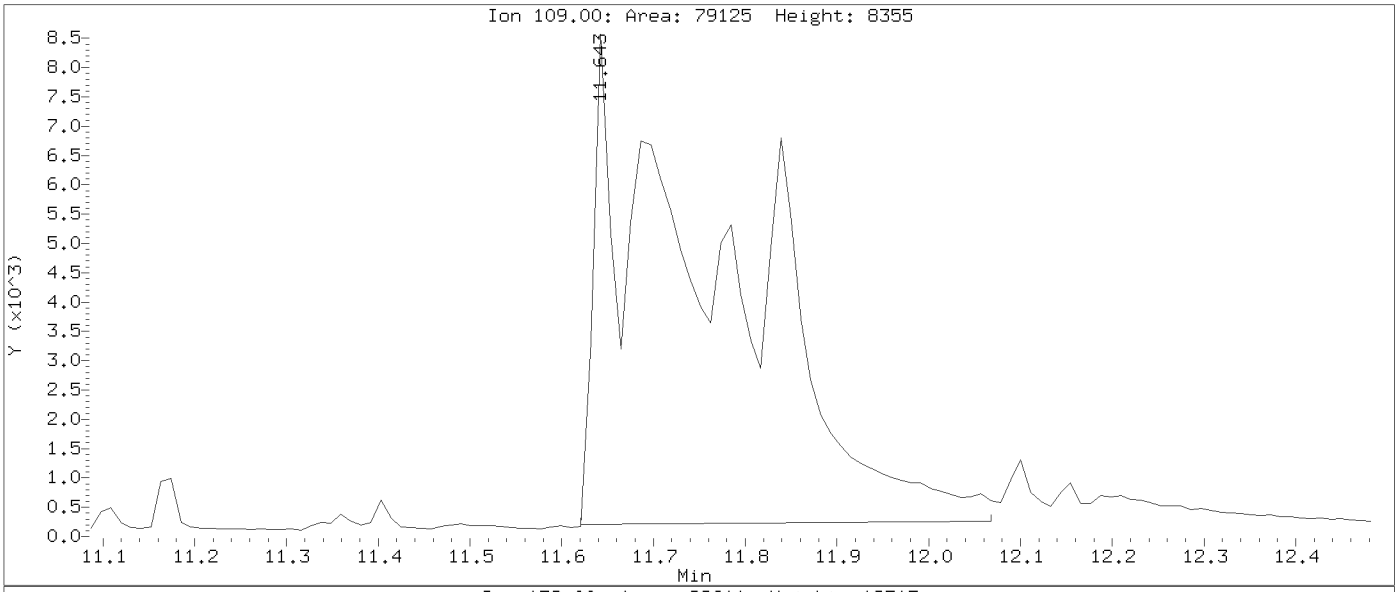
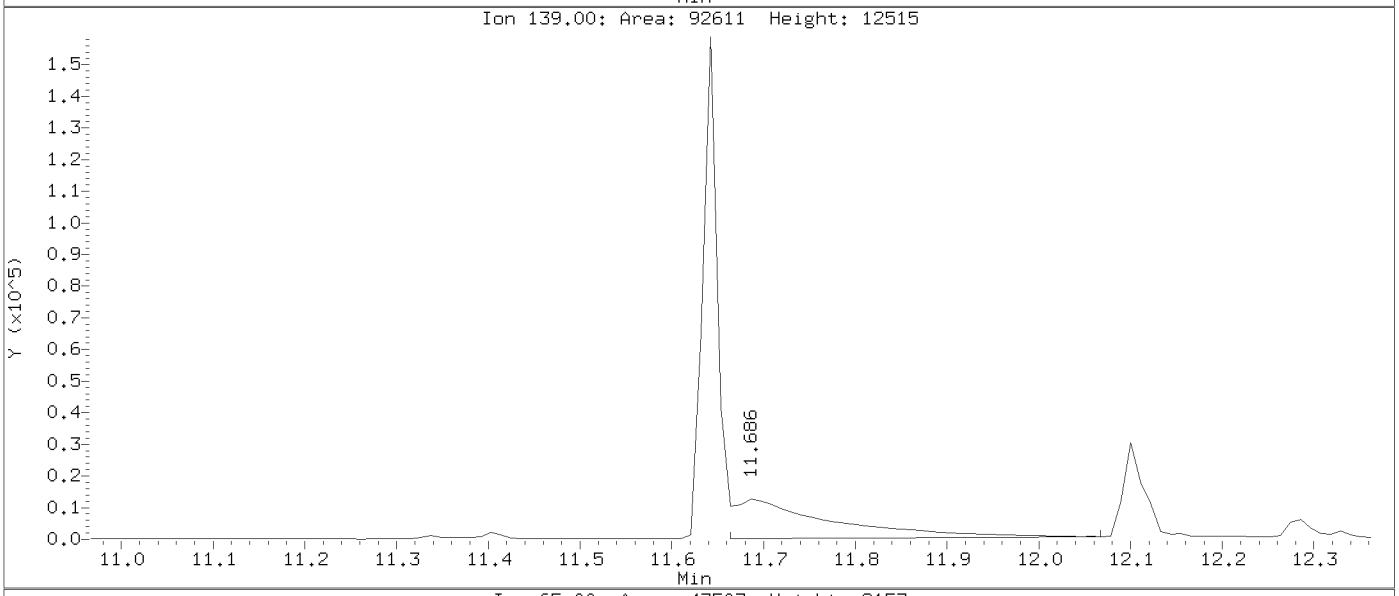
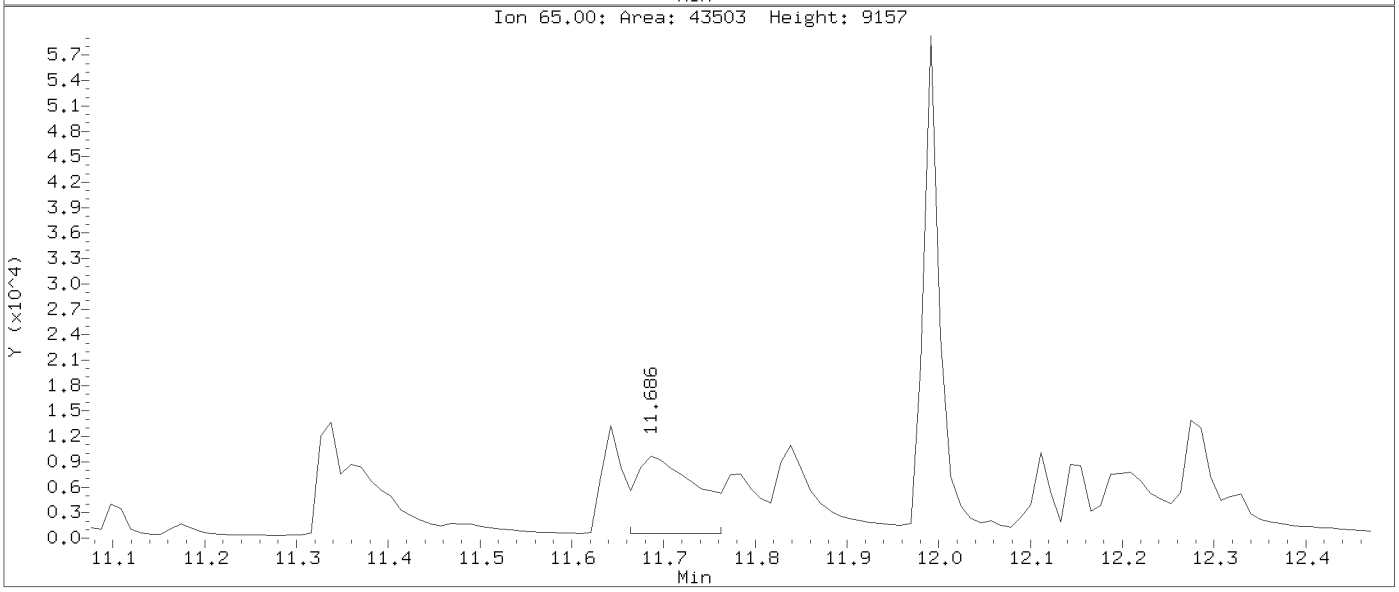
Injection Date: 28-JUL-2021 15:35
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitrophenol
CAS Number: 100-02-7

AFTER MANUAL INTEGRATION







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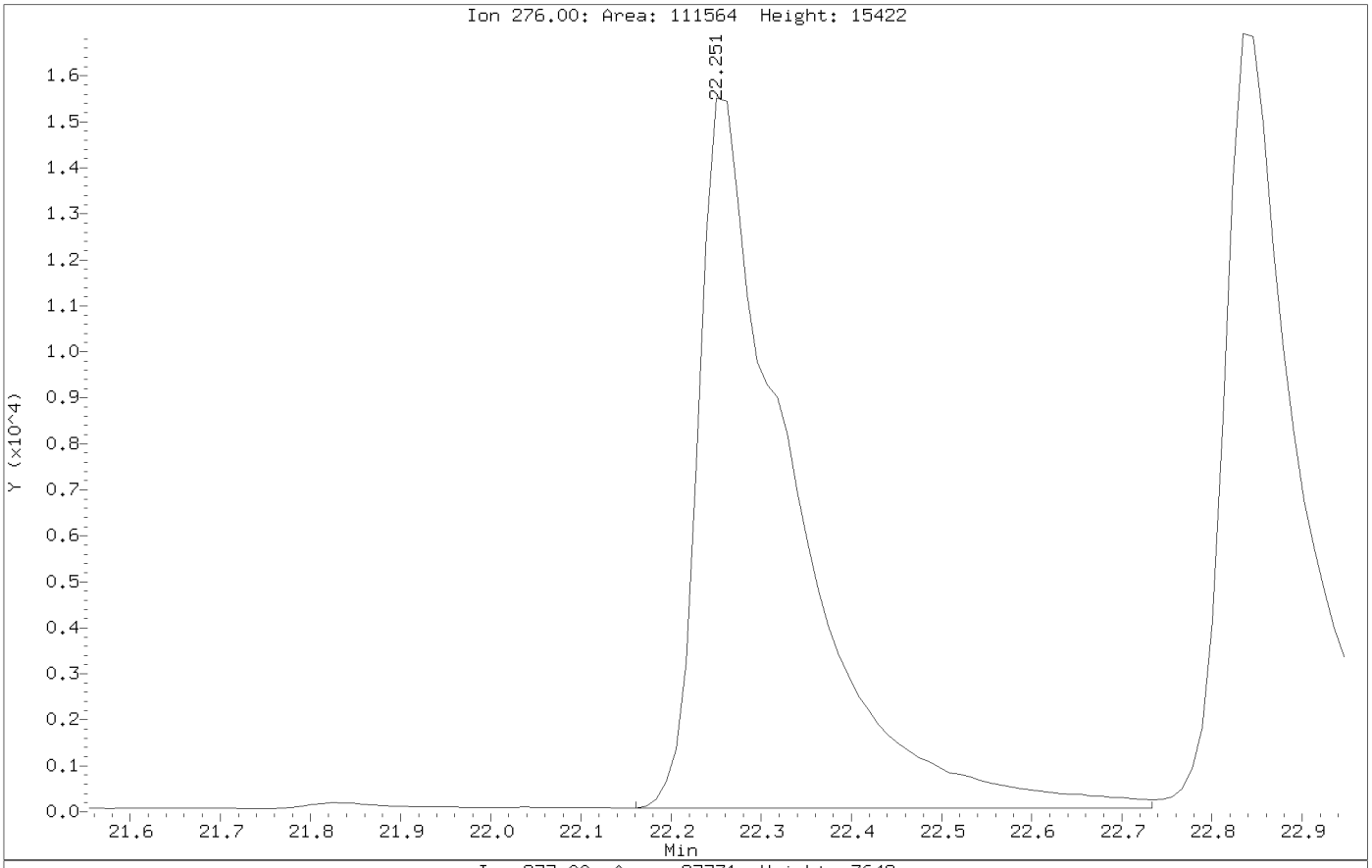
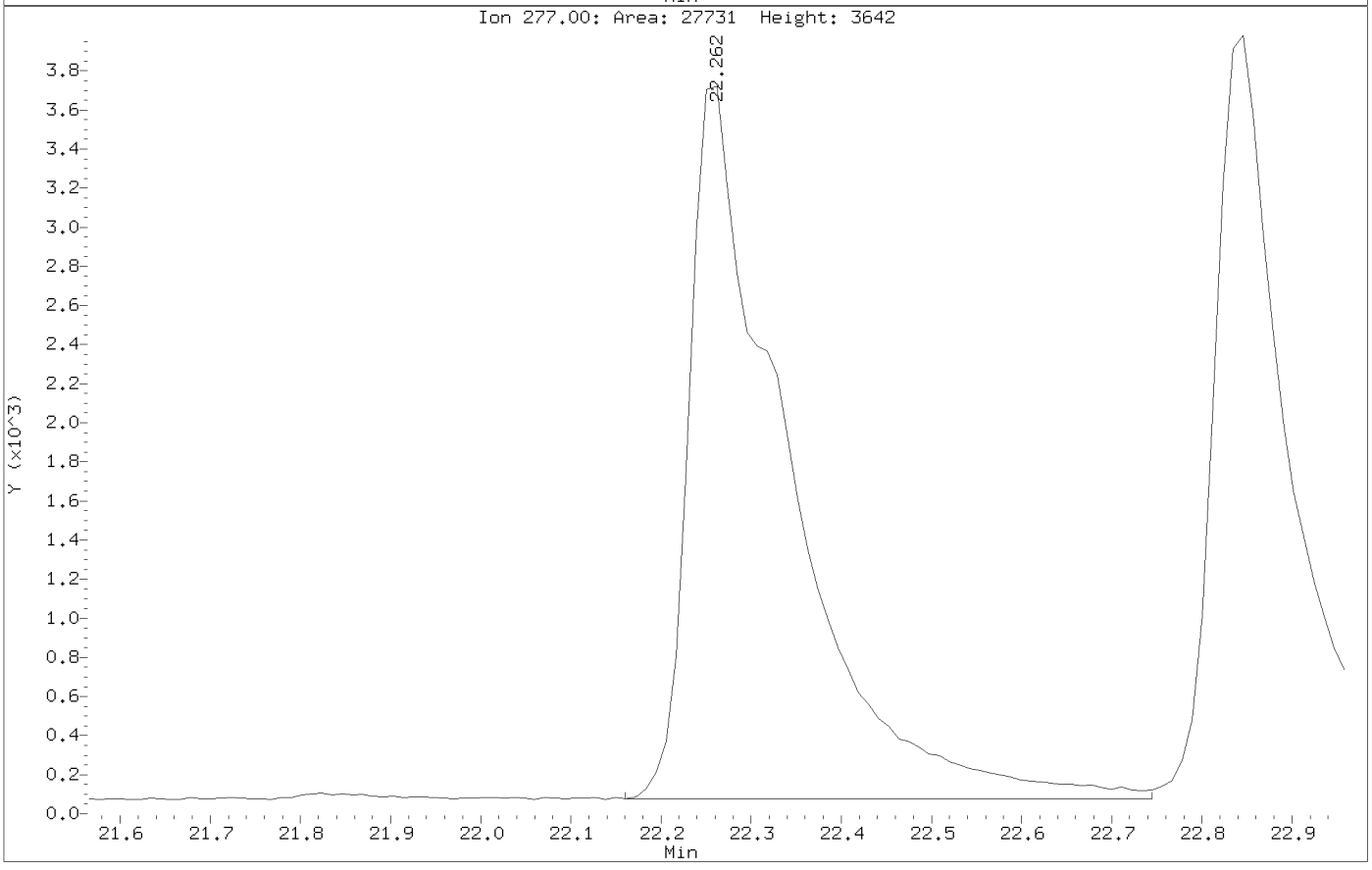
Injection Date: 28-JUL-2021 15:35
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

BEFORE MANUAL INTEGRATION





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Injection Date: 28-JUL-2021 15:35
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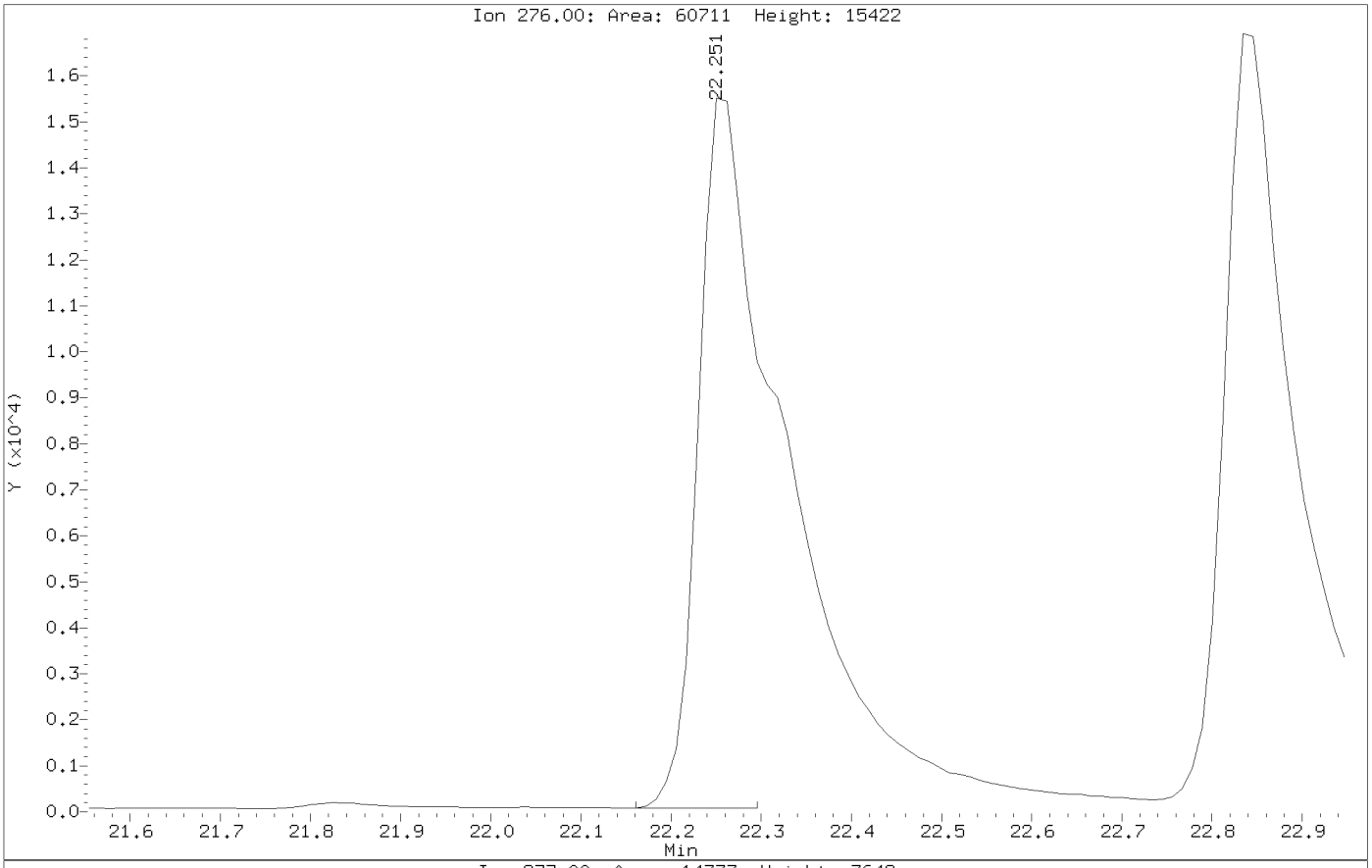
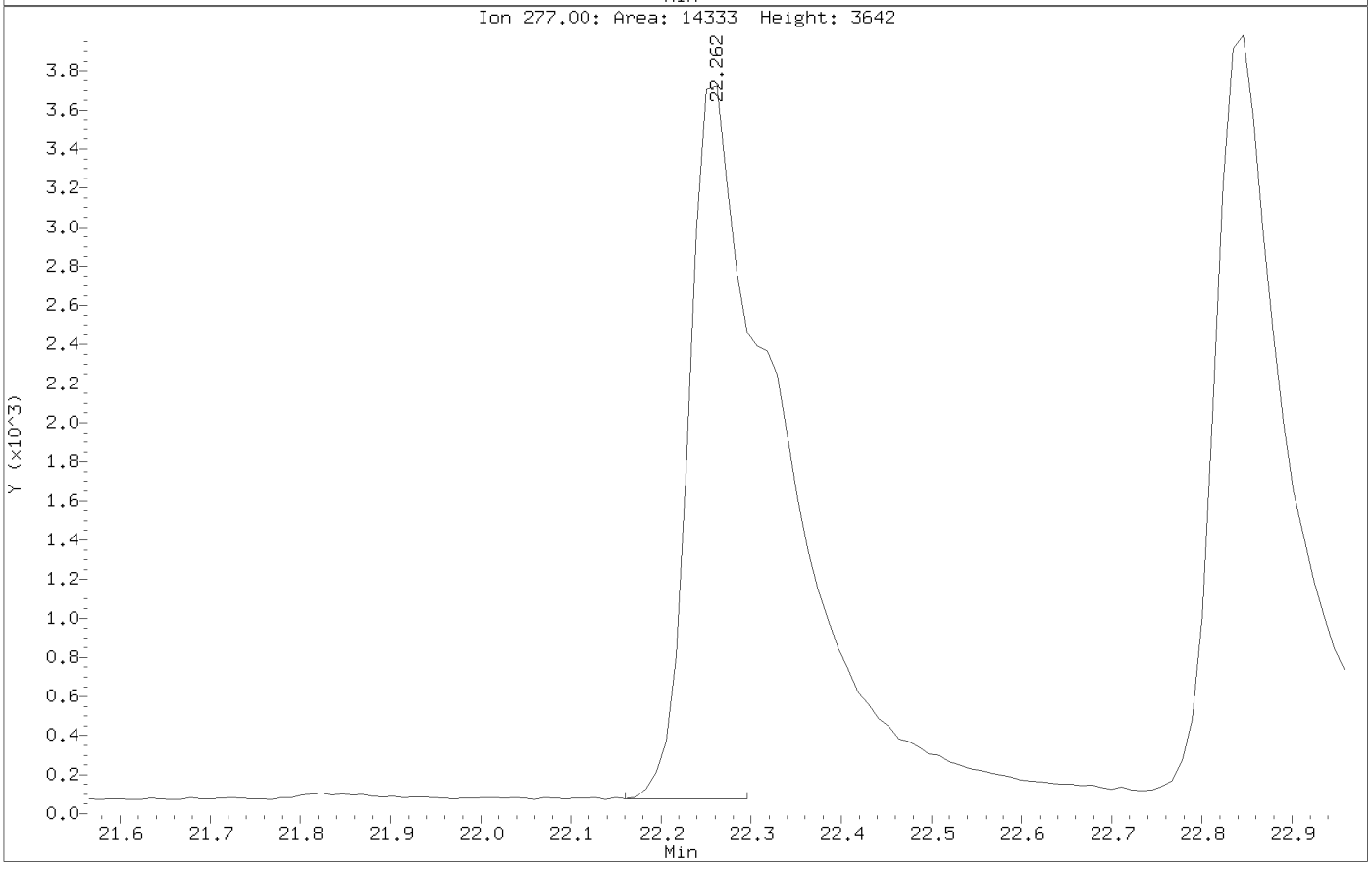
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

AFTER MANUAL INTEGRATION





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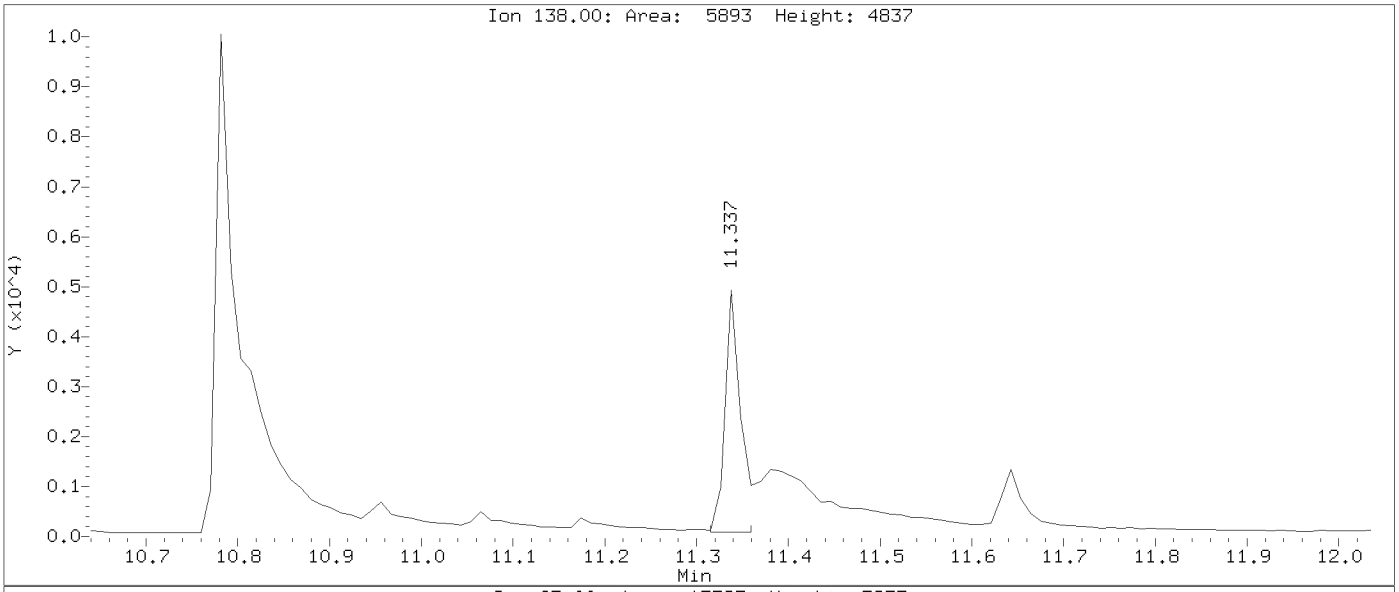
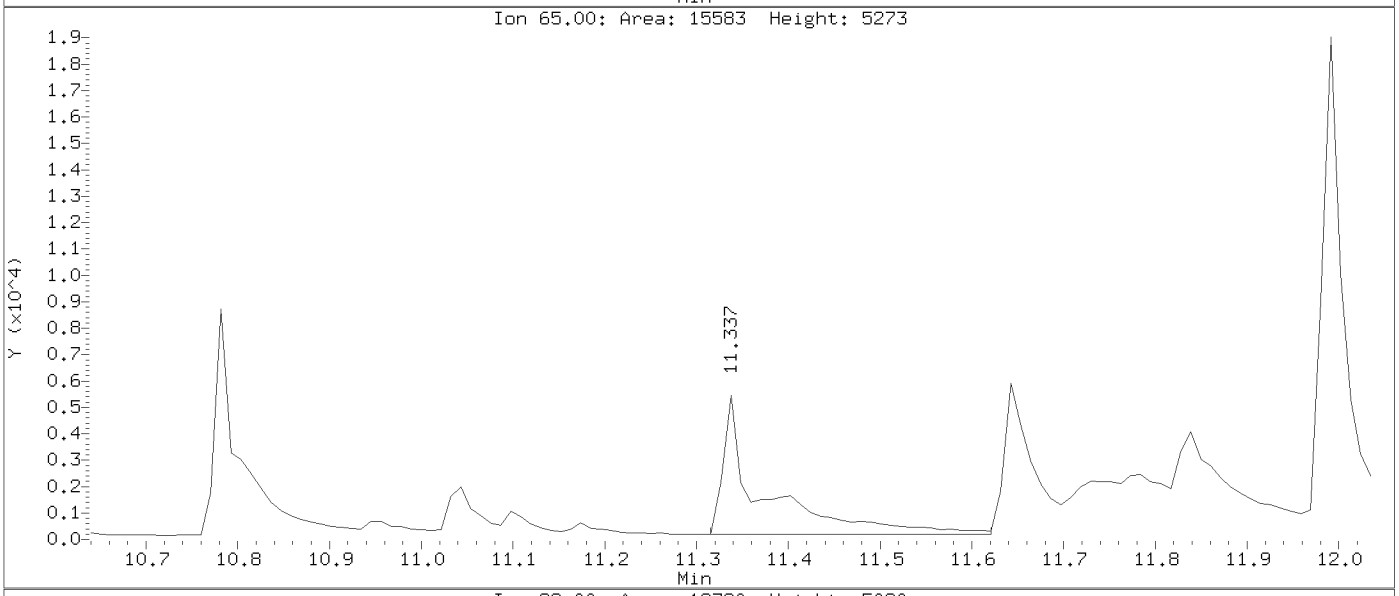
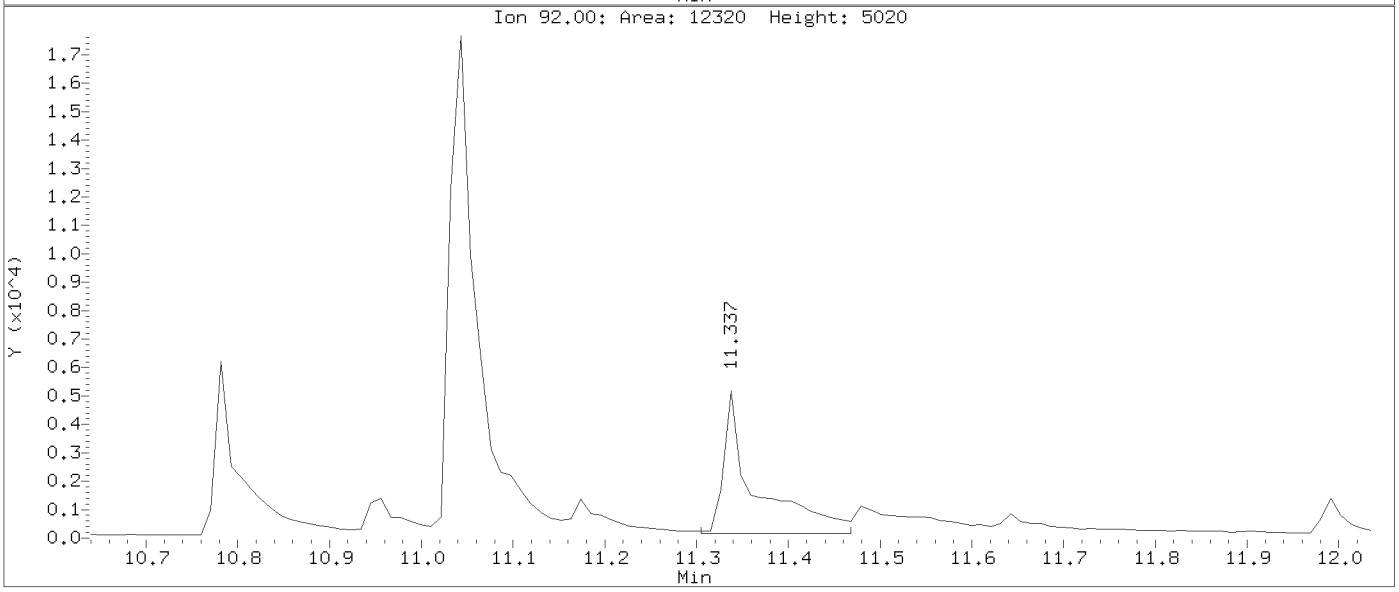
Injection Date: 28-JUL-2021 16:07
Instrument: gcms-n.i
Client Sample ID:

Compound: 3-Nitroaniline
CAS Number: 99-09-2

BEFORE MANUAL INTEGRATION







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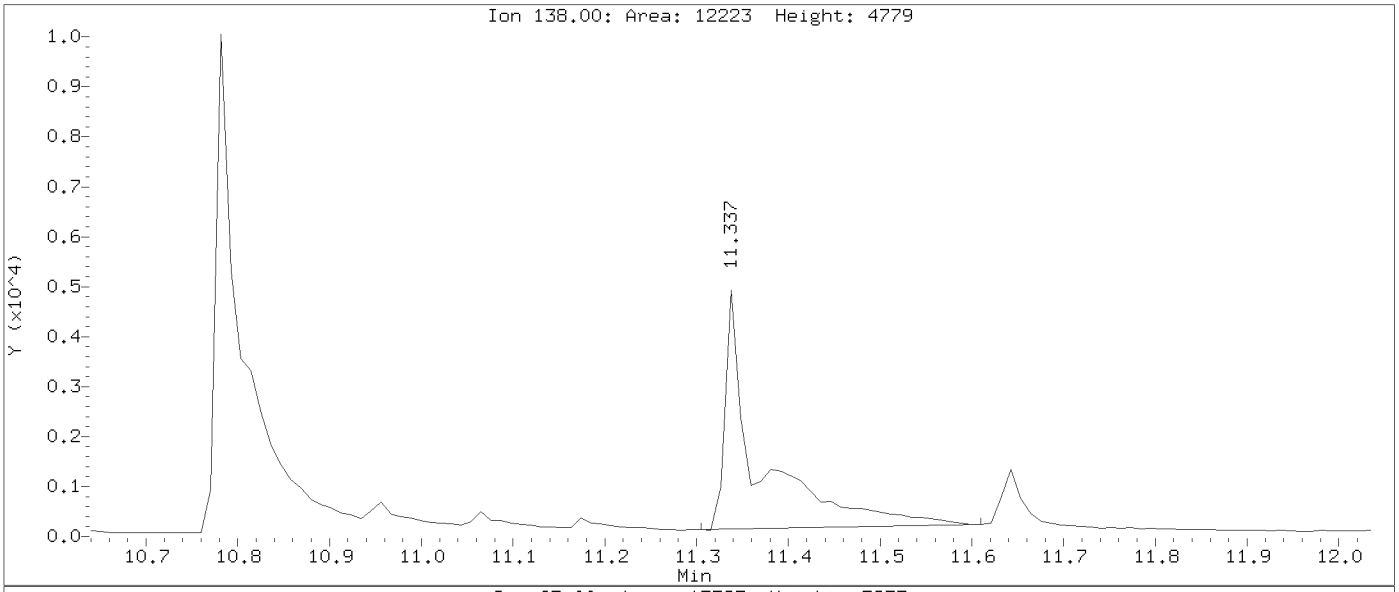
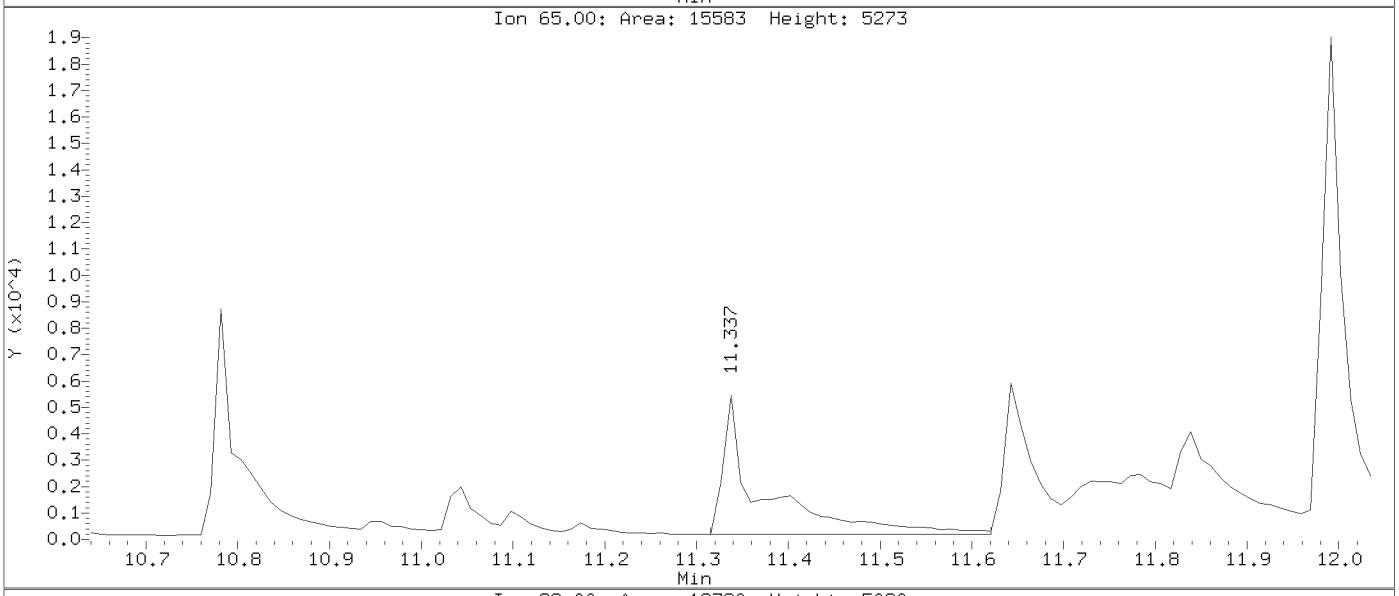
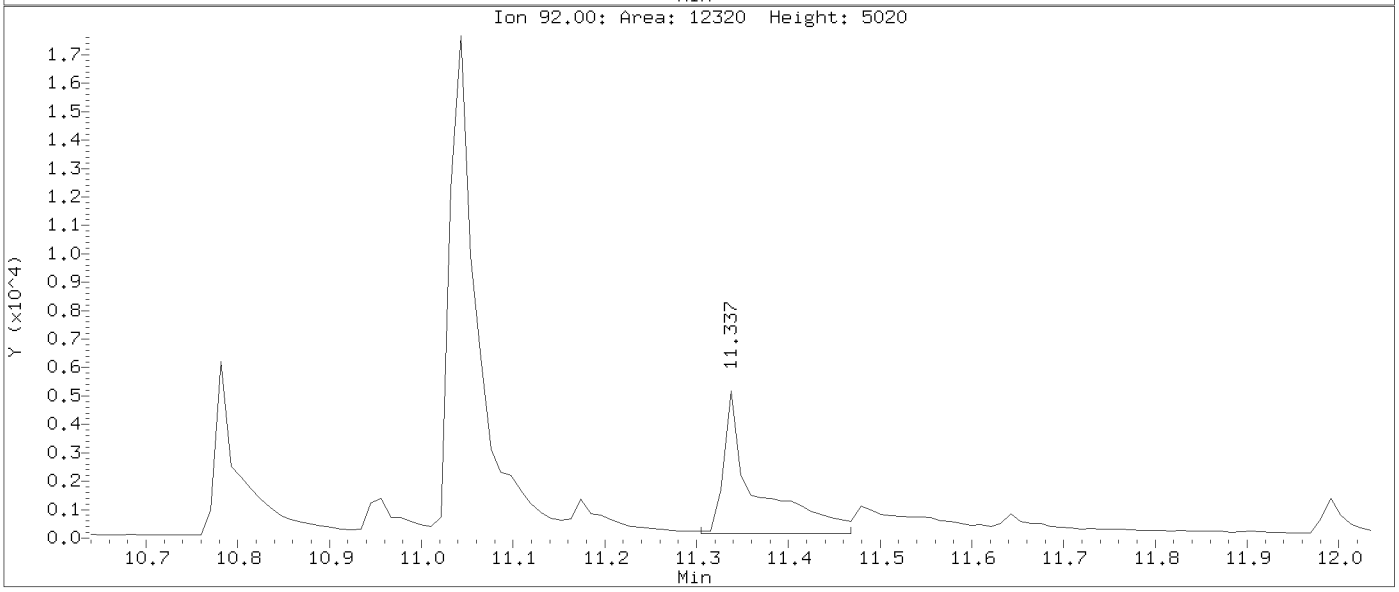
Compound: 3-Nitroaniline
CAS Number: 99-09-2

AFTER MANUAL INTEGRATION







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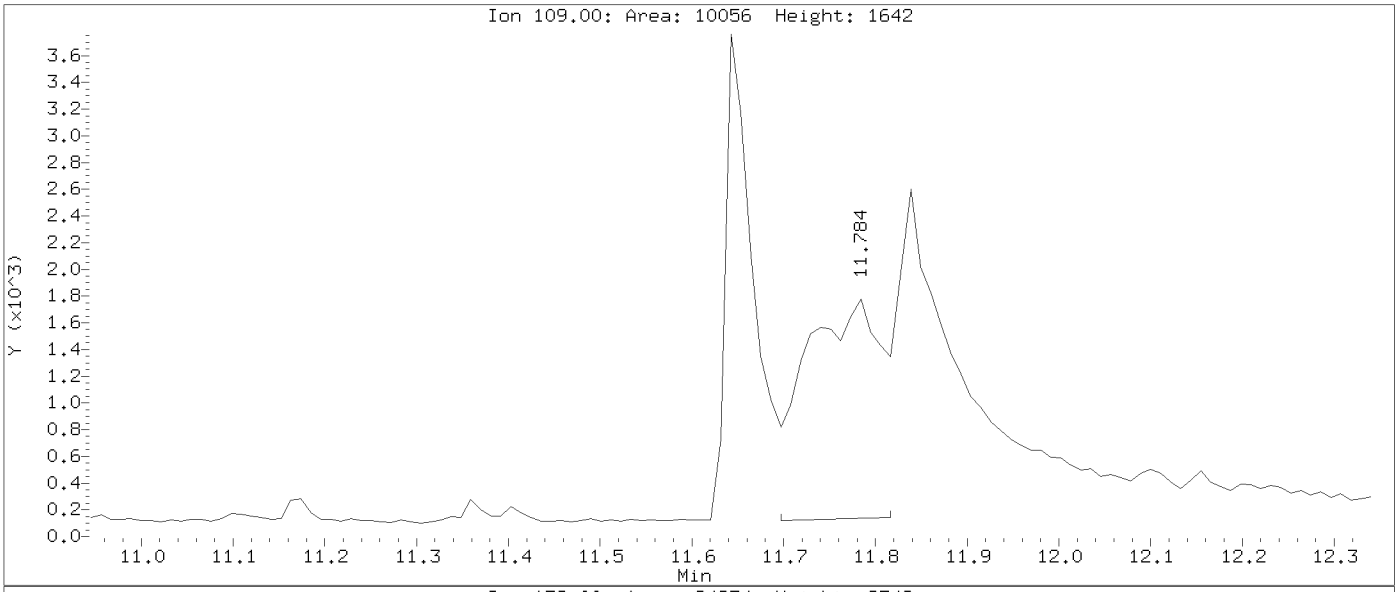
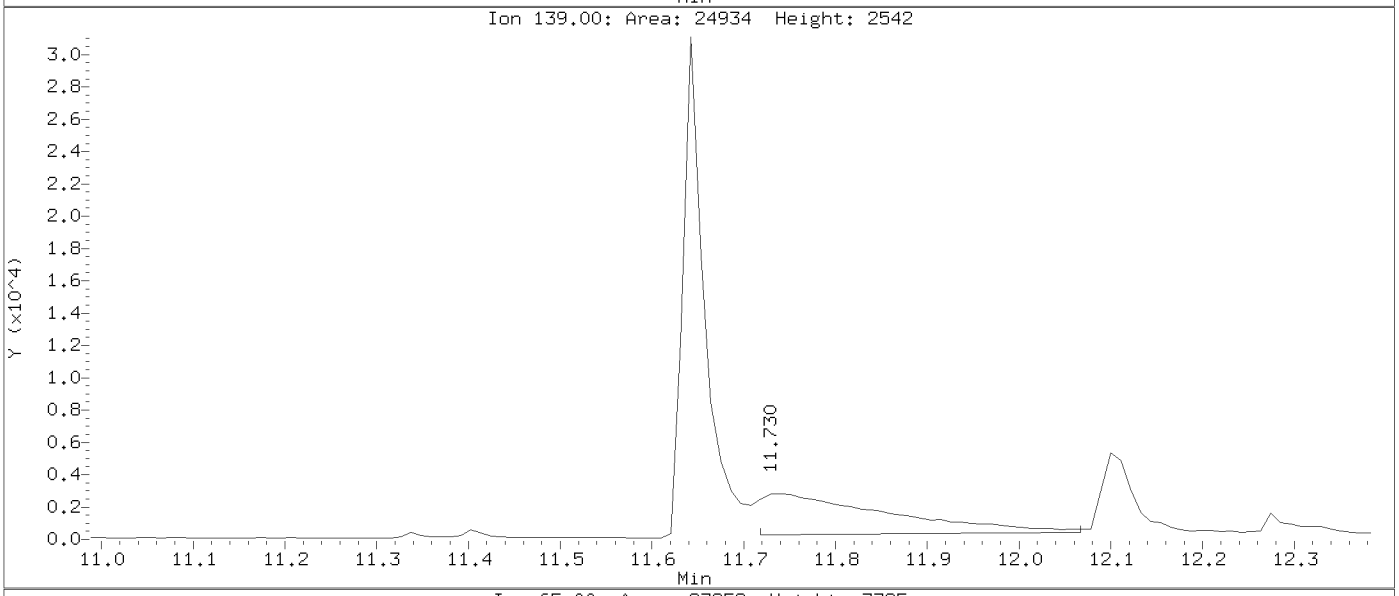
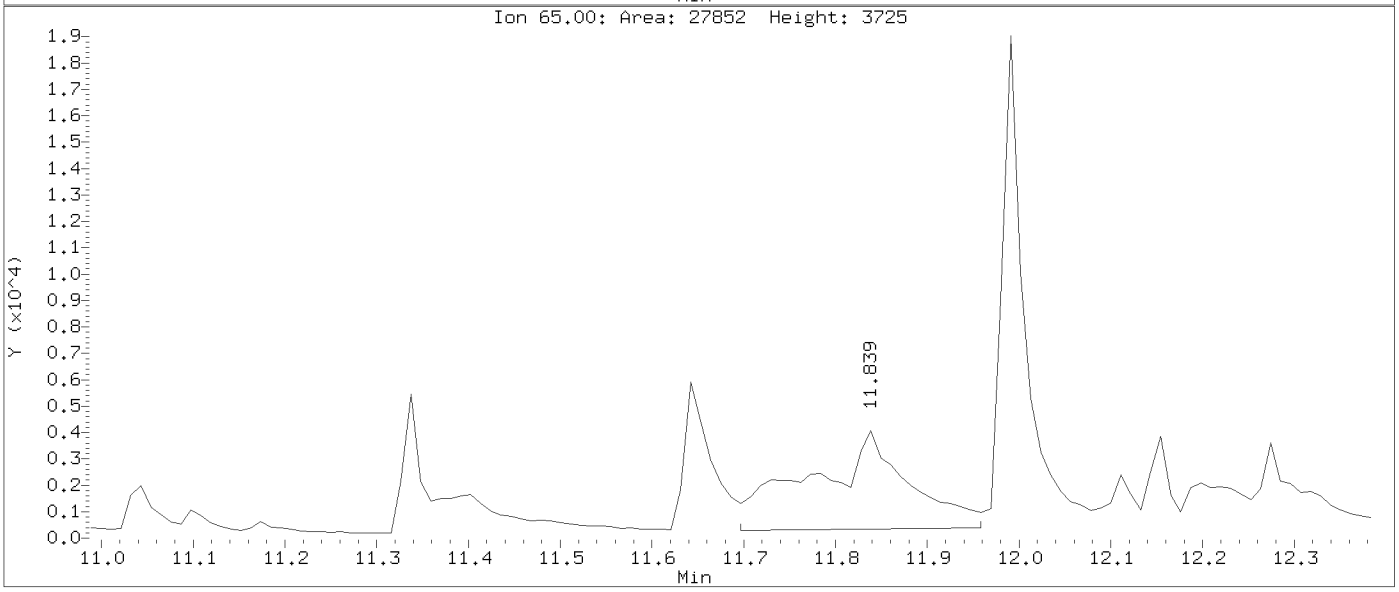
Injection Date: 28-JUL-2021 16:07
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitrophenol
CAS Number: 100-02-7

BEFORE MANUAL INTEGRATION







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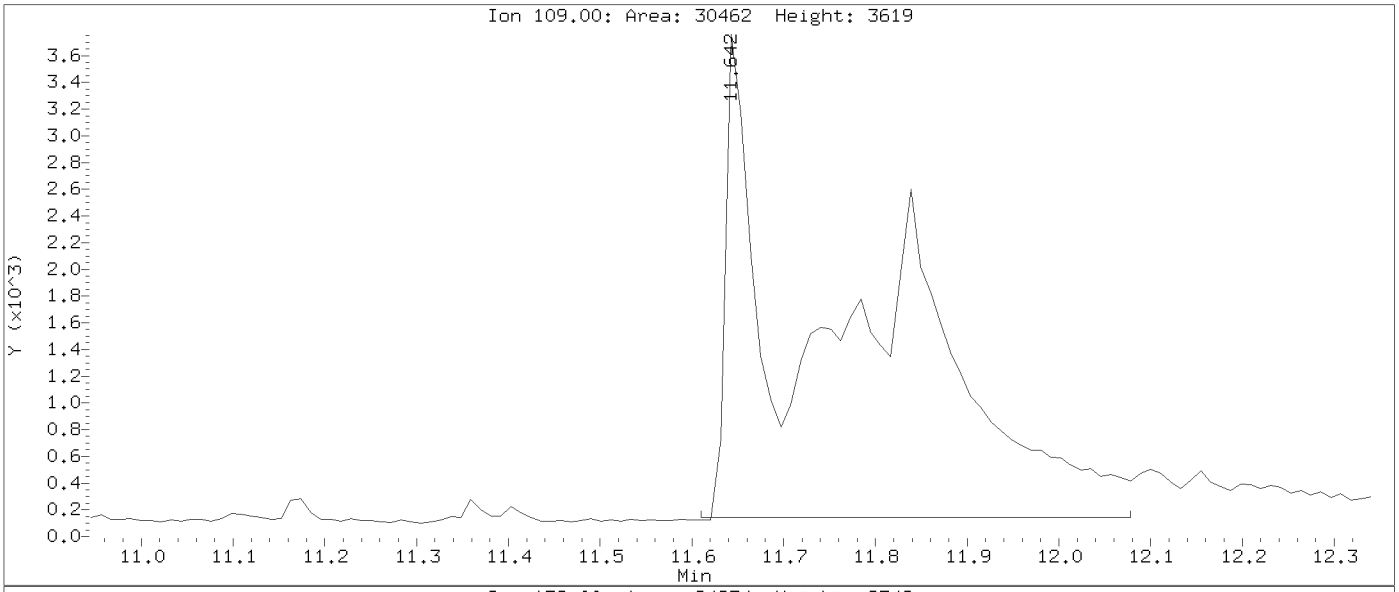
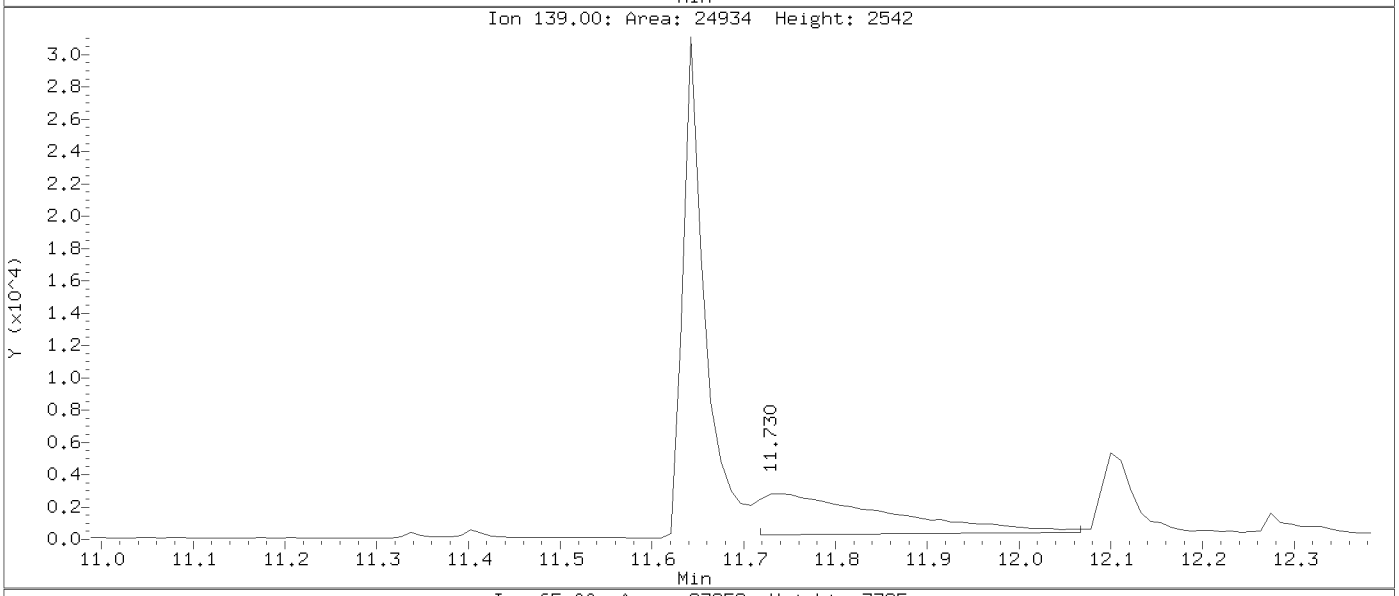
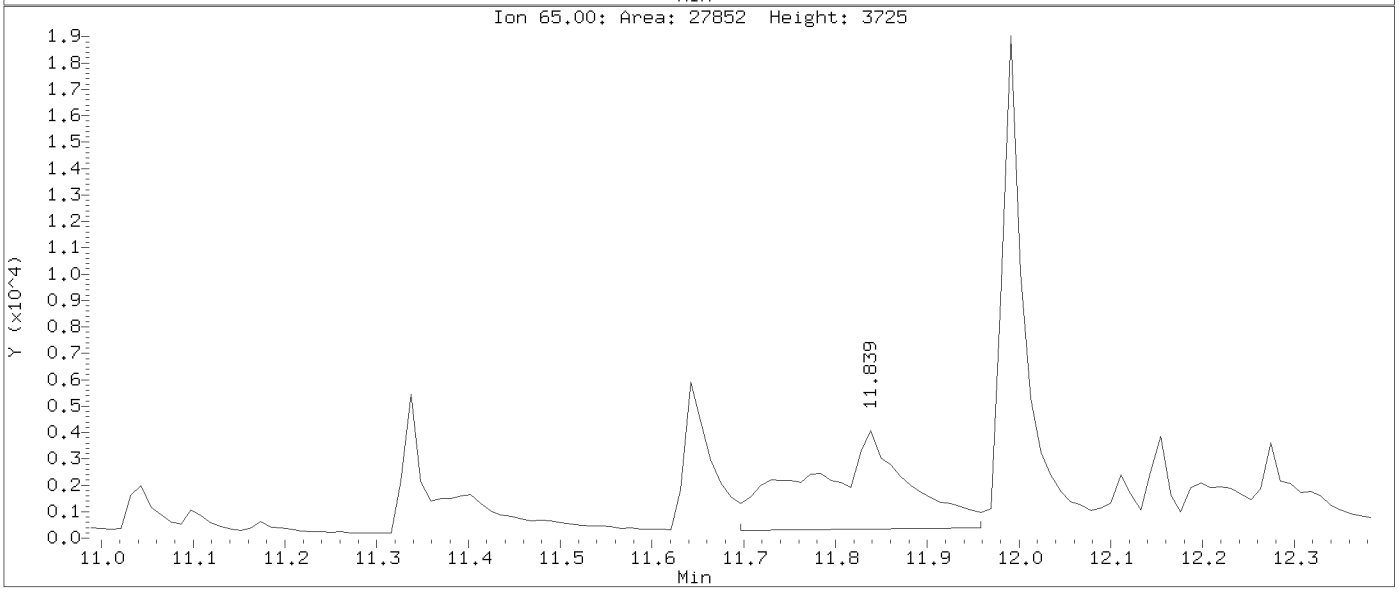
Injection Date: 28-JUL-2021 16:07
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitrophenol
CAS Number: 100-02-7

AFTER MANUAL INTEGRATION







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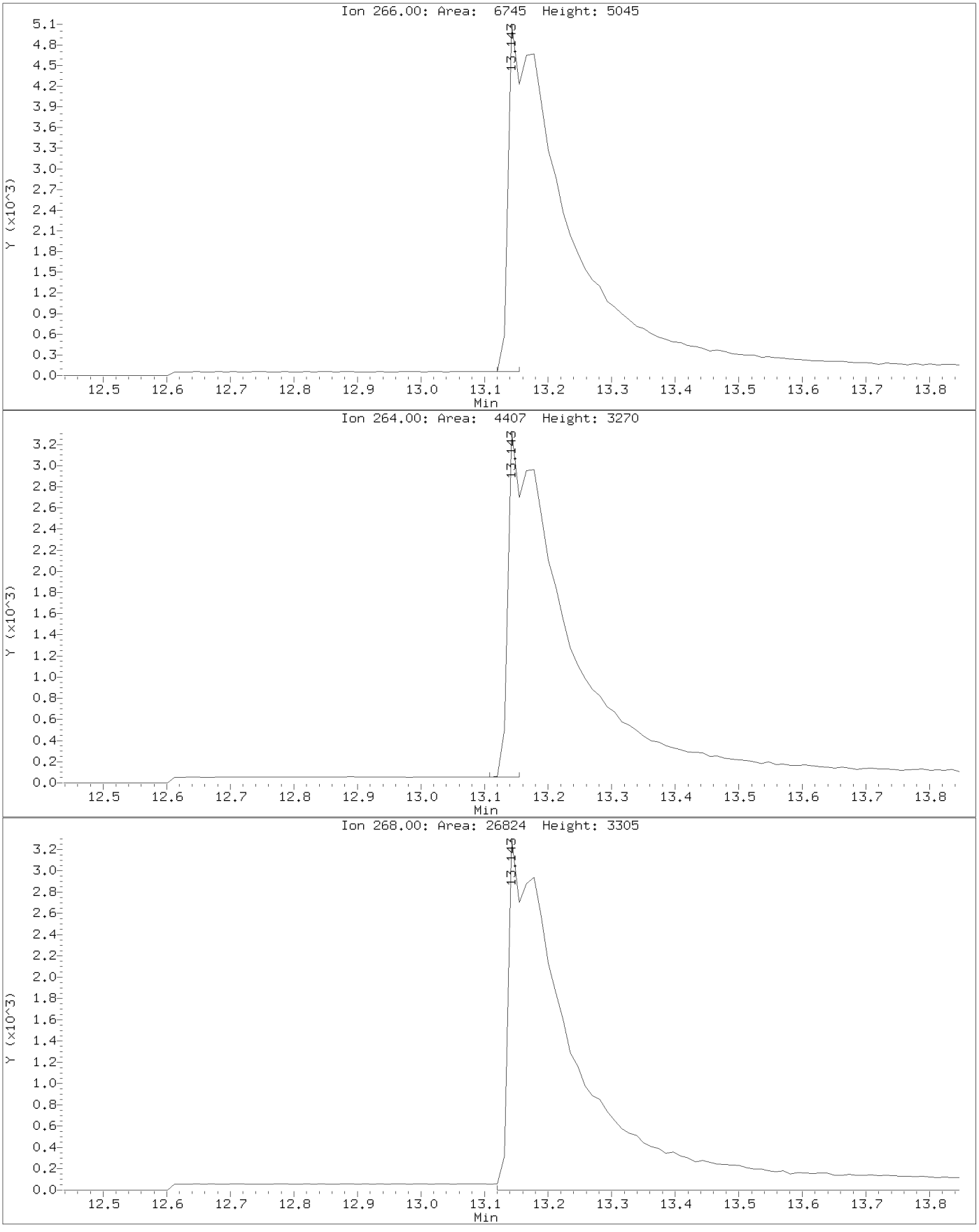
Injection Date: 28-JUL-2021 16:07
Instrument: gcms-n.i
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5

BEFORE MANUAL INTEGRATION



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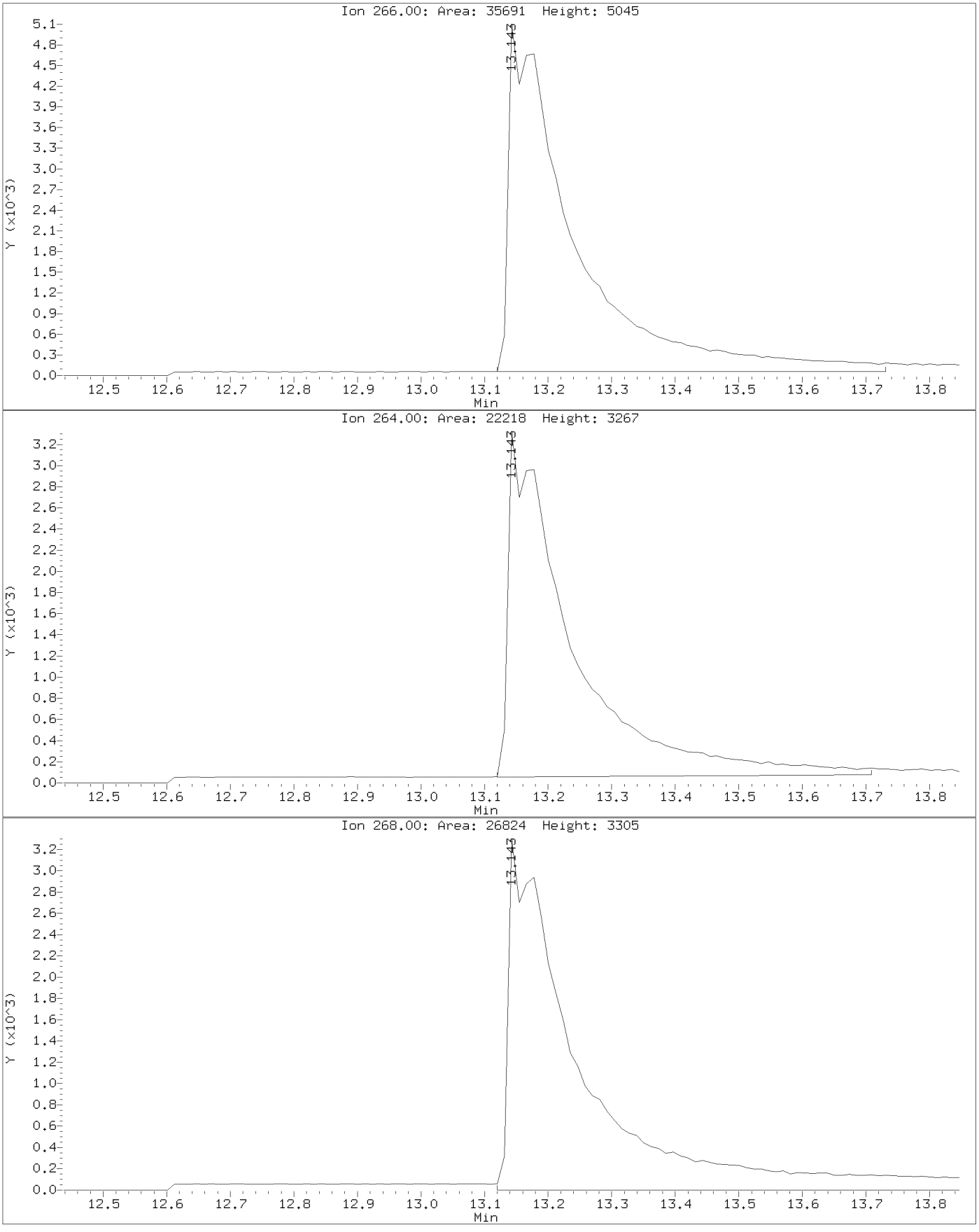
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5

AFTER MANUAL INTEGRATION



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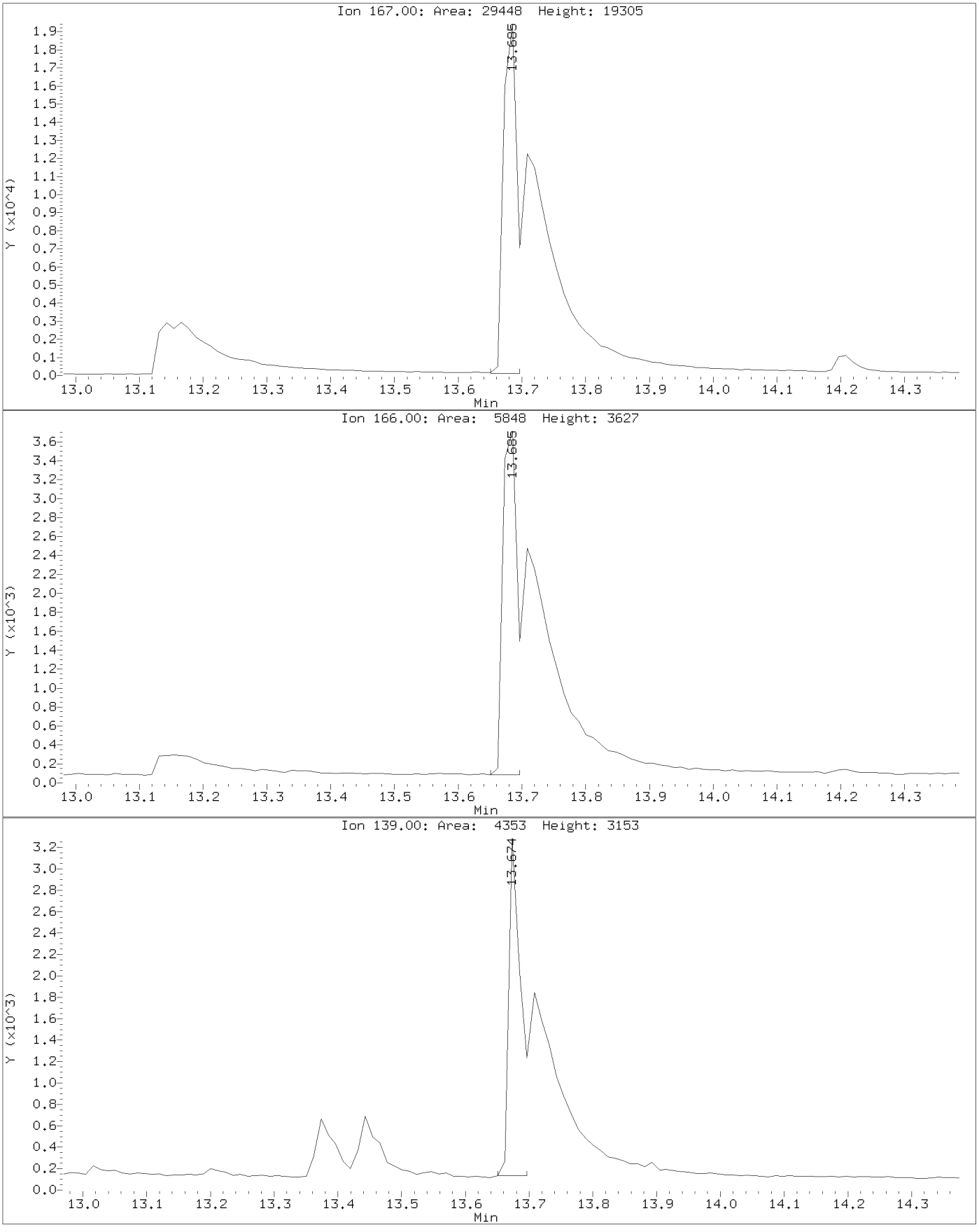
Instrument: gcms-n.i
Client Sample ID:

Compound: Carbazole
CAS Number: 86-74-8

BEFORE MANUAL INTEGRATION



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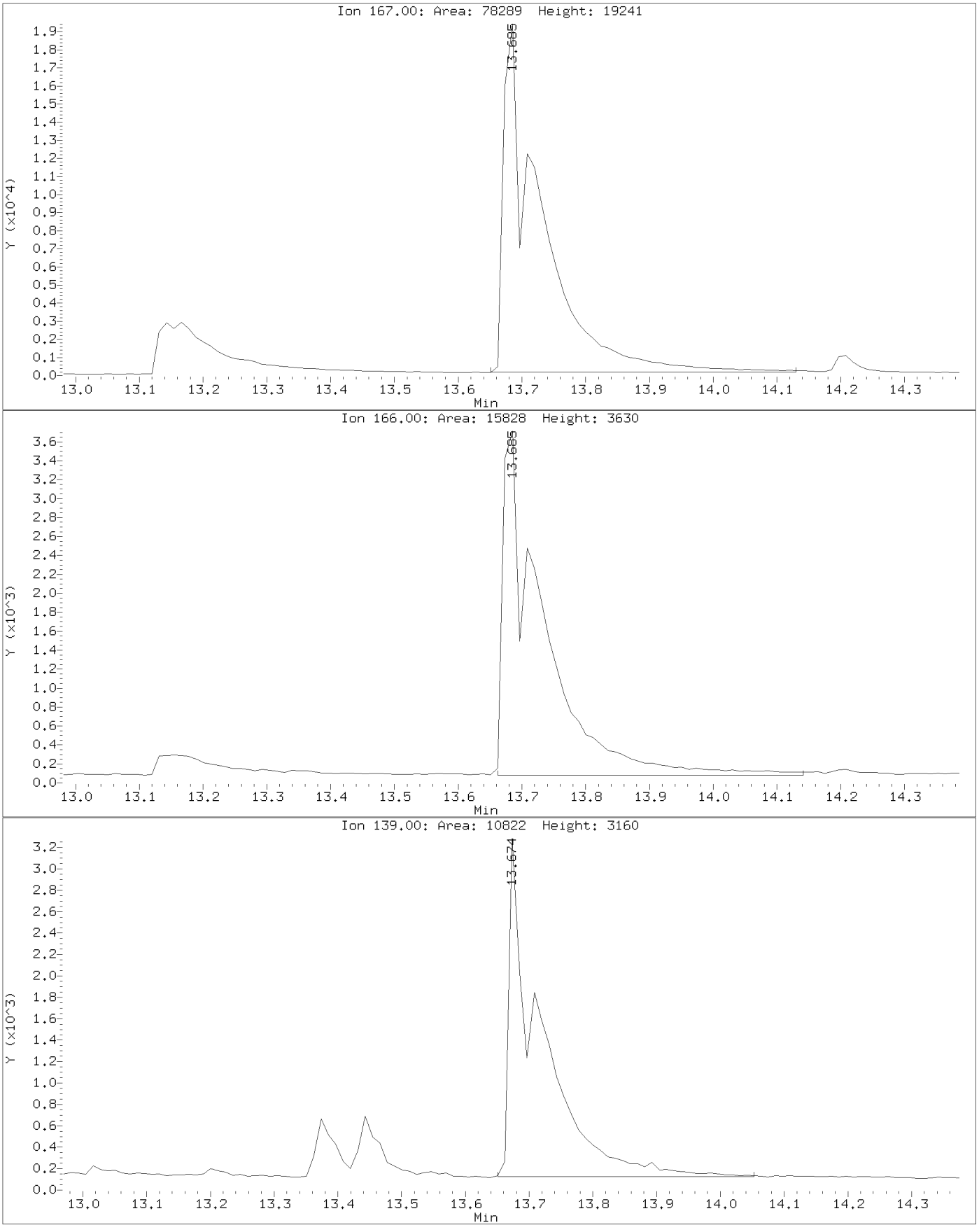
Client Sample ID:

Compound: Carbazole
CAS Number: 86-74-8

AFTER MANUAL INTEGRATION



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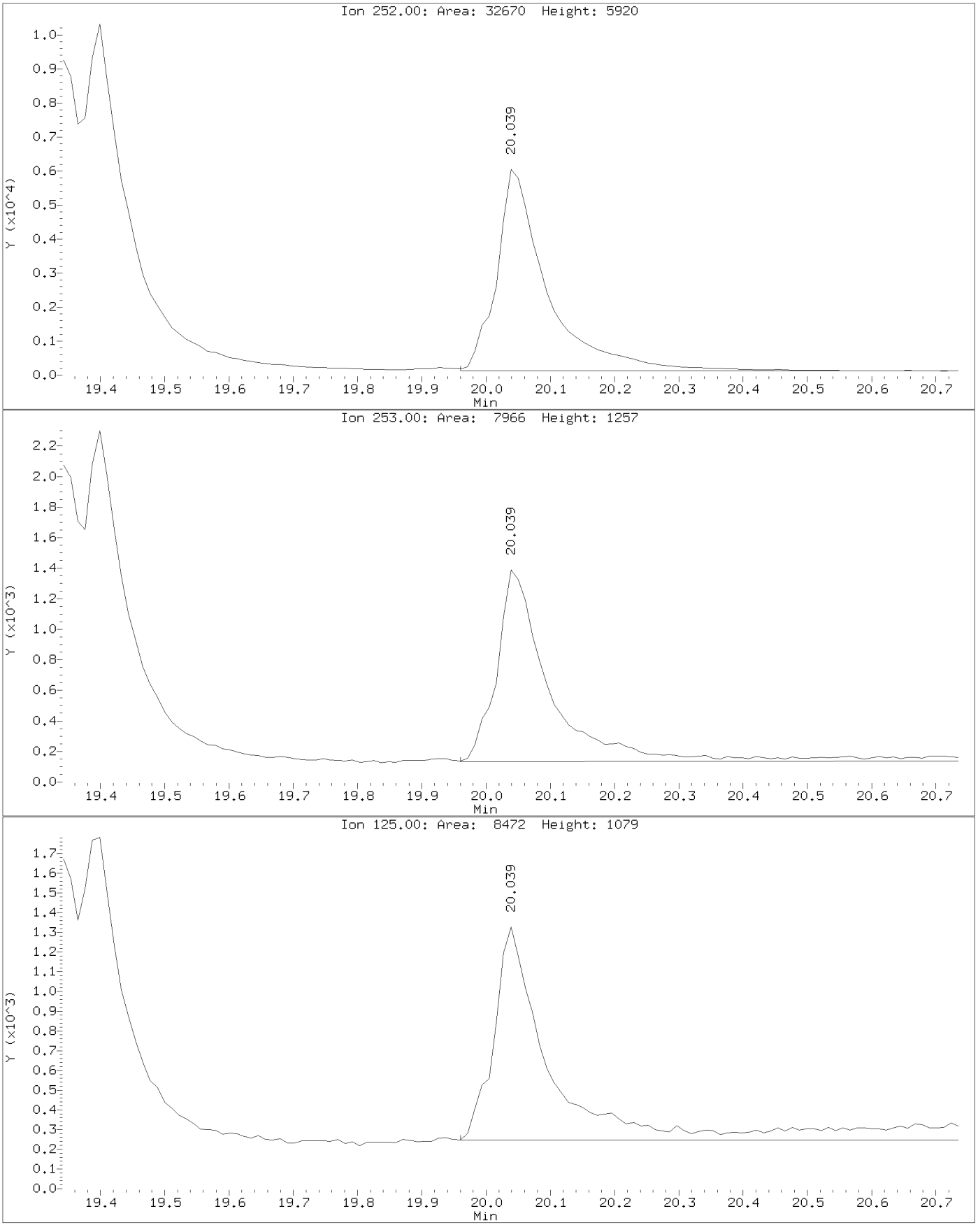
Injection Date: 28-JUL-2021 16:07
Instrument: gcms-n.i
Client Sample ID:

Compound: Benzo(k)fluoranthene
CAS Number: 207-08-9

BEFORE MANUAL INTEGRATION



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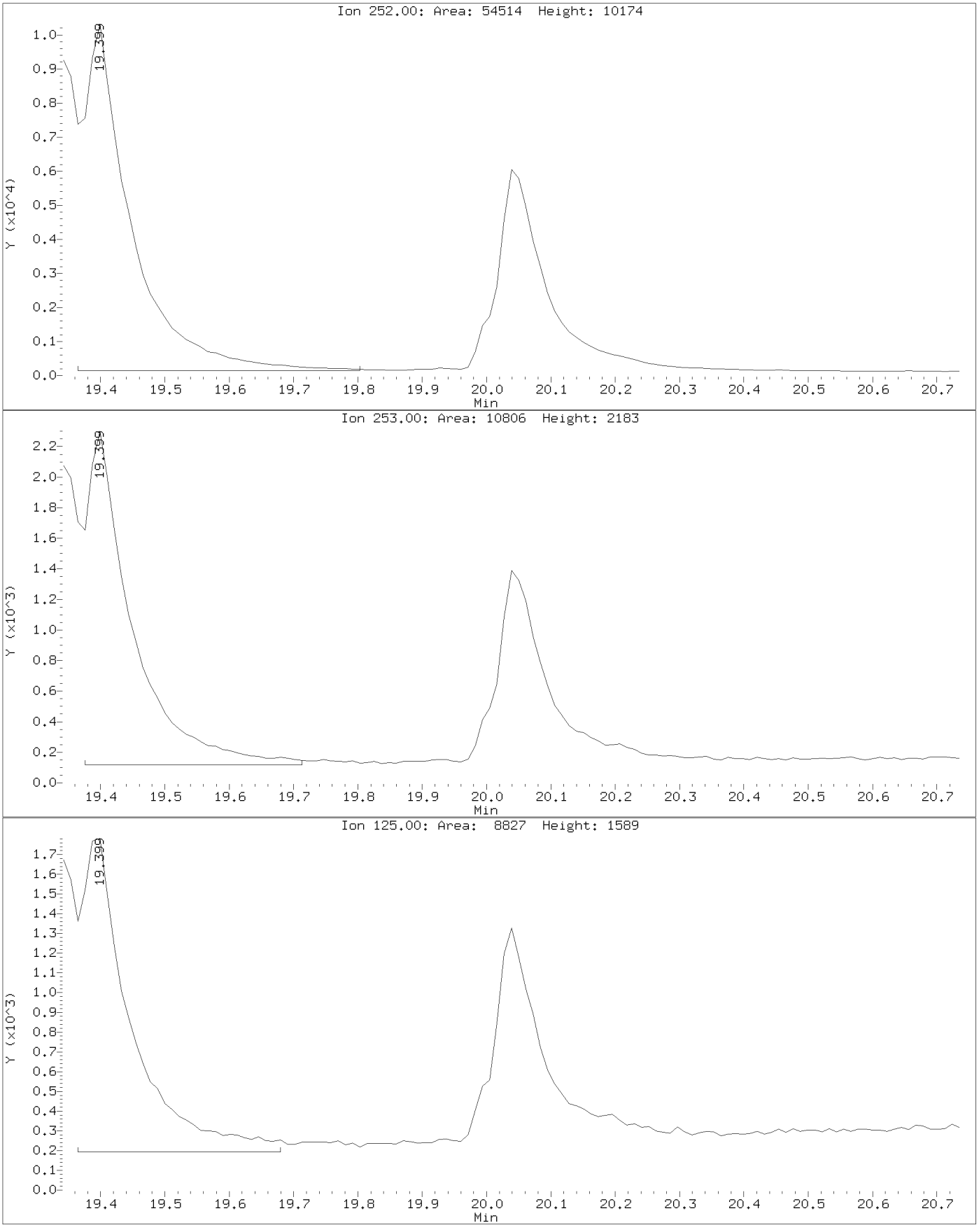
Client Sample ID:

Compound: Benzo(k)fluoranthene
CAS Number: 207-08-9

AFTER MANUAL INTEGRATION



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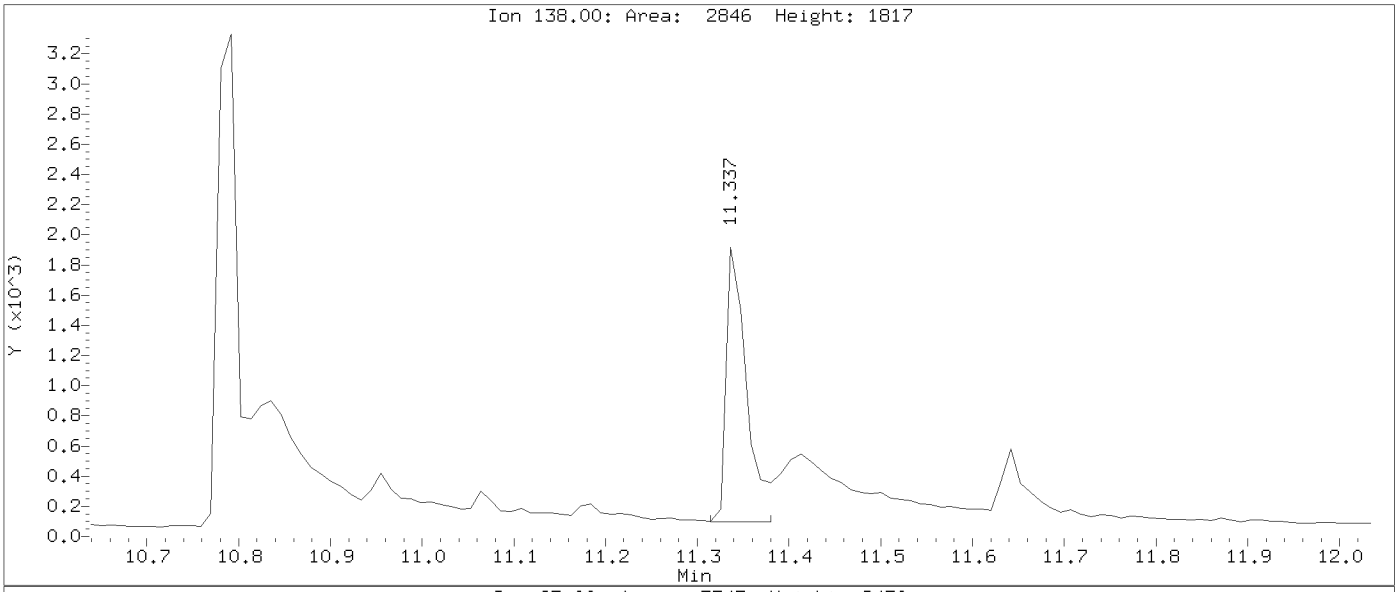
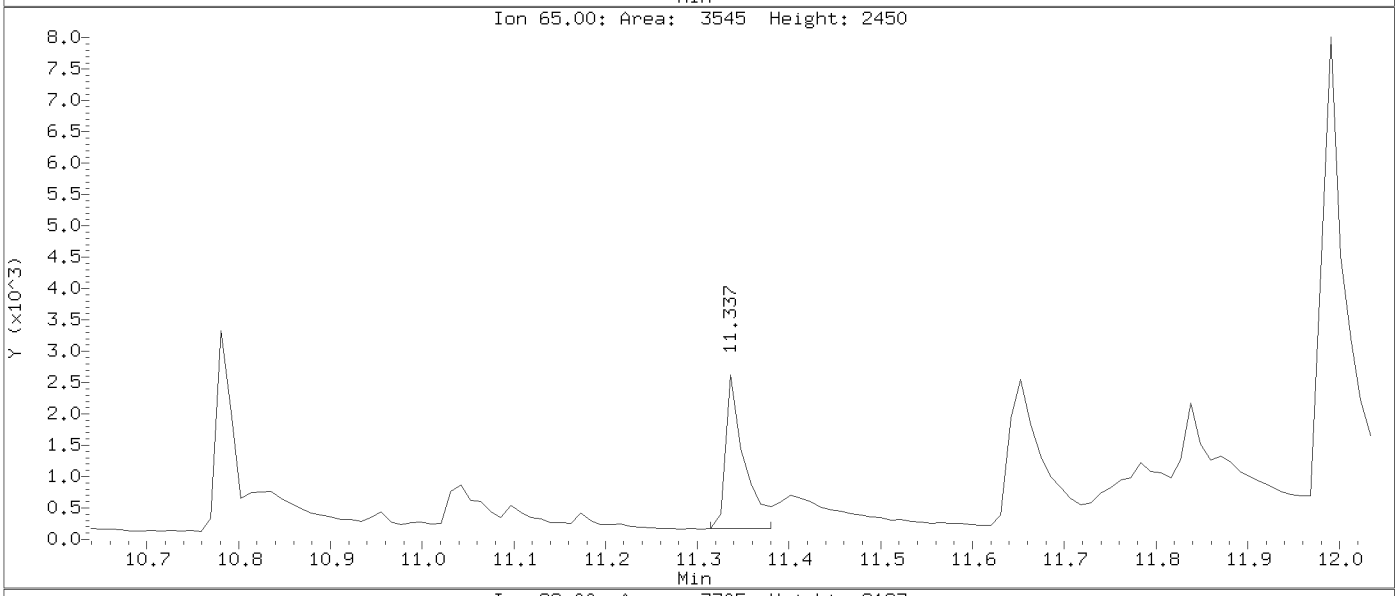
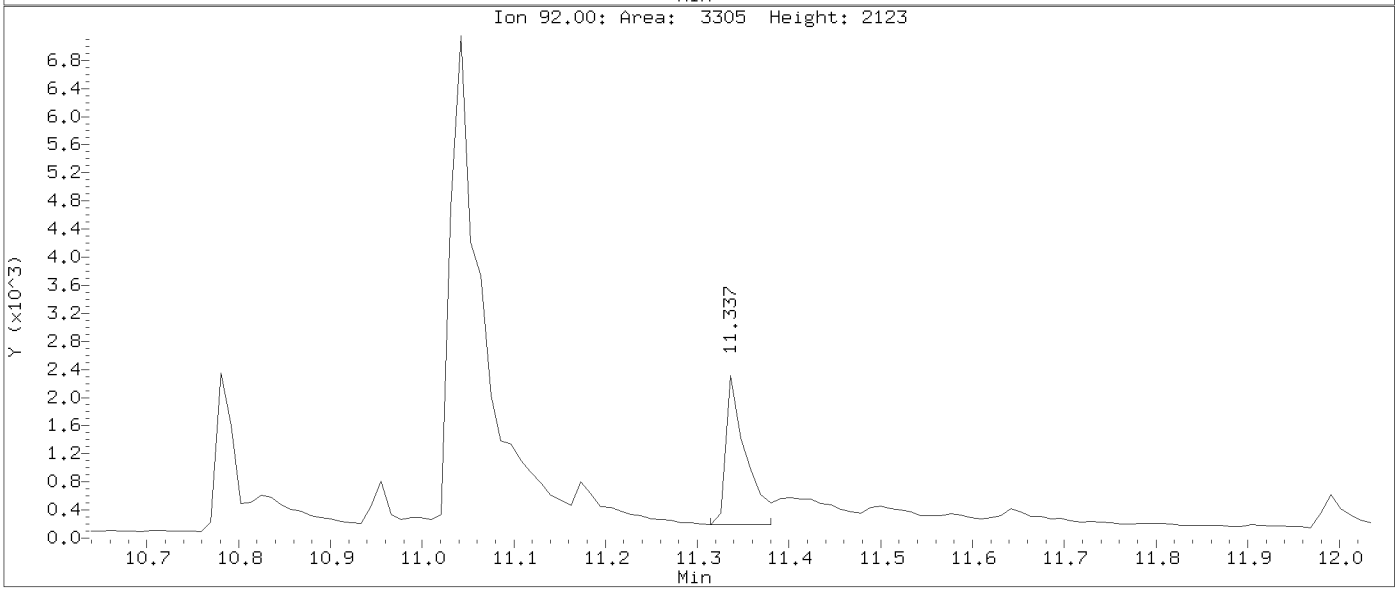
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: 3-Nitroaniline
CAS Number: 99-09-2

BEFORE MANUAL INTEGRATION







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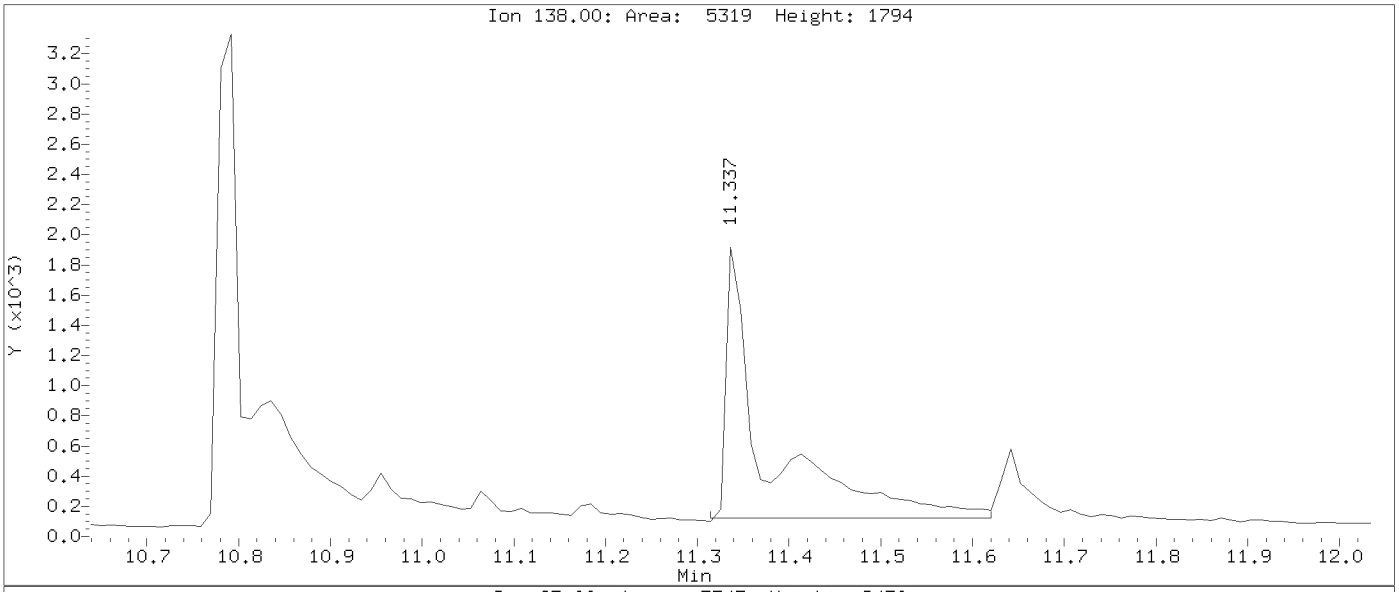
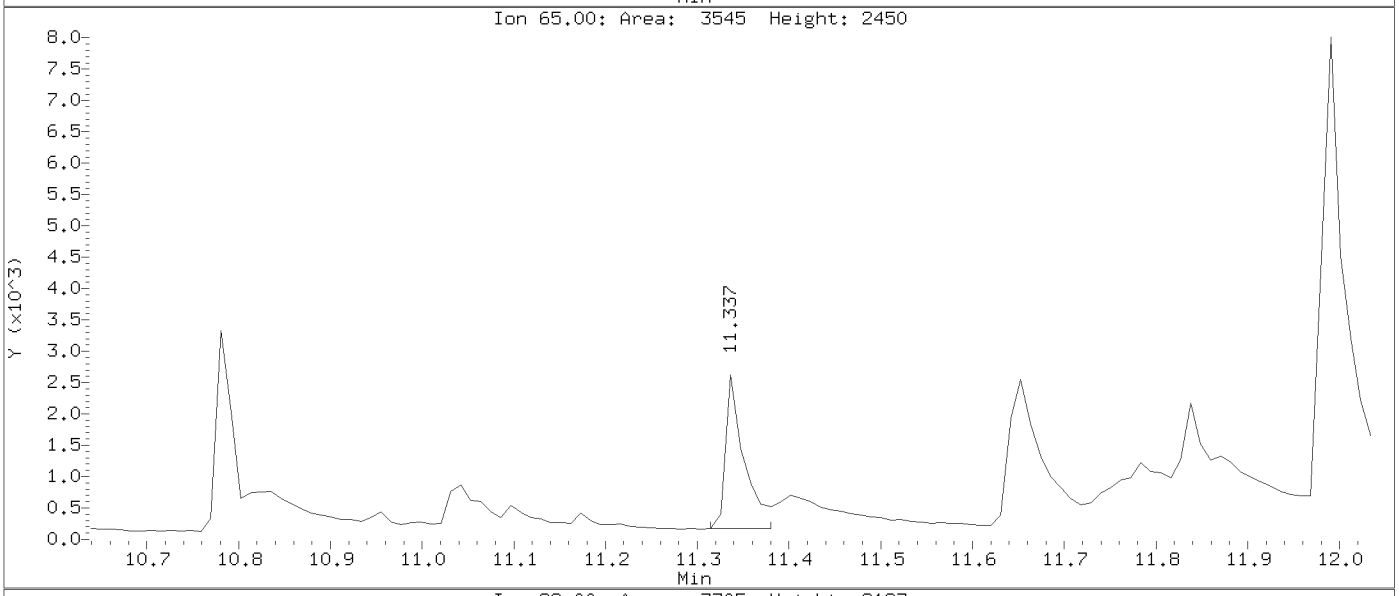
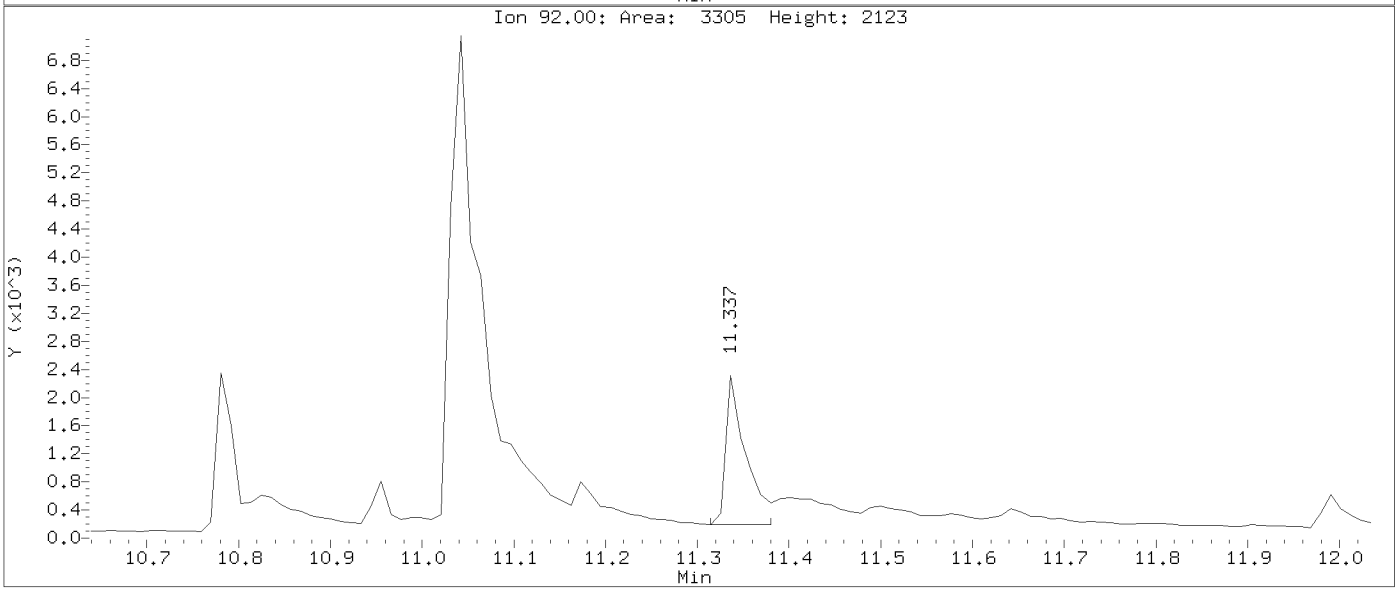
Client Sample ID:

Compound: 3-Nitroaniline
CAS Number: 99-09-2

AFTER MANUAL INTEGRATION







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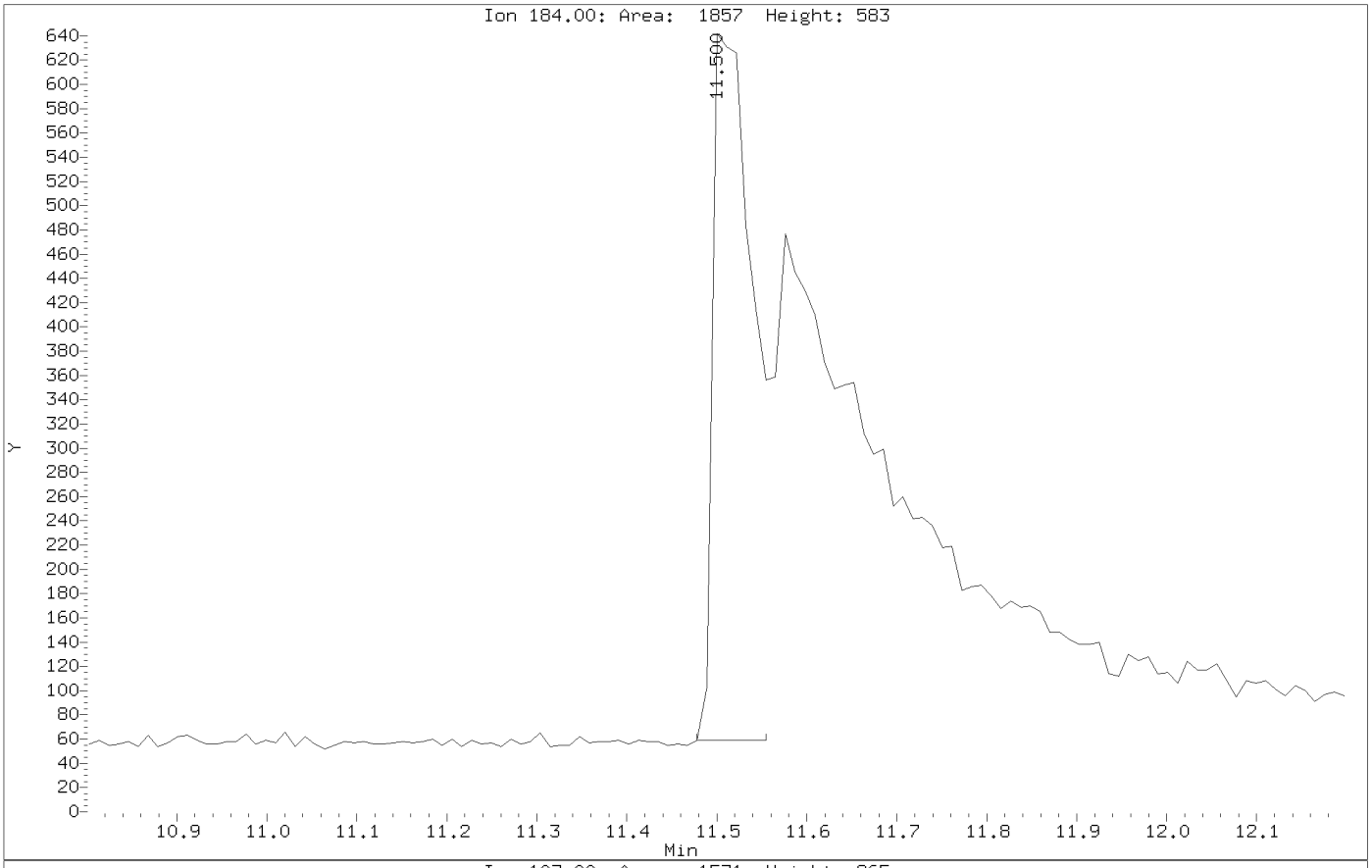
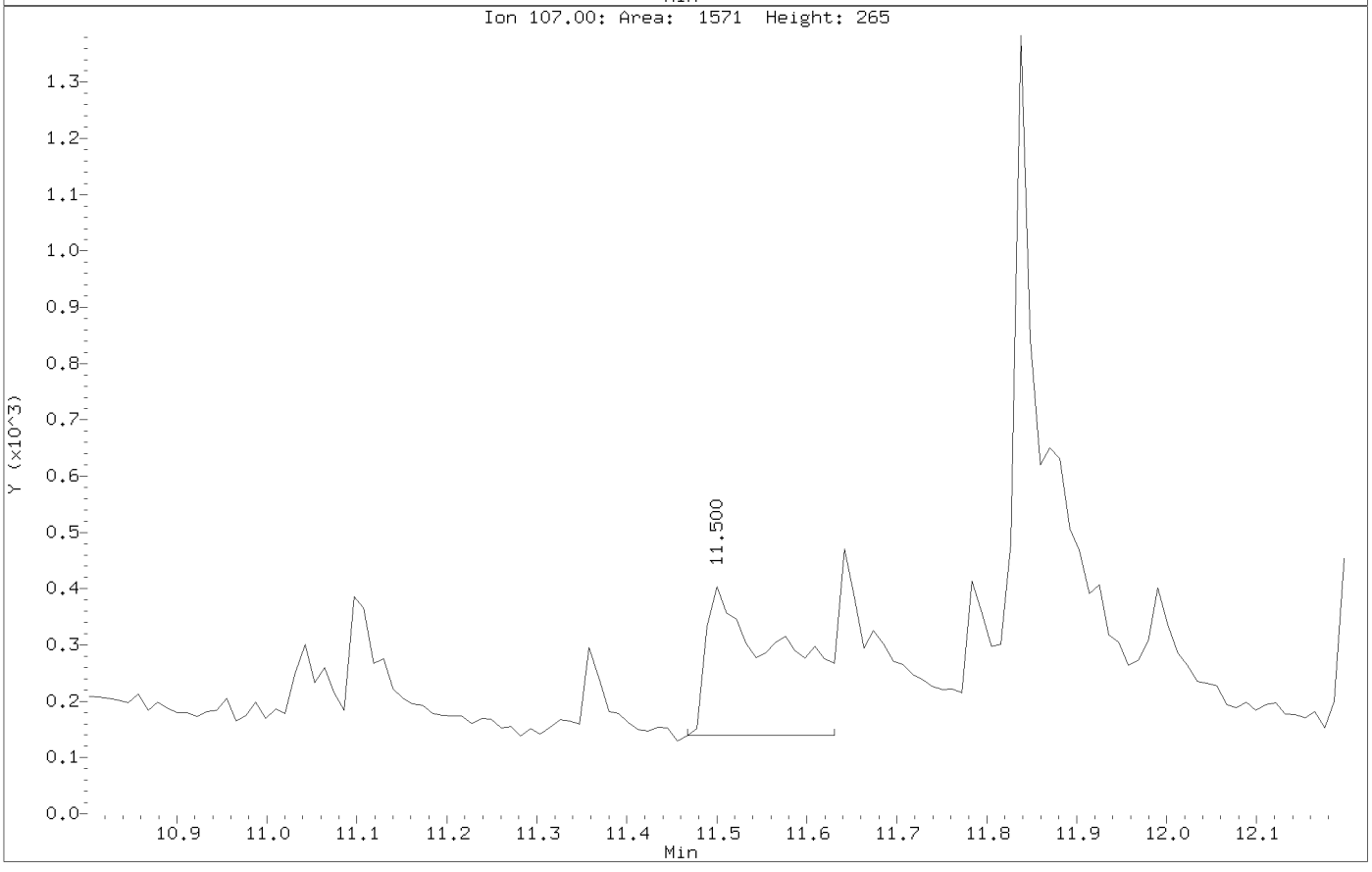
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: 2,4-Dinitrophenol
CAS Number: 51-28-5

BEFORE MANUAL INTEGRATION





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Injection Date: 28-JUL-2021 16:39
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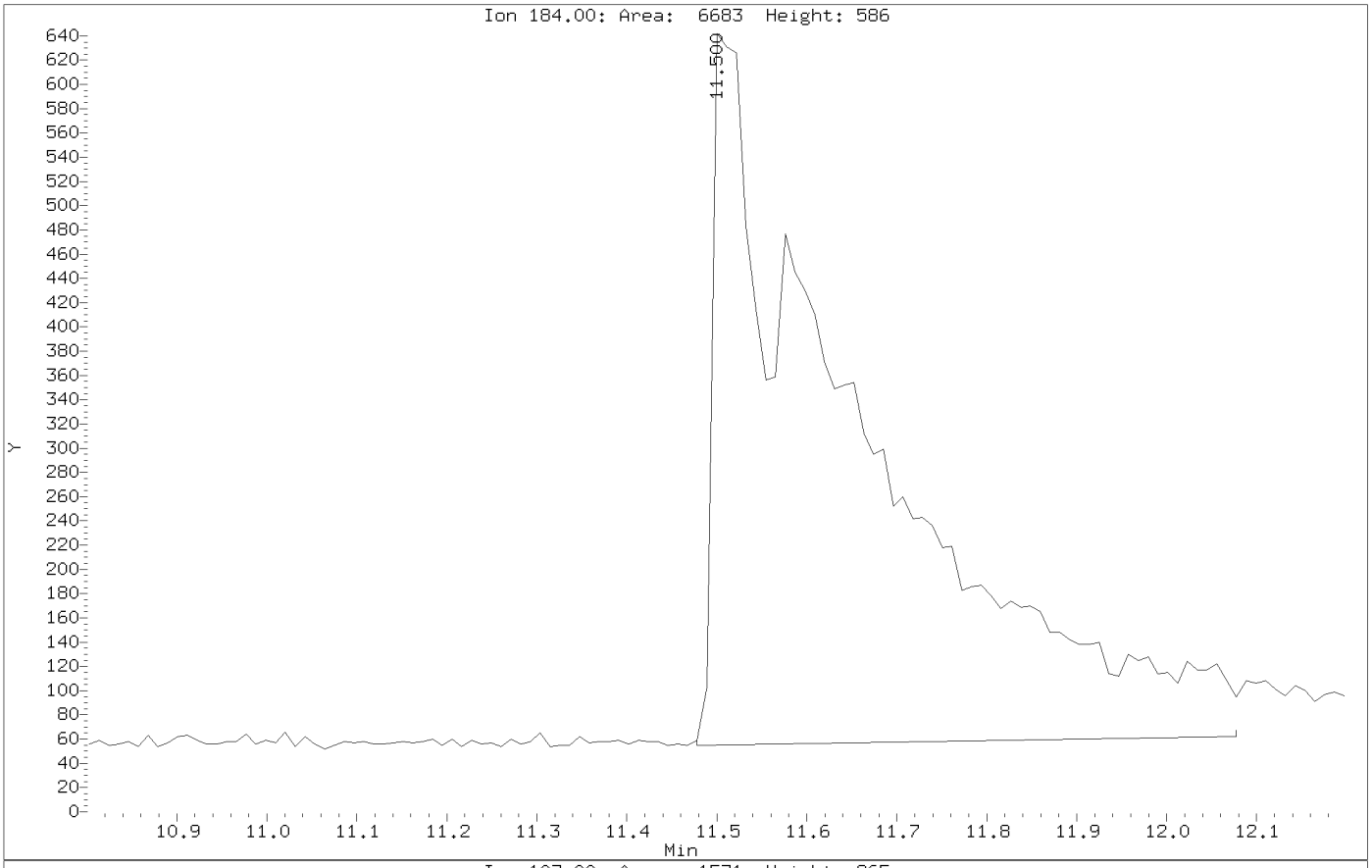
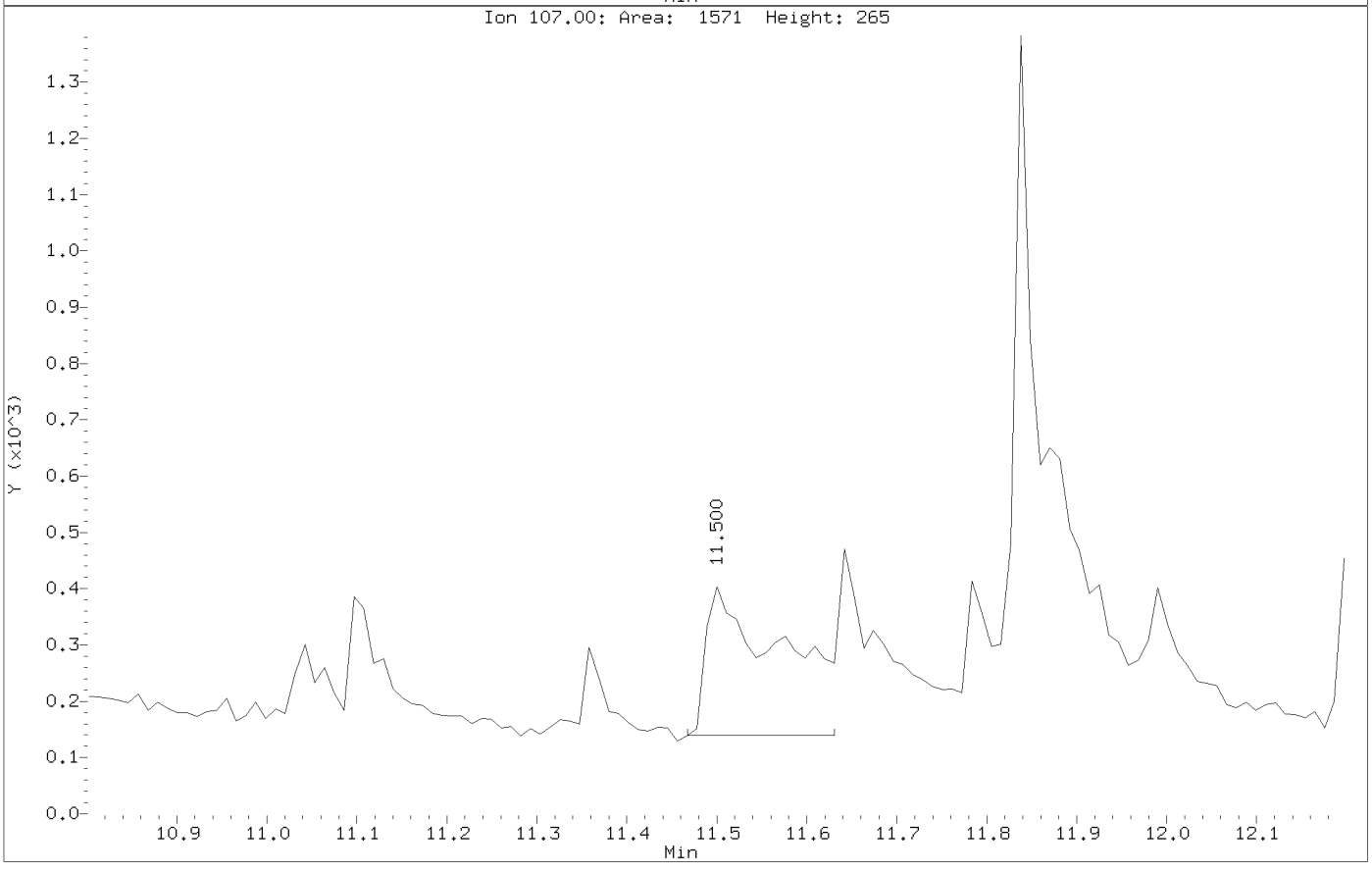
Client Sample ID:

Compound: 2,4-Dinitrophenol
CAS Number: 51-28-5

AFTER MANUAL INTEGRATION





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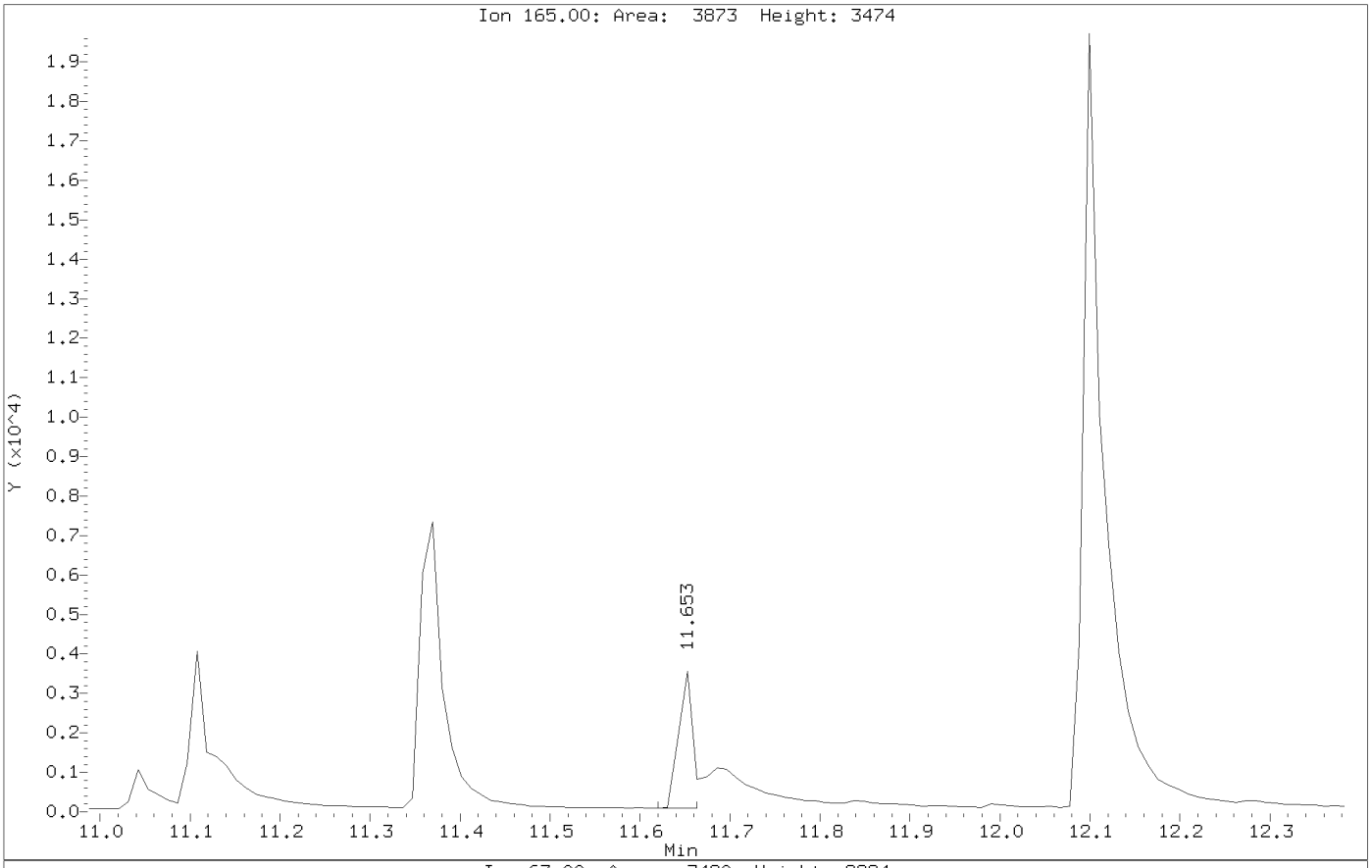
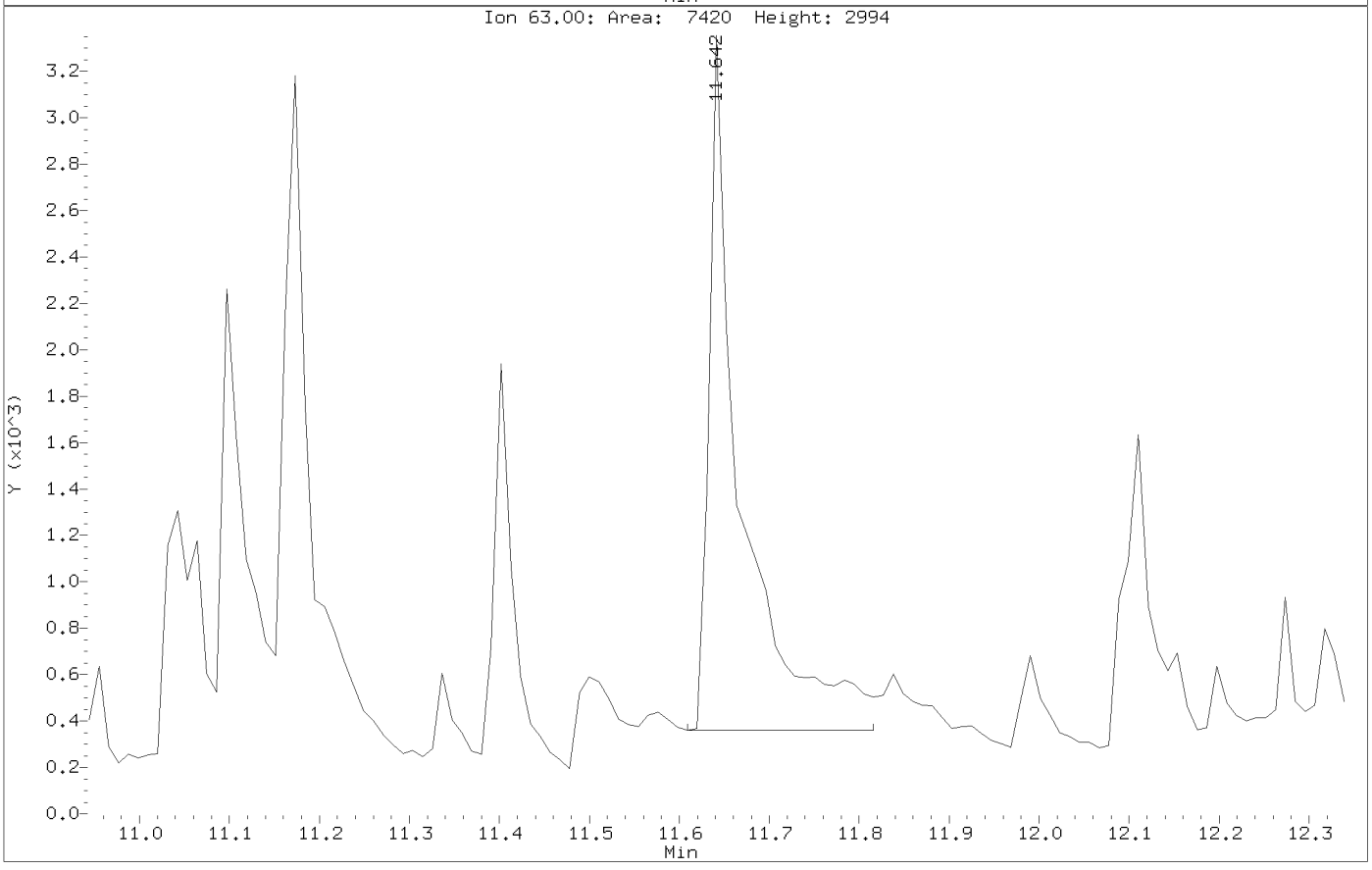
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: 2,4-Dinitrotoluene
CAS Number: 121-14-2

BEFORE MANUAL INTEGRATION

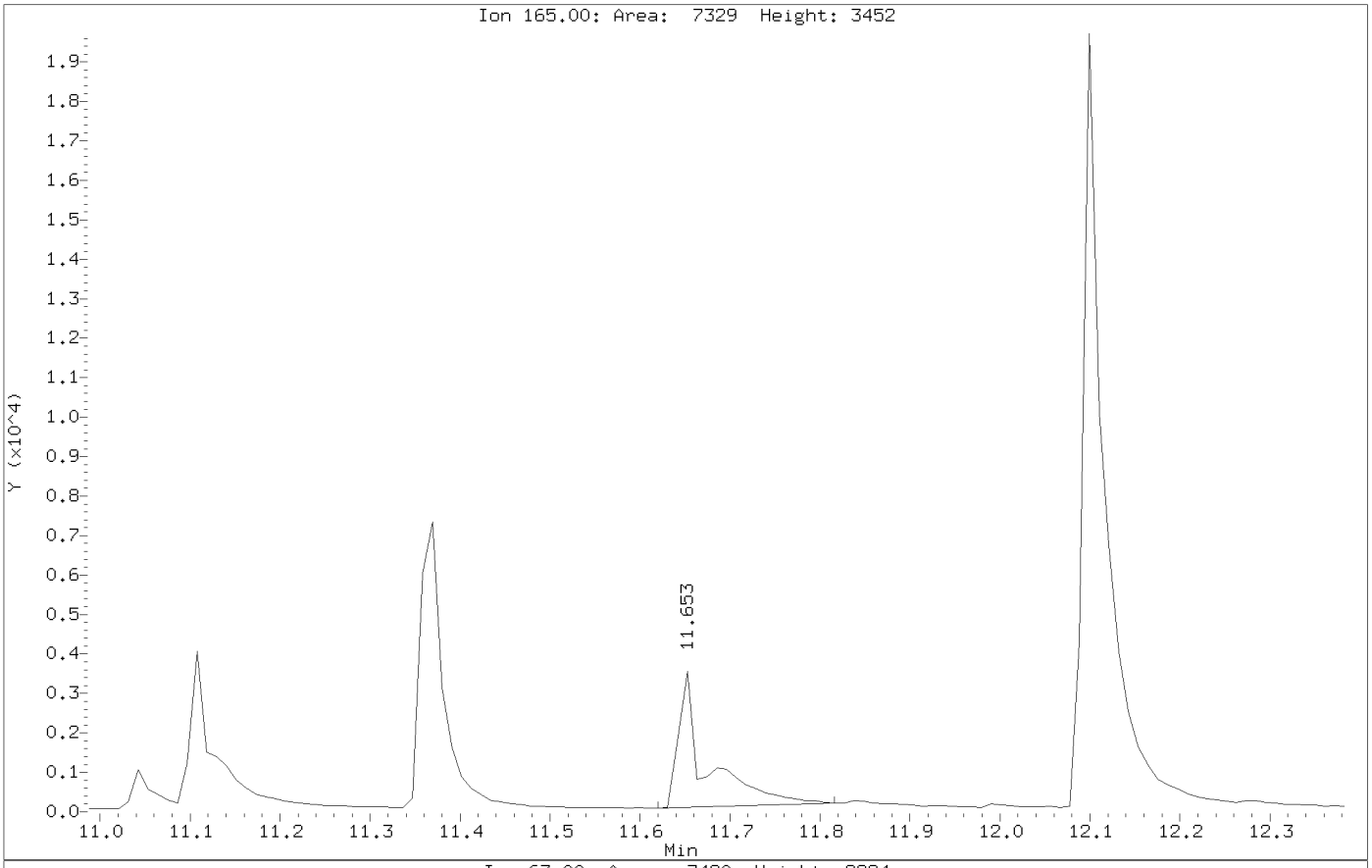


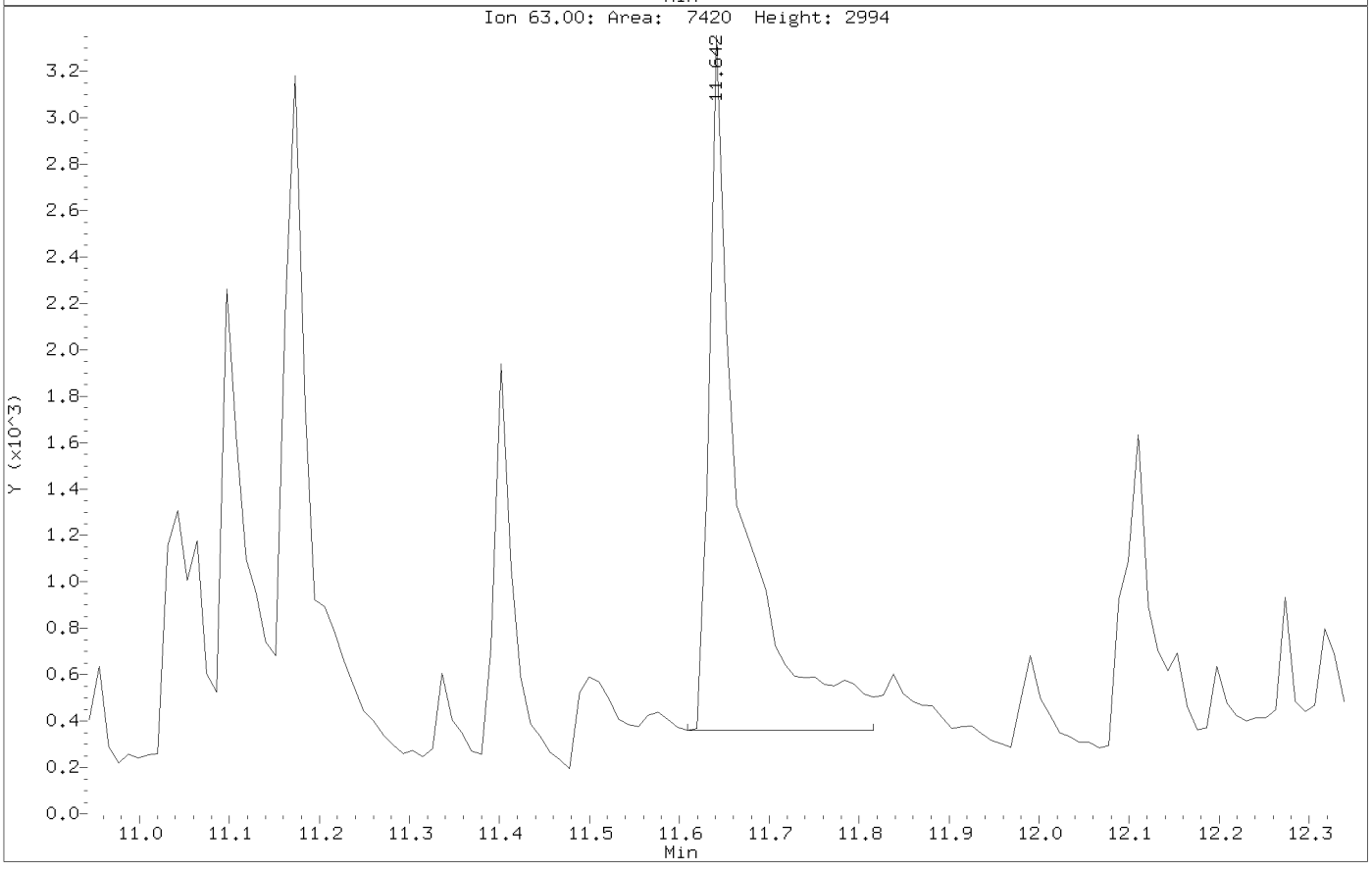


Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3620.D
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: 2,4-Dinitrotoluene
CAS Number: 121-14-2

AFTER MANUAL INTEGRATION





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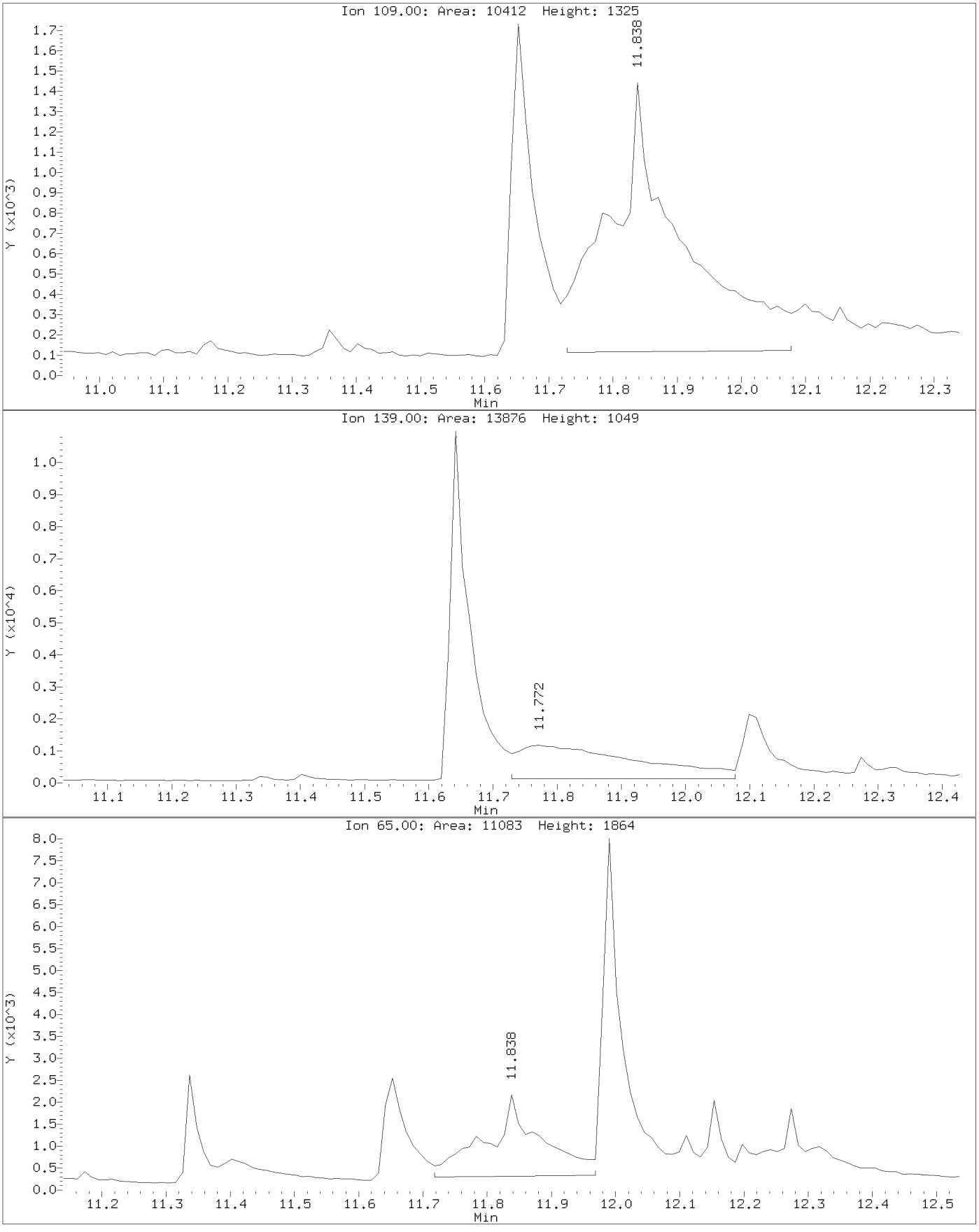
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitrophenol
CAS Number: 100-02-7

BEFORE MANUAL INTEGRATION



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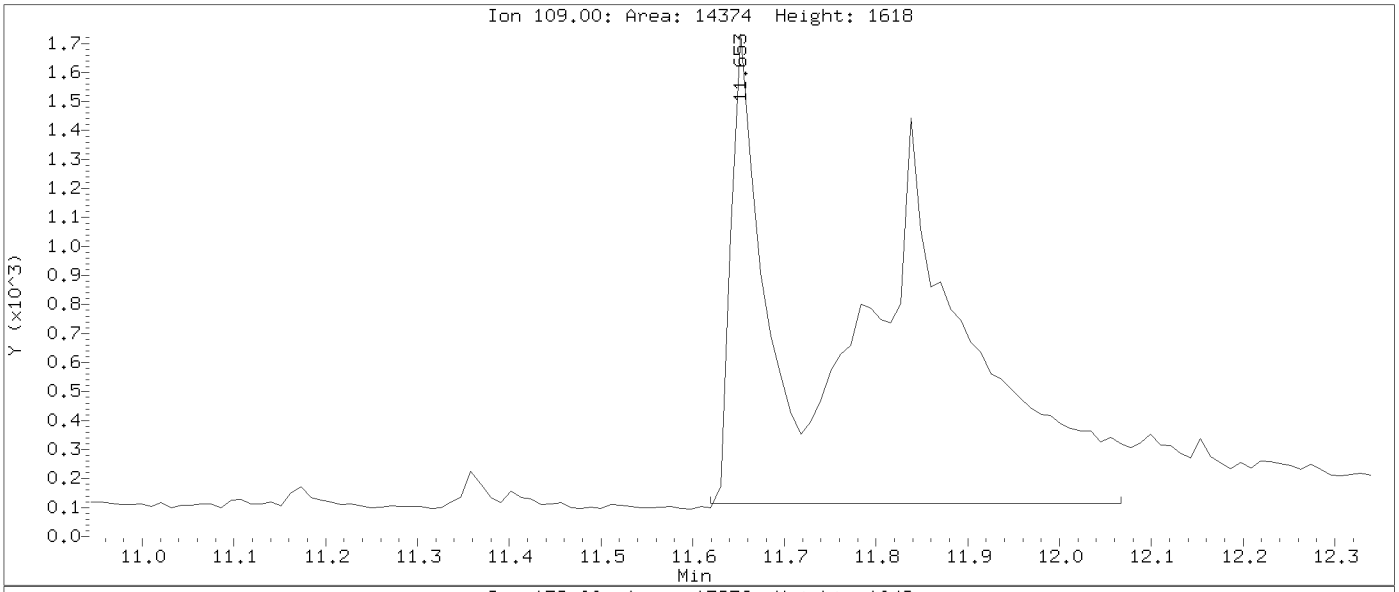
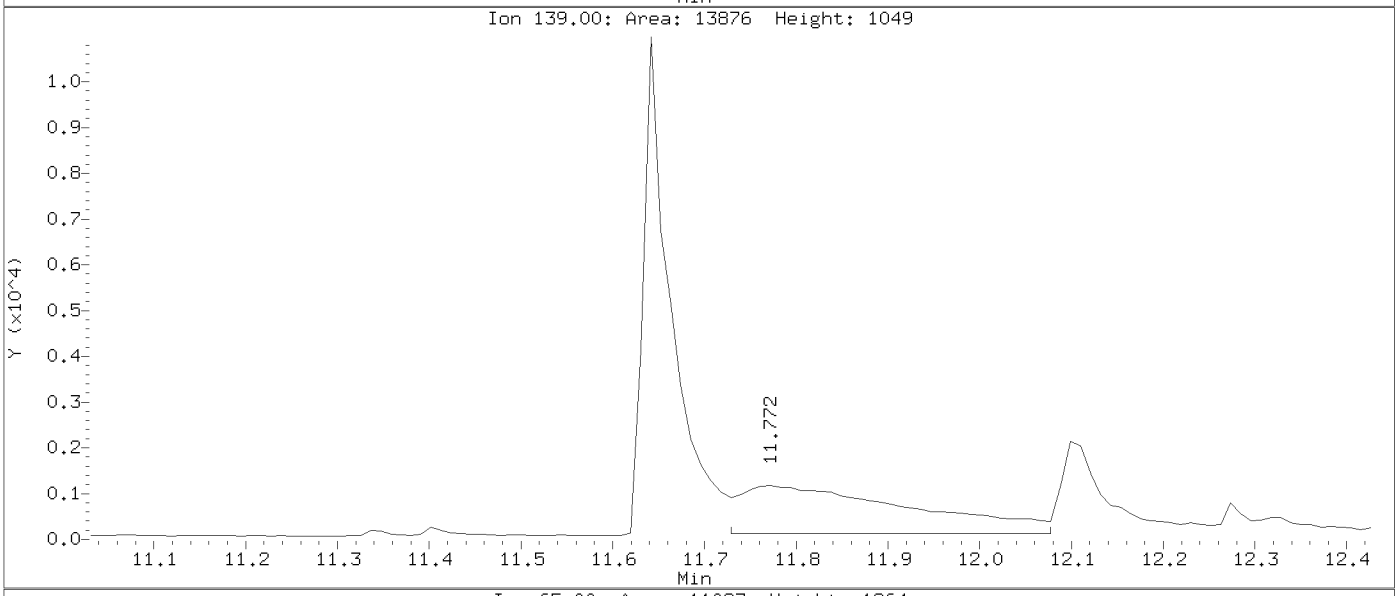
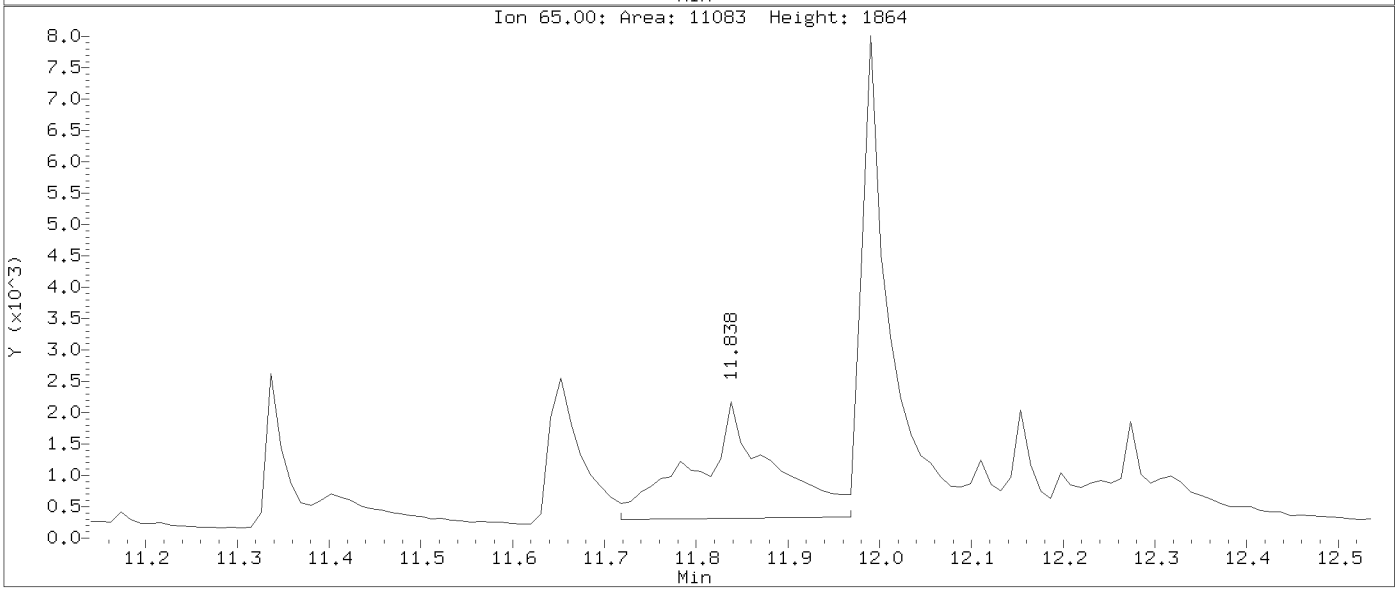
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitrophenol
CAS Number: 100-02-7

AFTER MANUAL INTEGRATION







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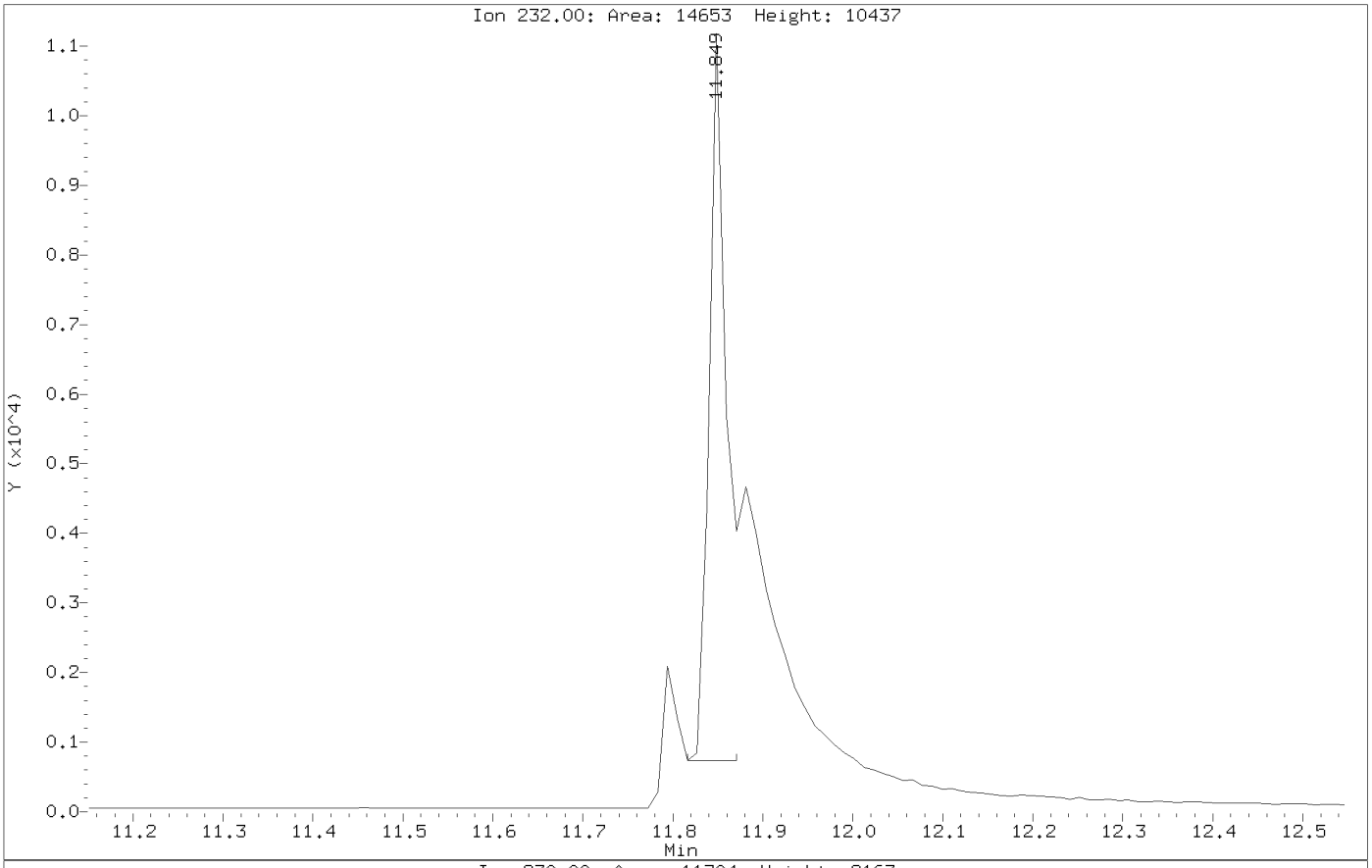
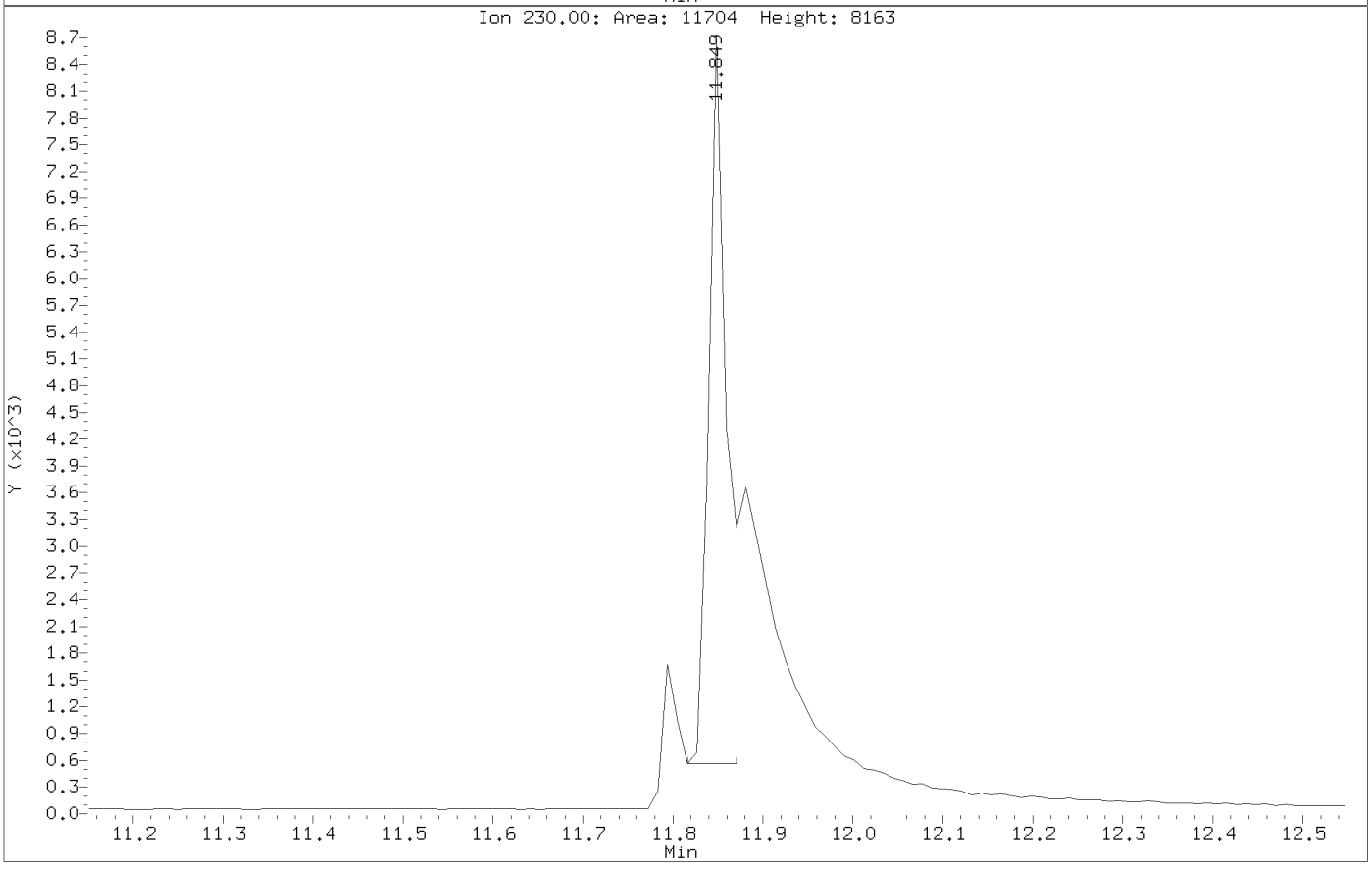
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: 2,3,4,6-Tetrachlorophenol
CAS Number: 58-90-2

BEFORE MANUAL INTEGRATION





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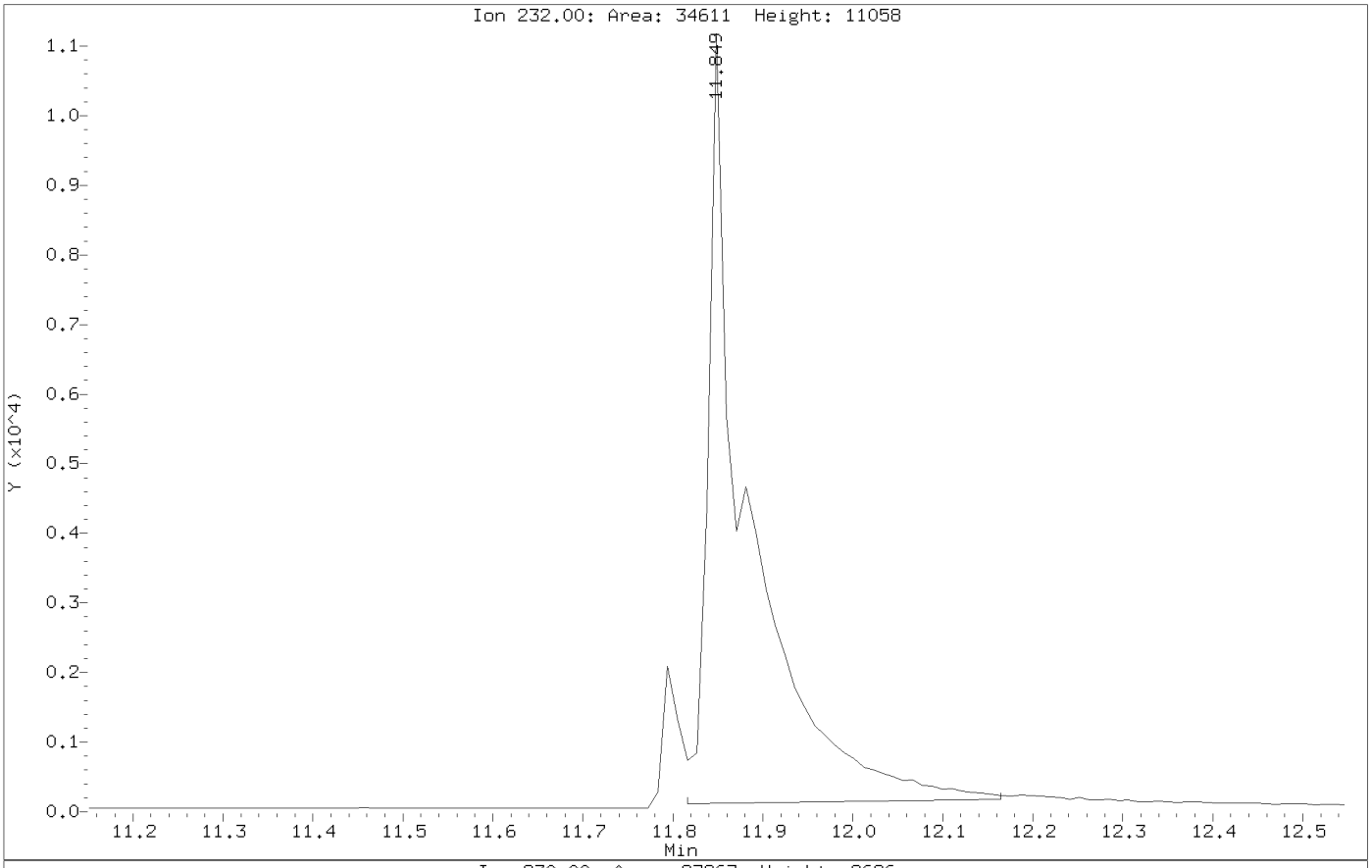
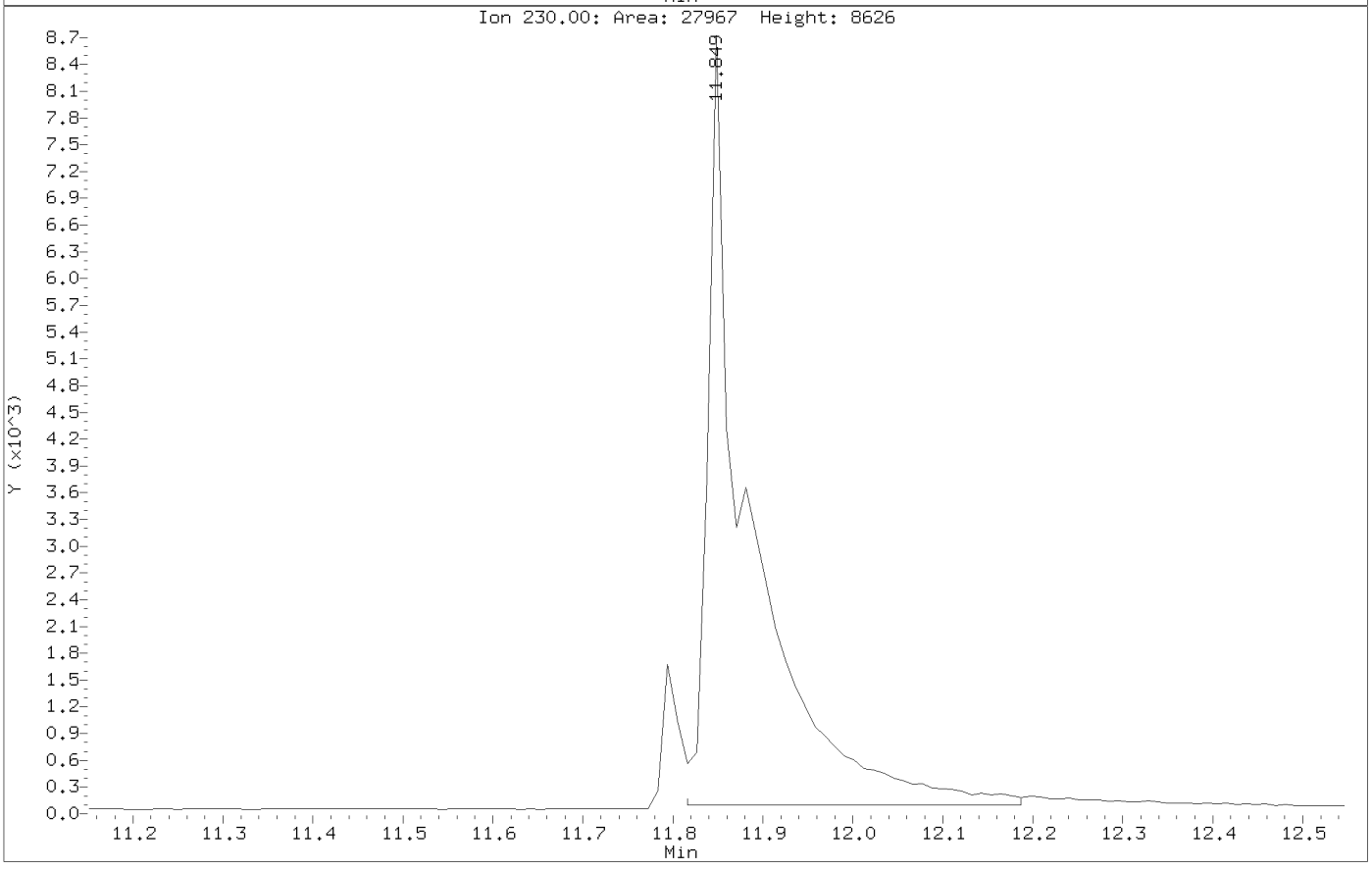
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: 2,3,4,6-Tetrachlorophenol
CAS Number: 58-90-2

AFTER MANUAL INTEGRATION





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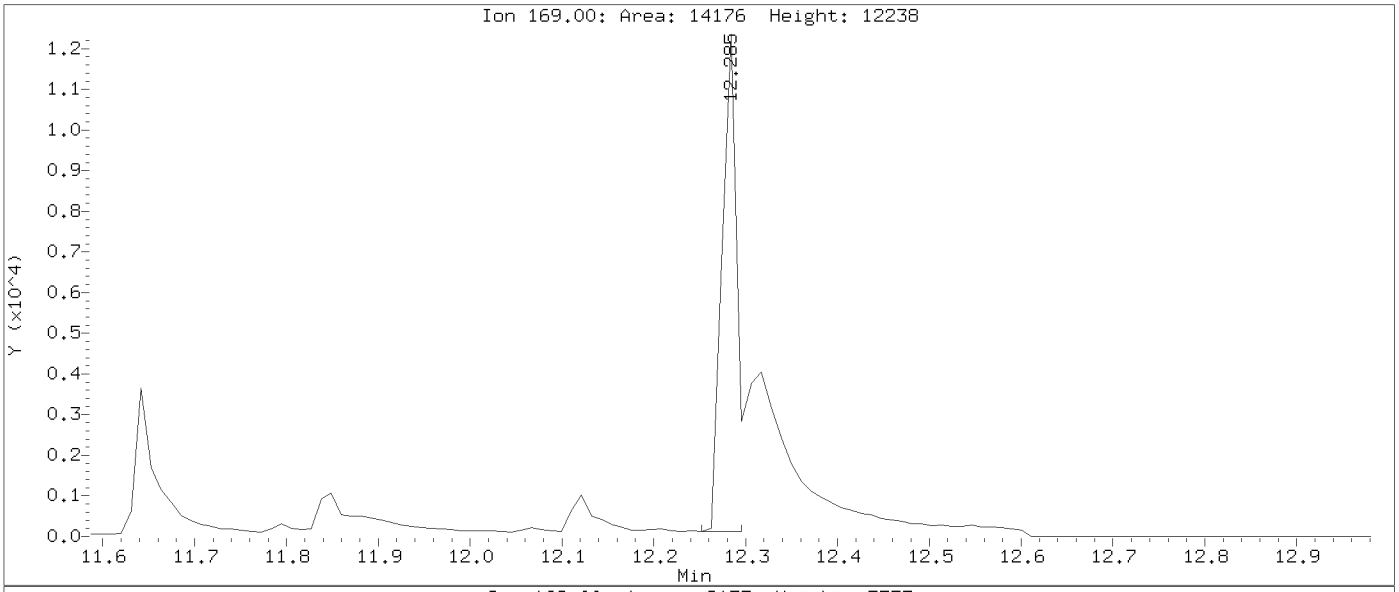
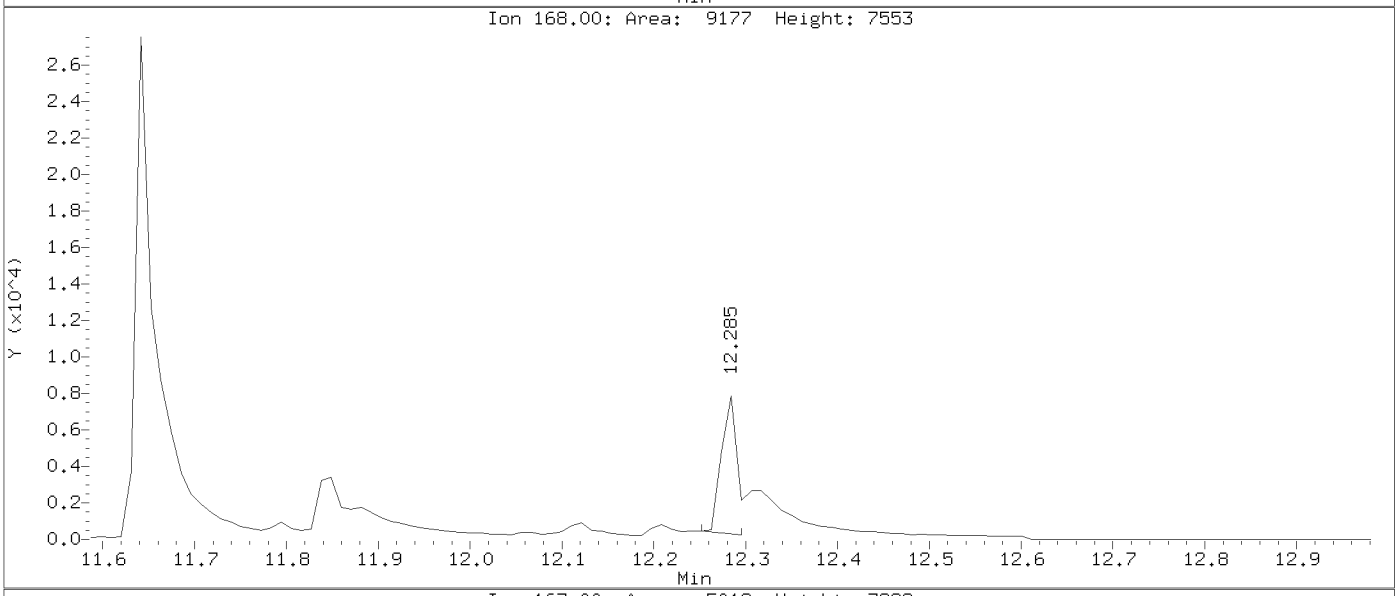
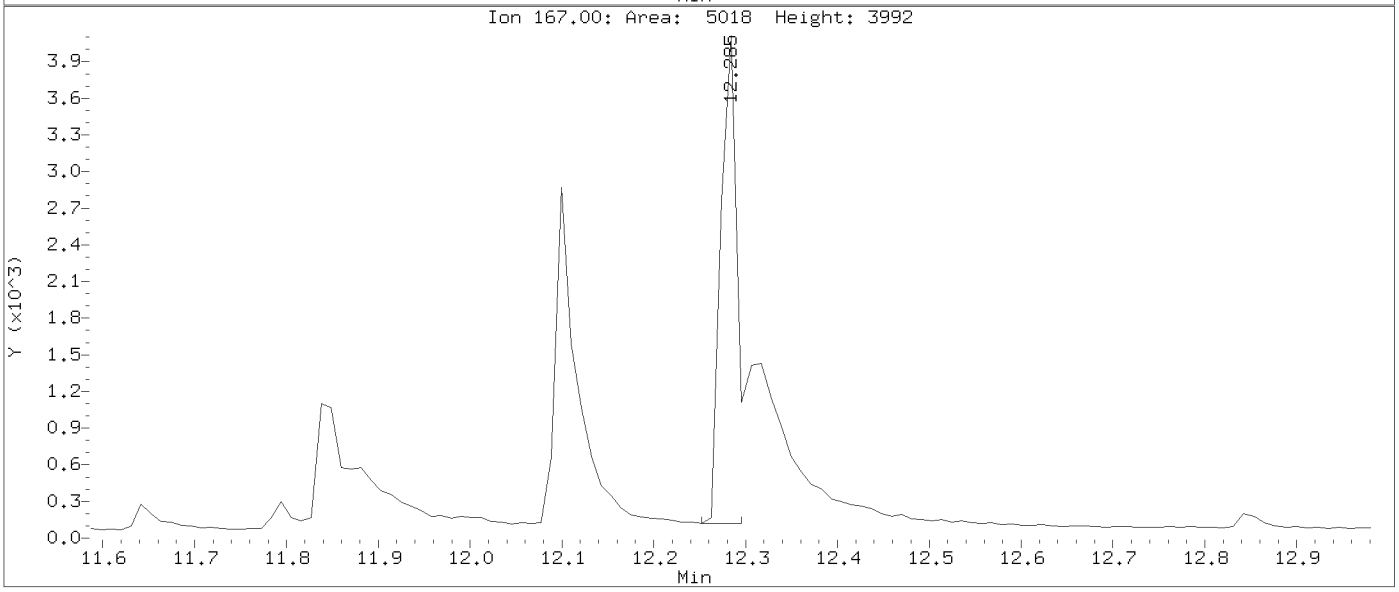
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: N-Nitrosodiphenylamine
CAS Number: 86-30-6

BEFORE MANUAL INTEGRATION







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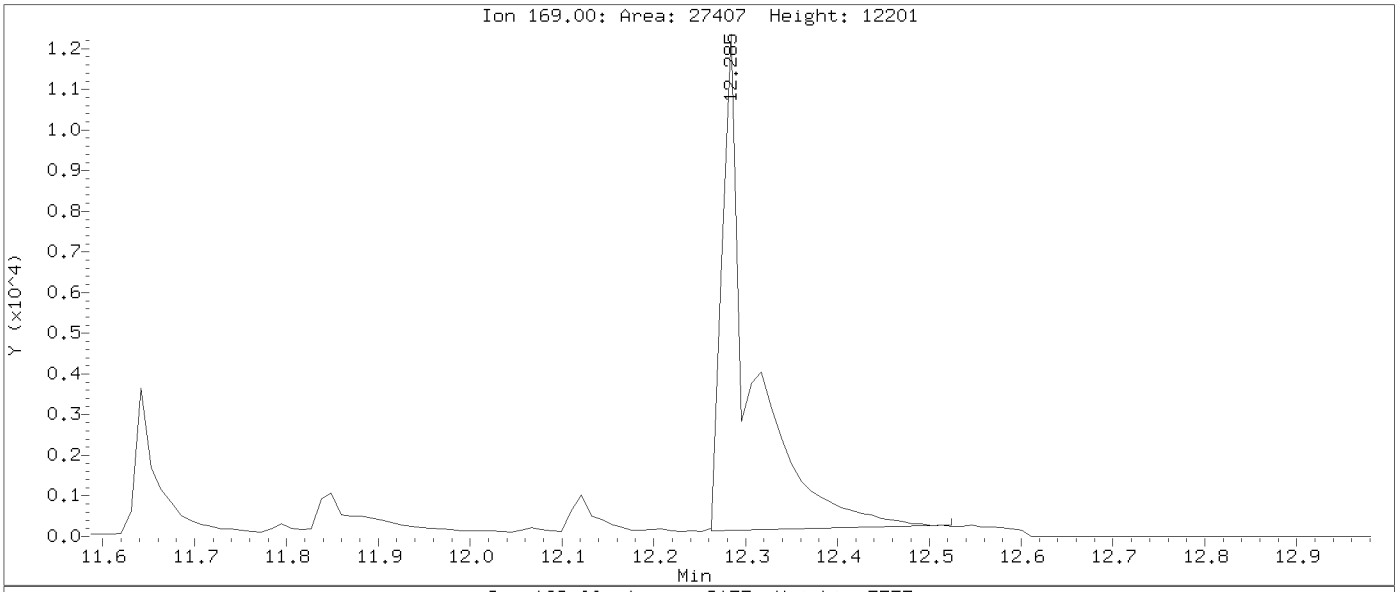
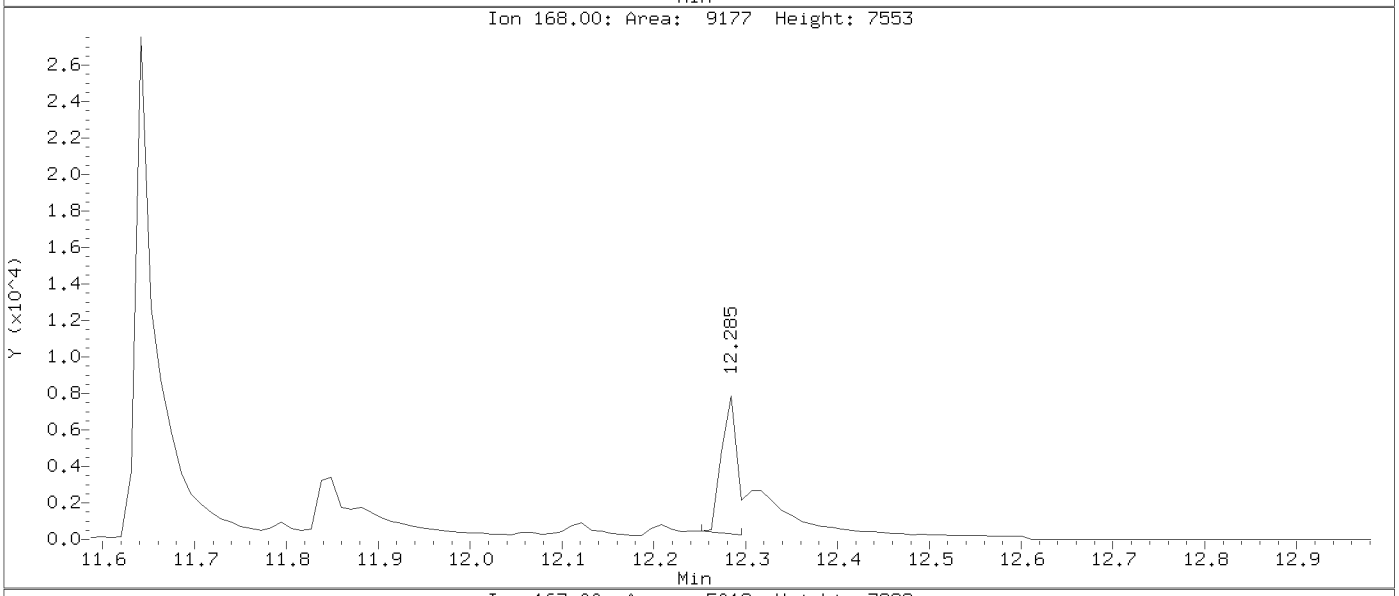
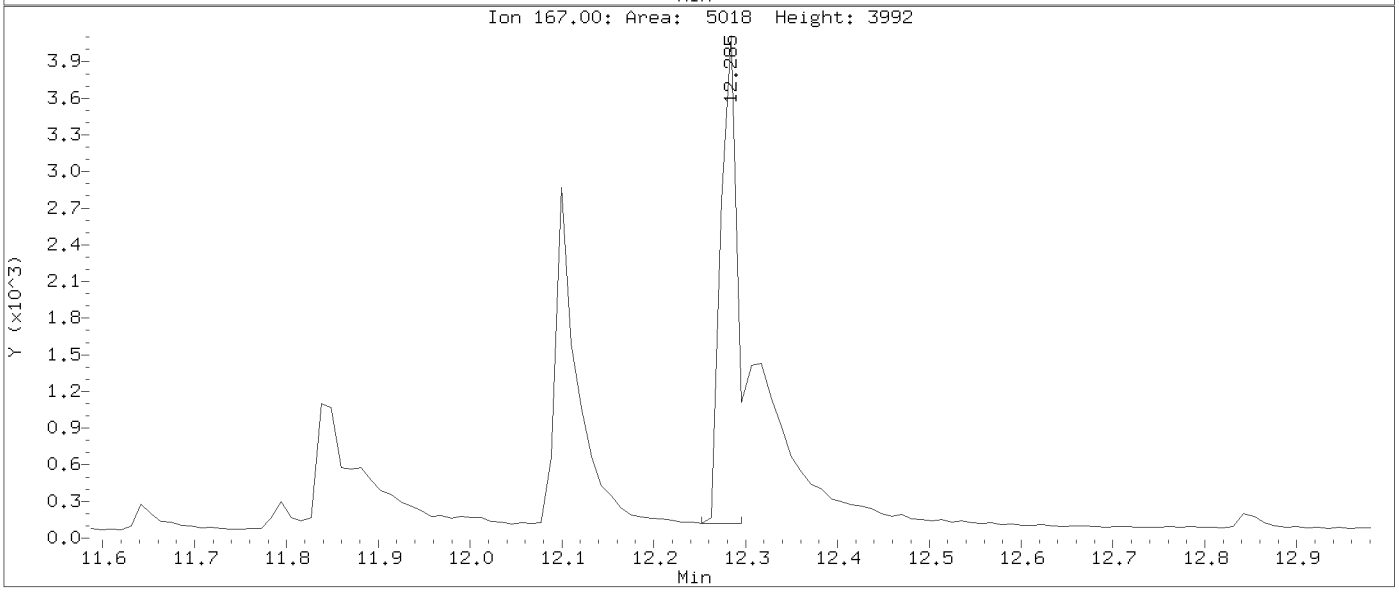
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: N-Nitrosodiphenylamine
CAS Number: 86-30-6

AFTER MANUAL INTEGRATION







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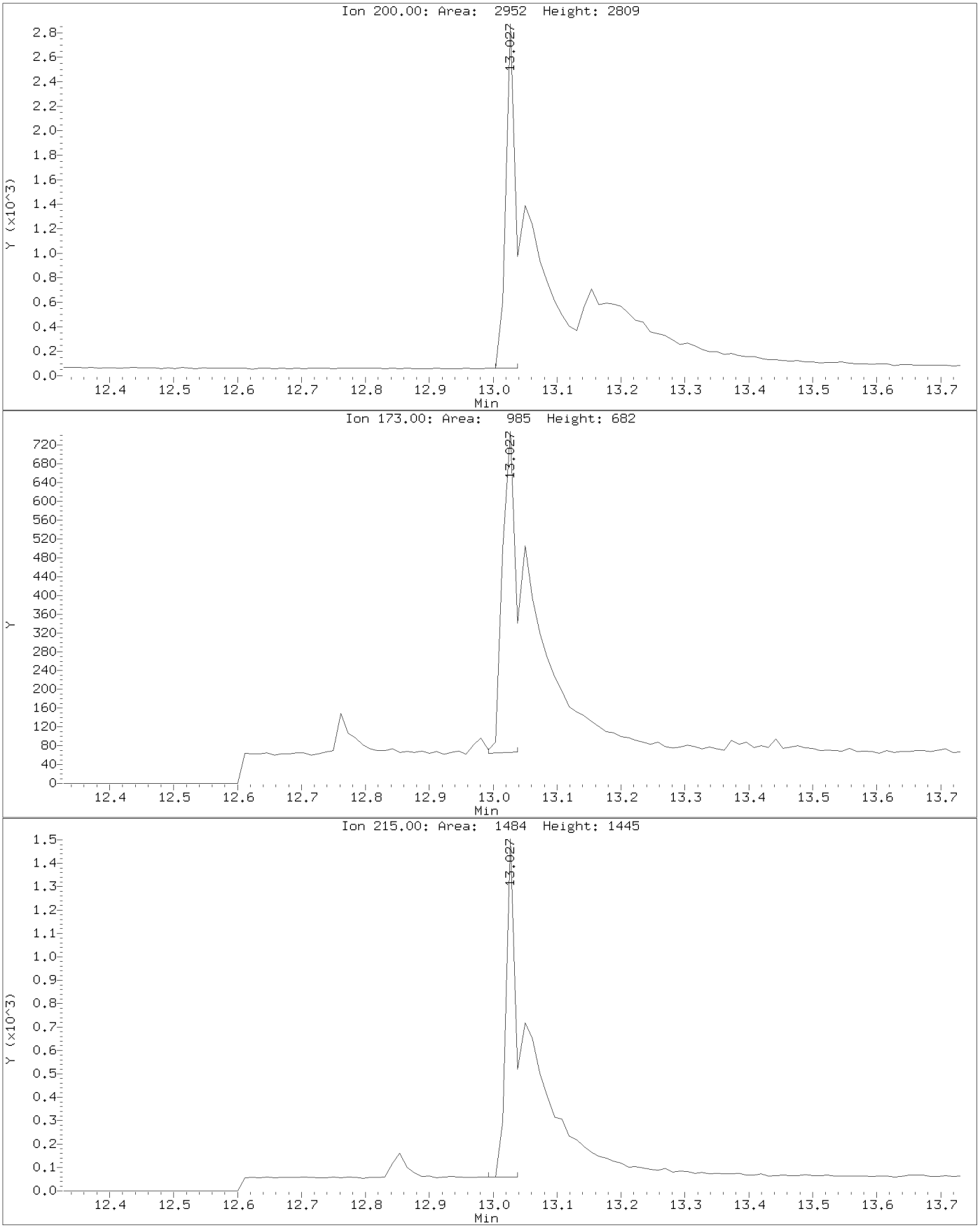
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: Atrazine
CAS Number: 1912-24-9

BEFORE MANUAL INTEGRATION



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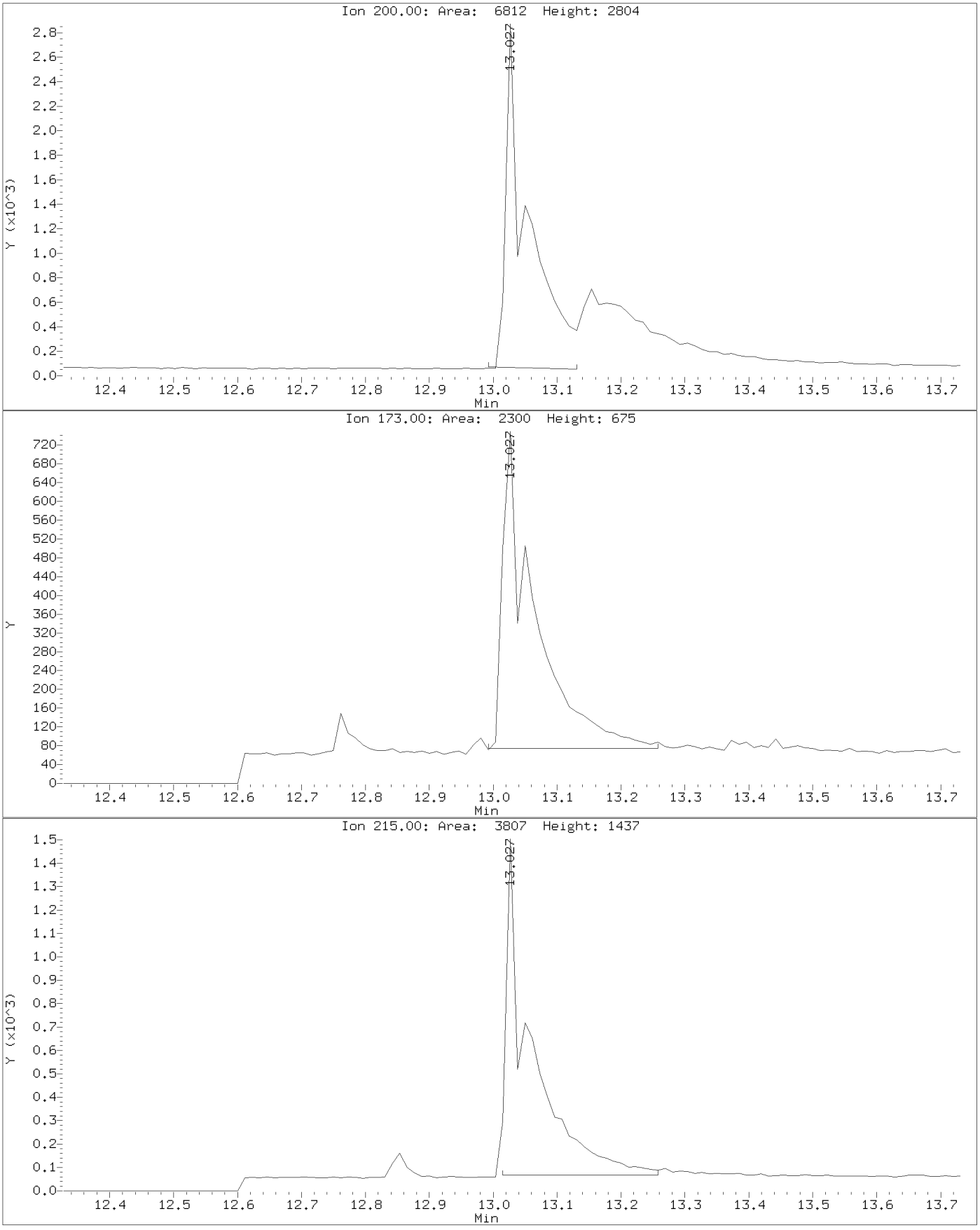
Instrument: gcms-n.i
Client Sample ID:

Compound: Atrazine
CAS Number: 1912-24-9

AFTER MANUAL INTEGRATION



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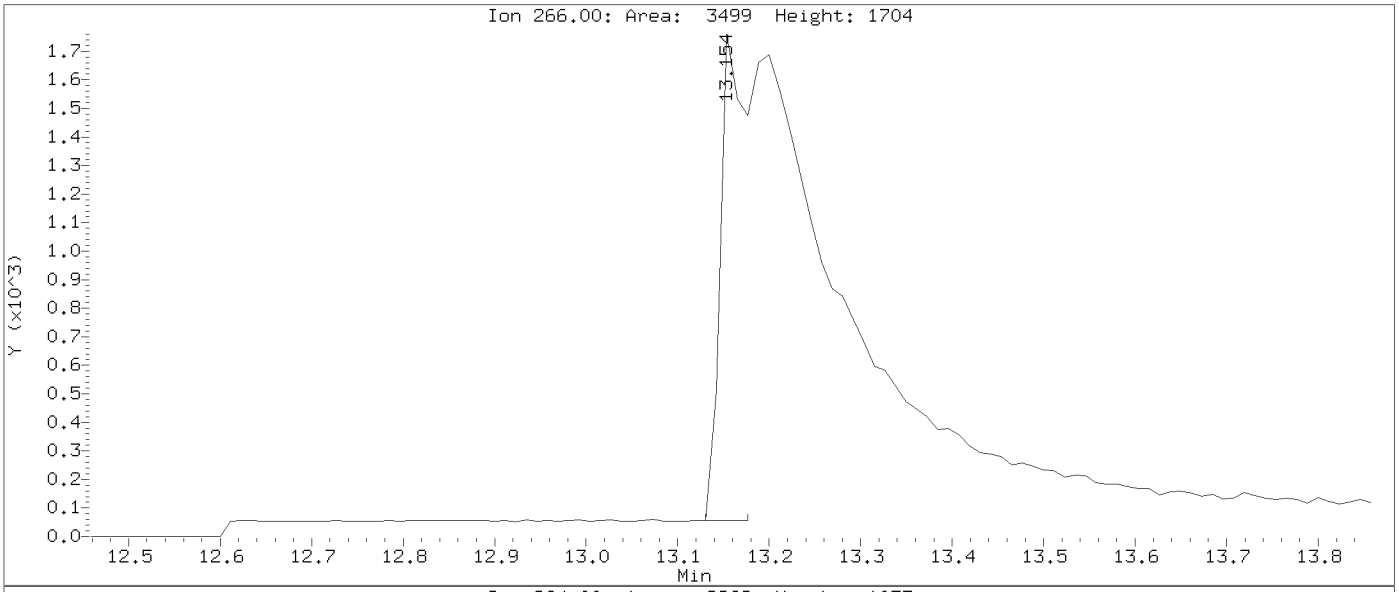
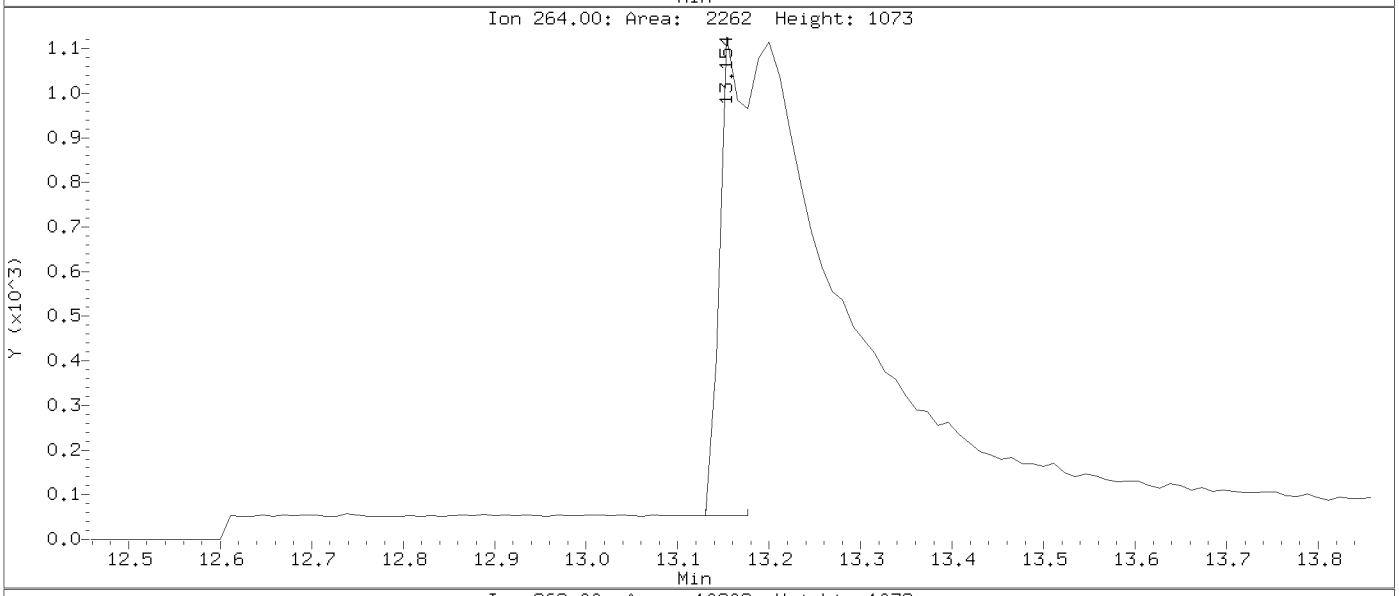
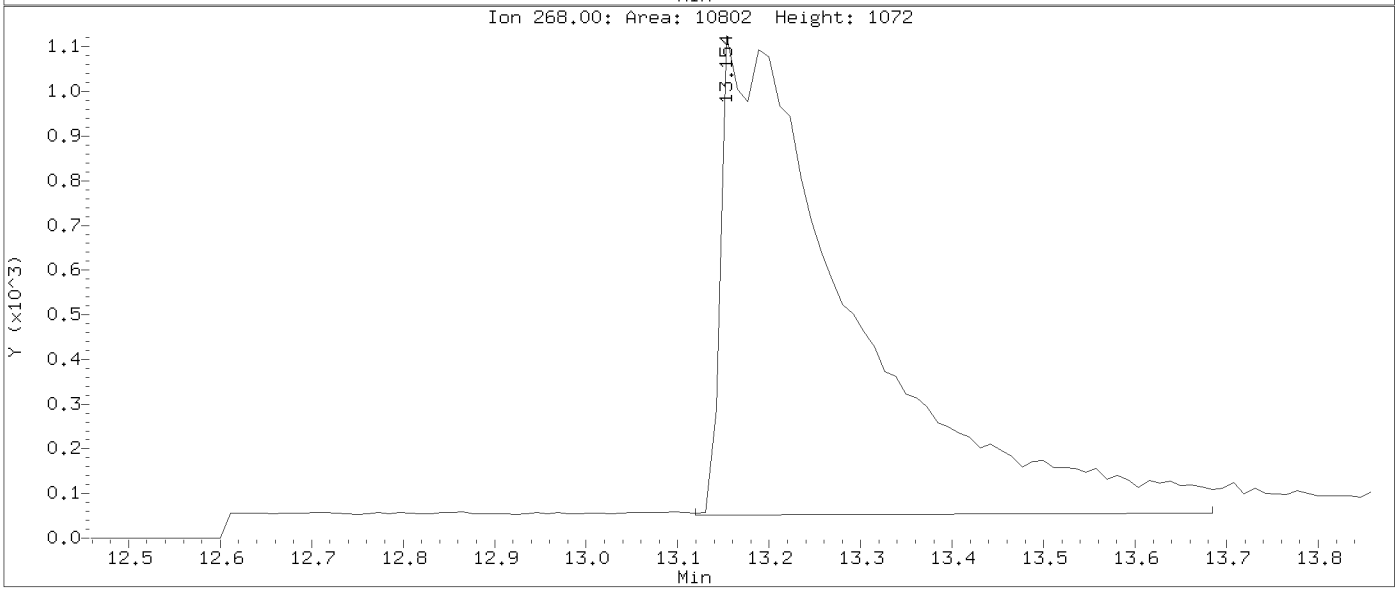
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5

BEFORE MANUAL INTEGRATION







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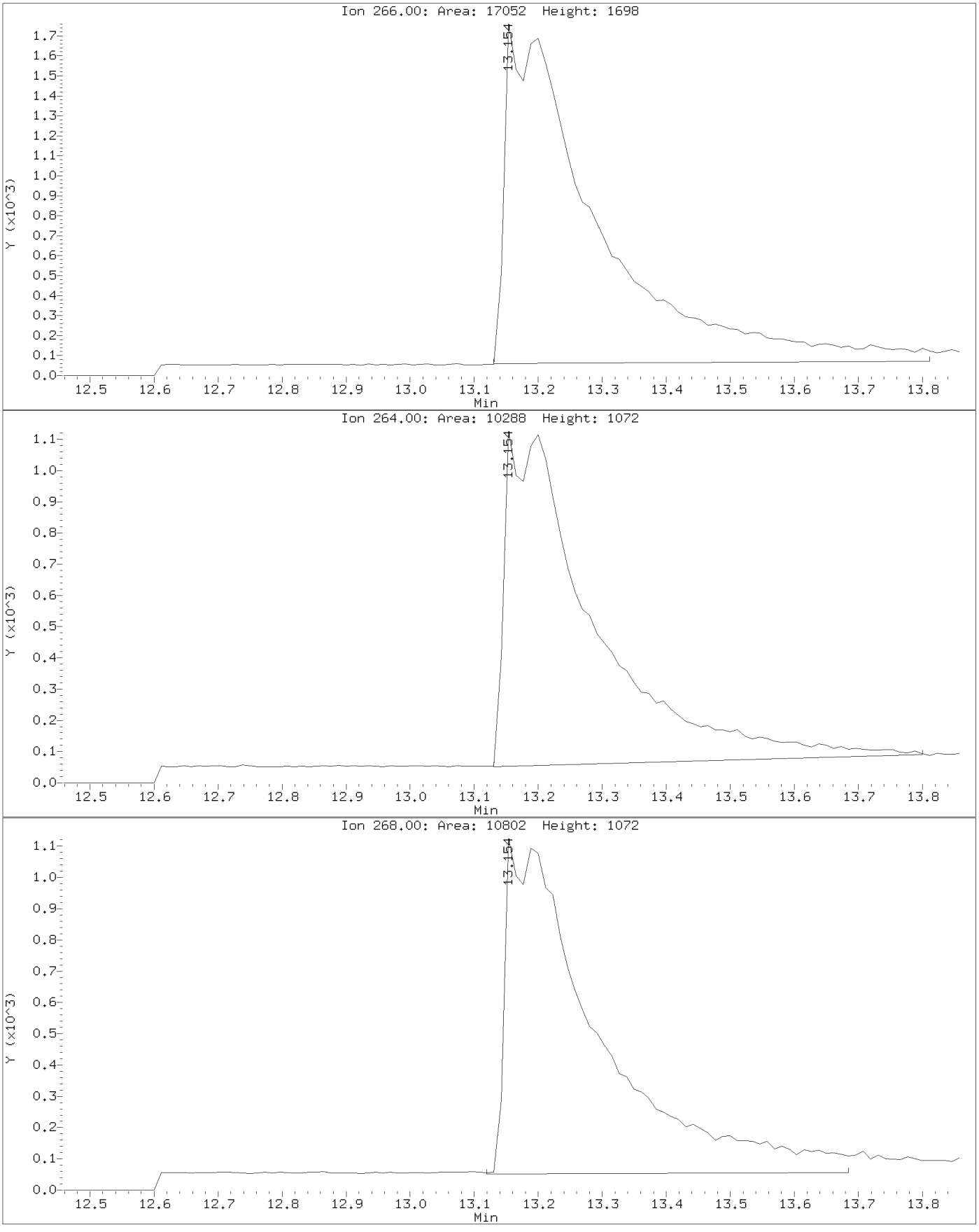
Instrument: gcms-n.i
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5

AFTER MANUAL INTEGRATION



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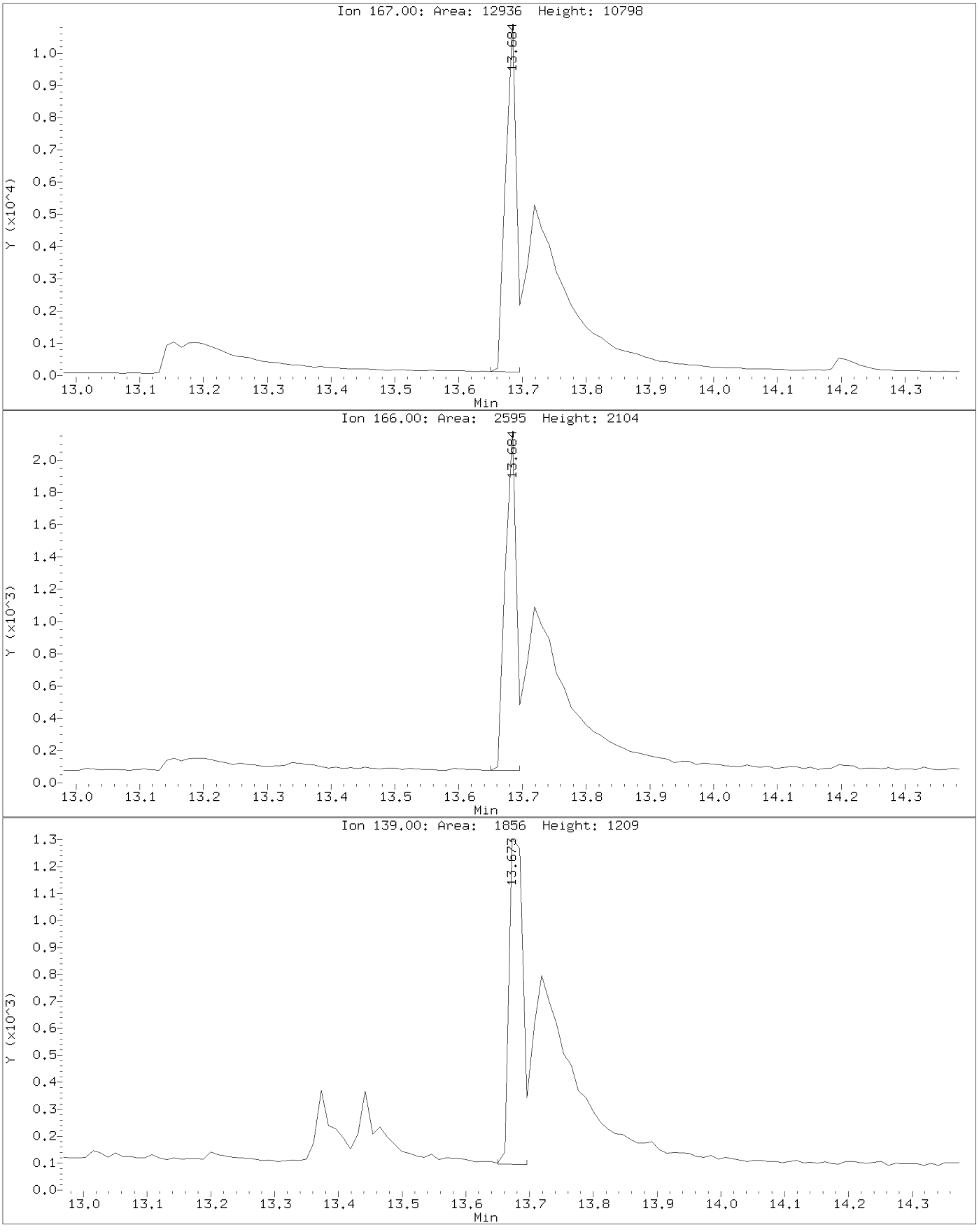
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: Carbazole
CAS Number: 86-74-8

BEFORE MANUAL INTEGRATION



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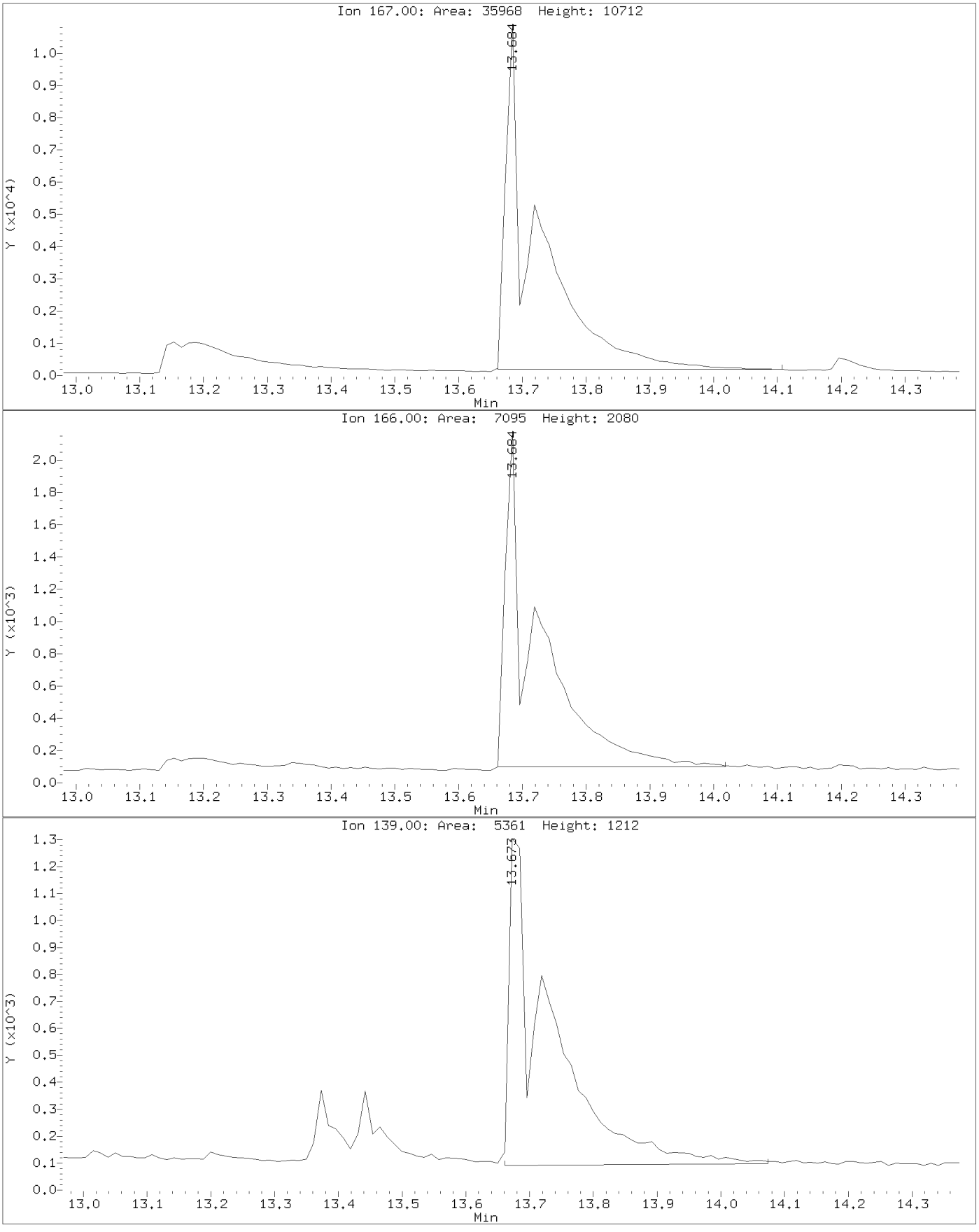
Instrument: gcms-n.i
Client Sample ID:

Compound: Carbazole
CAS Number: 86-74-8

AFTER MANUAL INTEGRATION



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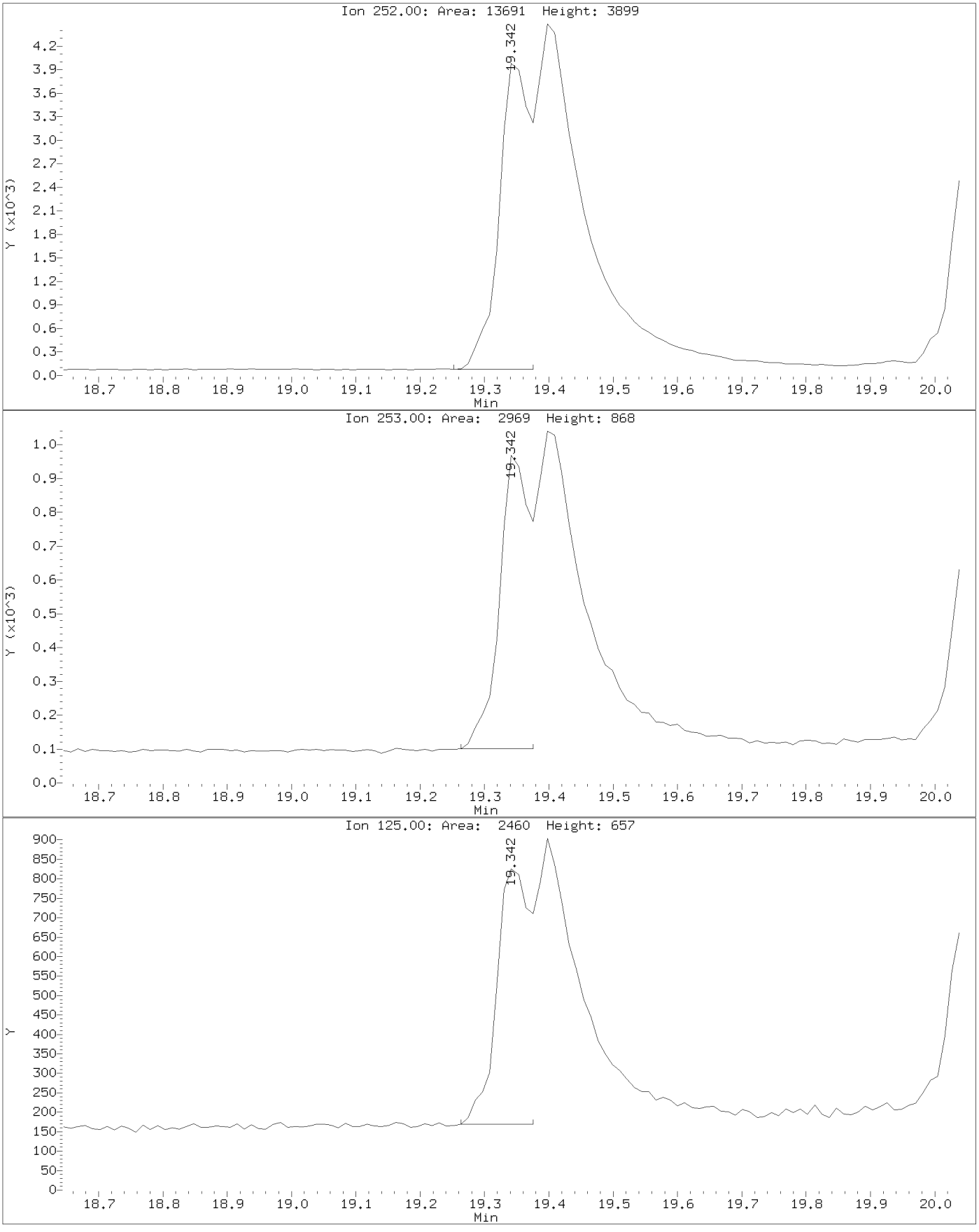
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: Benzo(k)fluoranthene
CAS Number: 207-08-9

BEFORE MANUAL INTEGRATION



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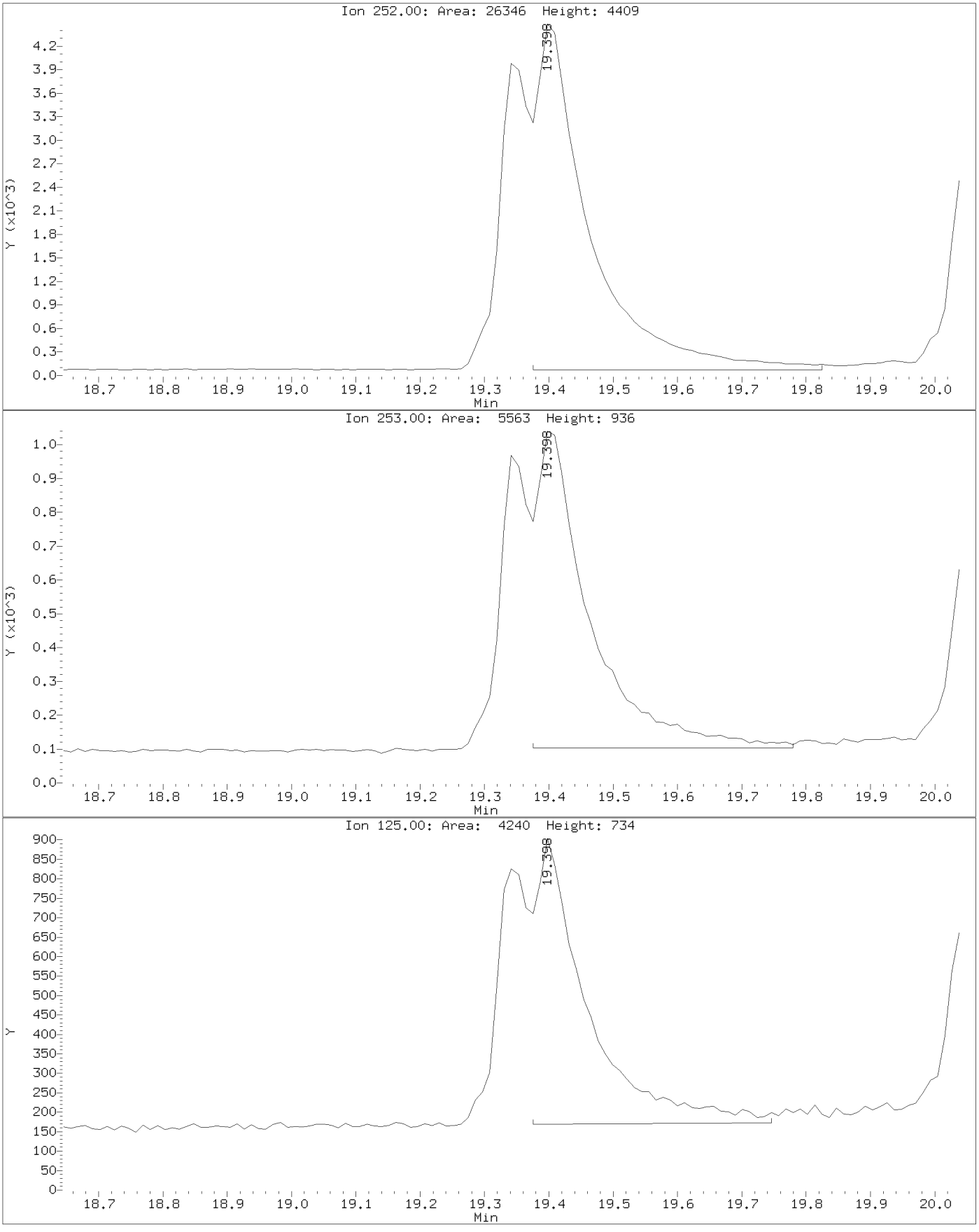
Injection Date: 28-JUL-2021 16:39
Instrument: gcms-n.i
Client Sample ID:

Compound: Benzo(k)fluoranthene
CAS Number: 207-08-9

AFTER MANUAL INTEGRATION



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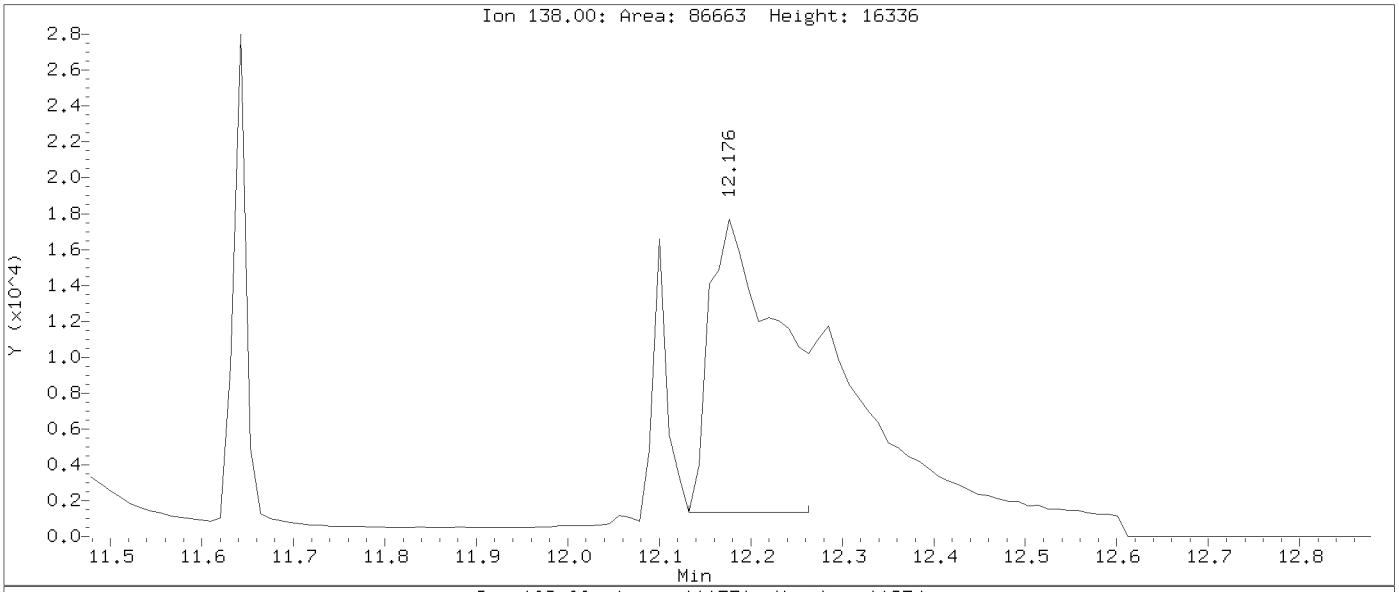
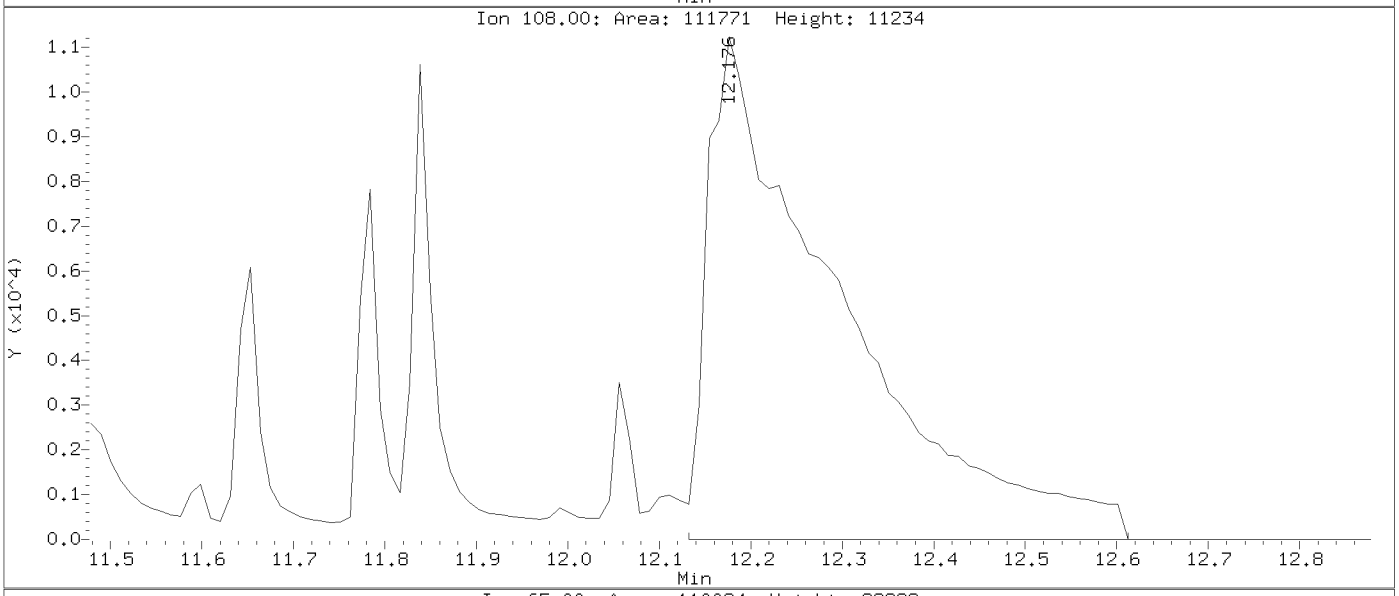
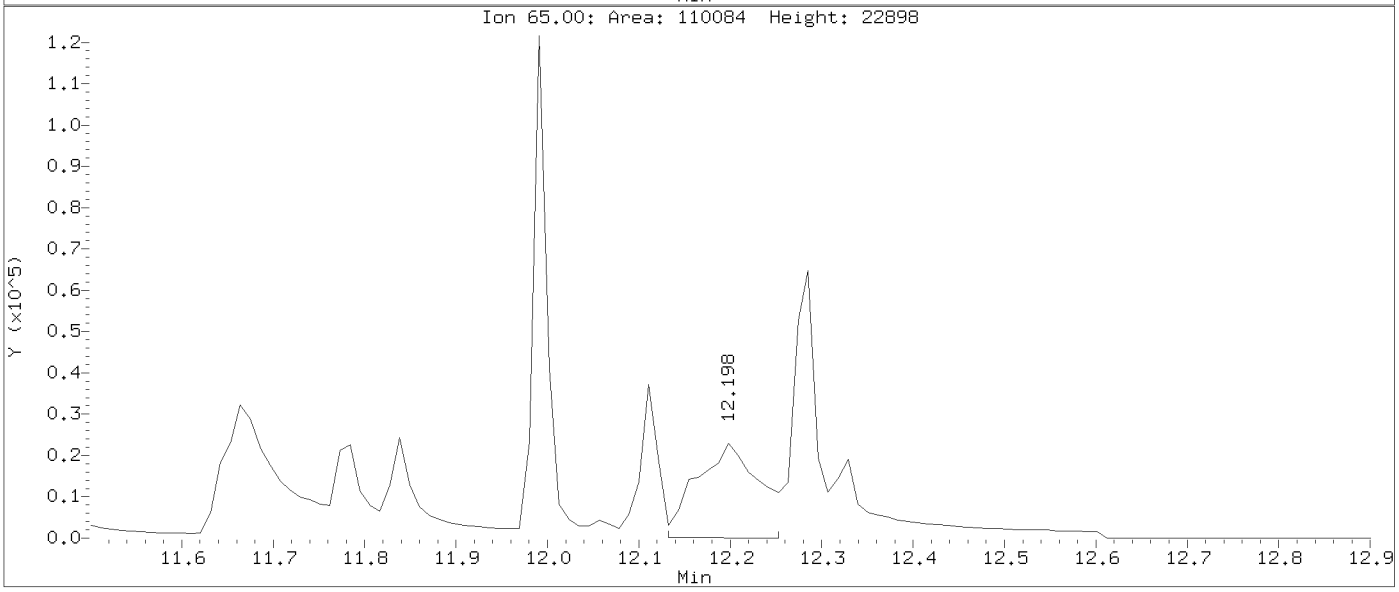
Injection Date: 28-JUL-2021 17:15
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitroaniline
CAS Number: 100-01-6

BEFORE MANUAL INTEGRATION







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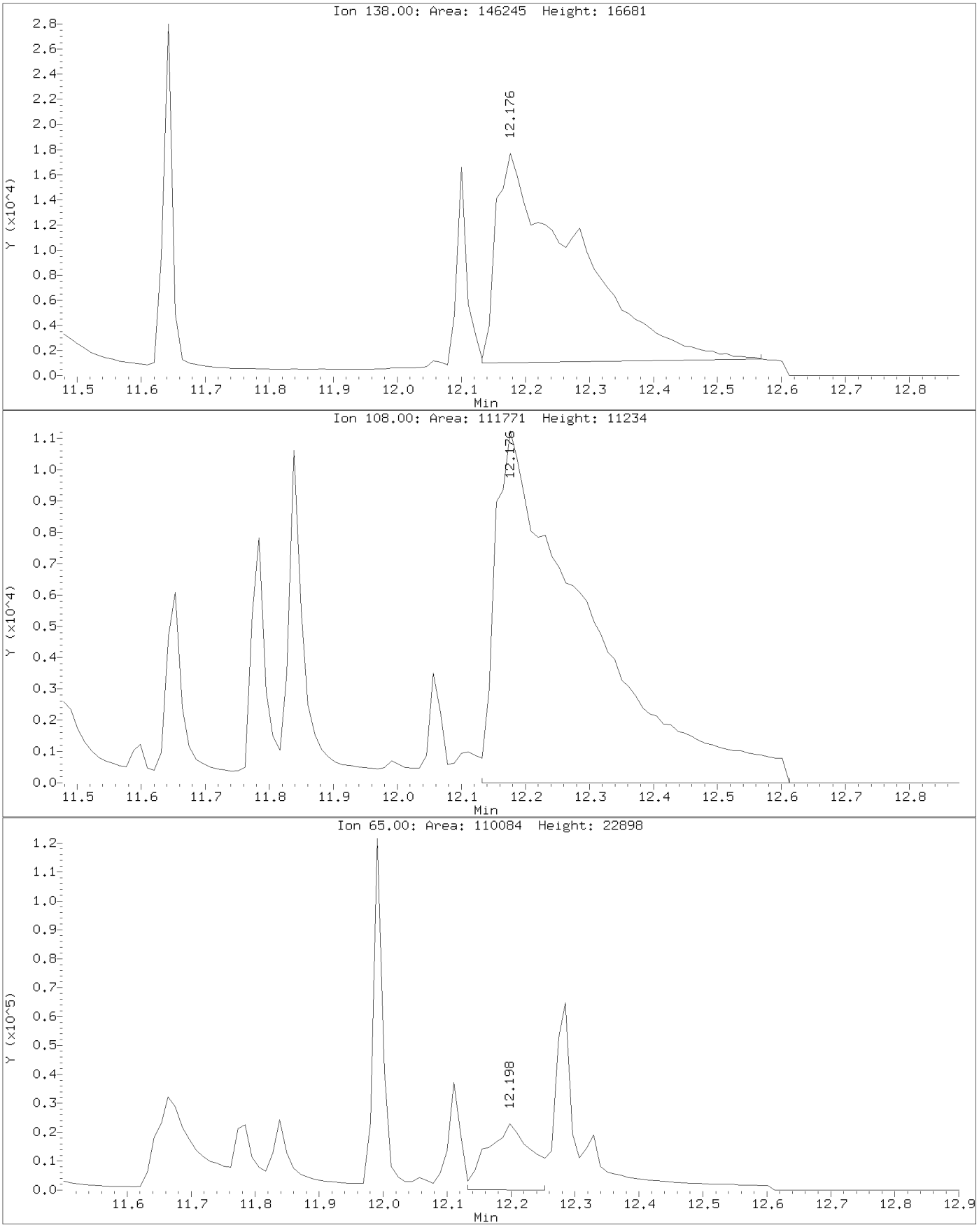
Injection Date: 28-JUL-2021 17:15
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitroaniline
CAS Number: 100-01-6

AFTER MANUAL INTEGRATION



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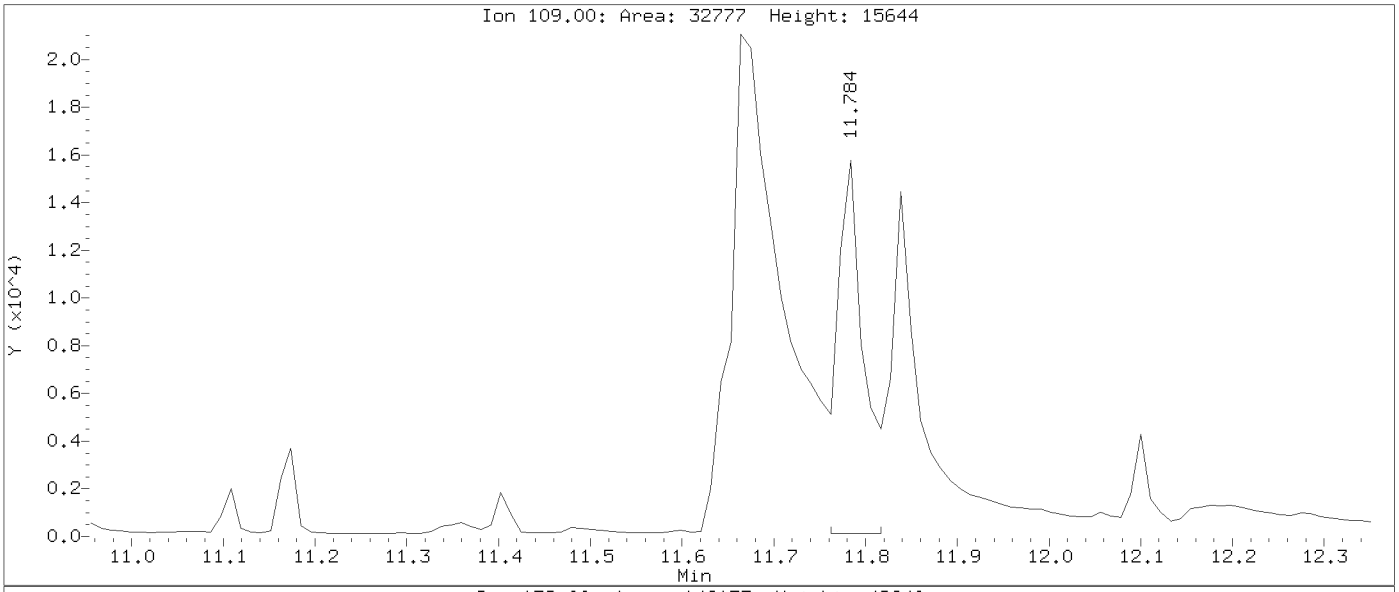
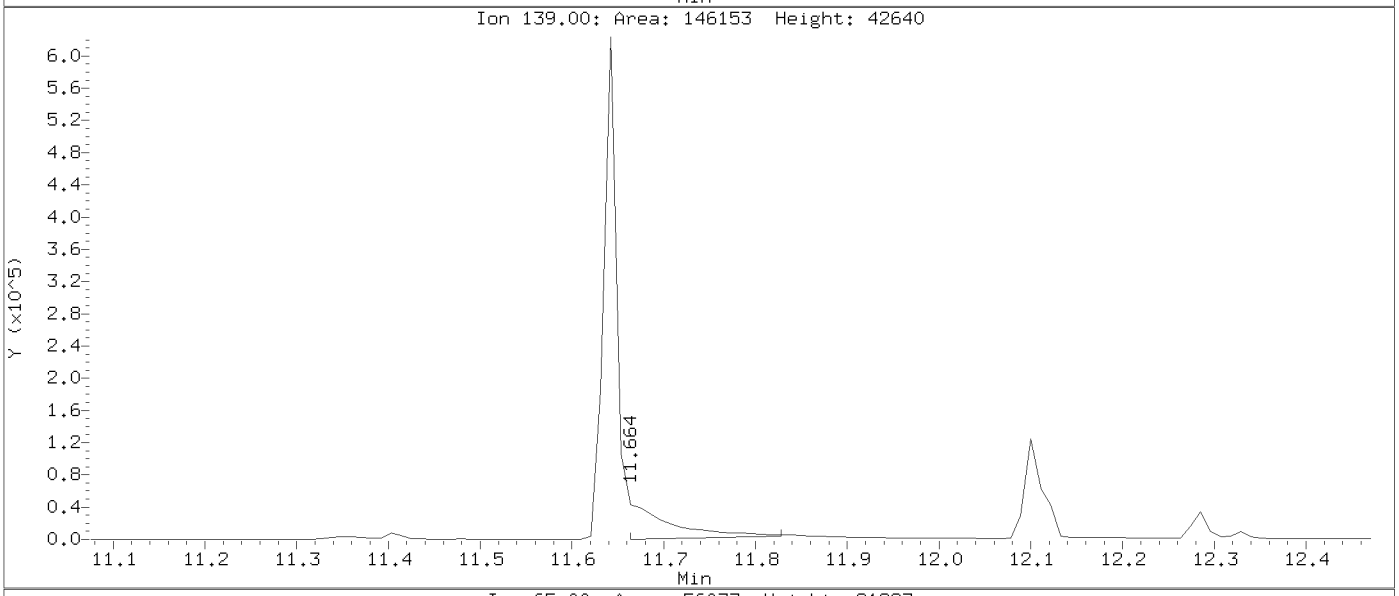
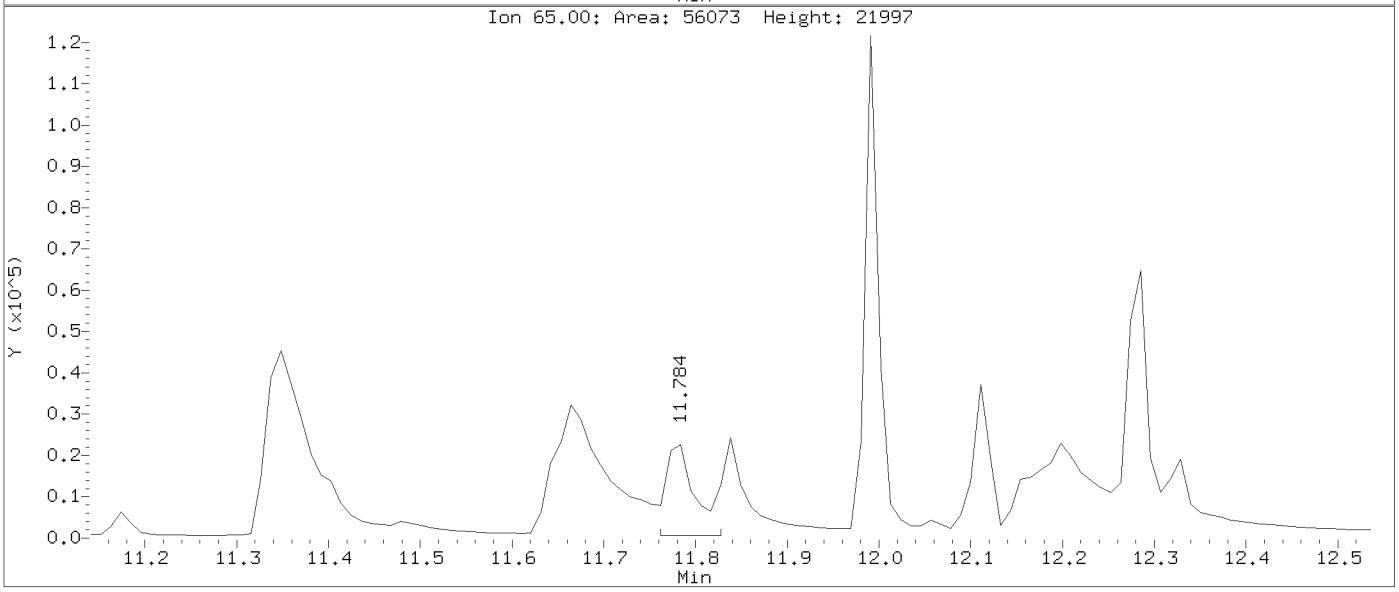
Injection Date: 28-JUL-2021 17:15
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitrophenol
CAS Number: 100-02-7

BEFORE MANUAL INTEGRATION



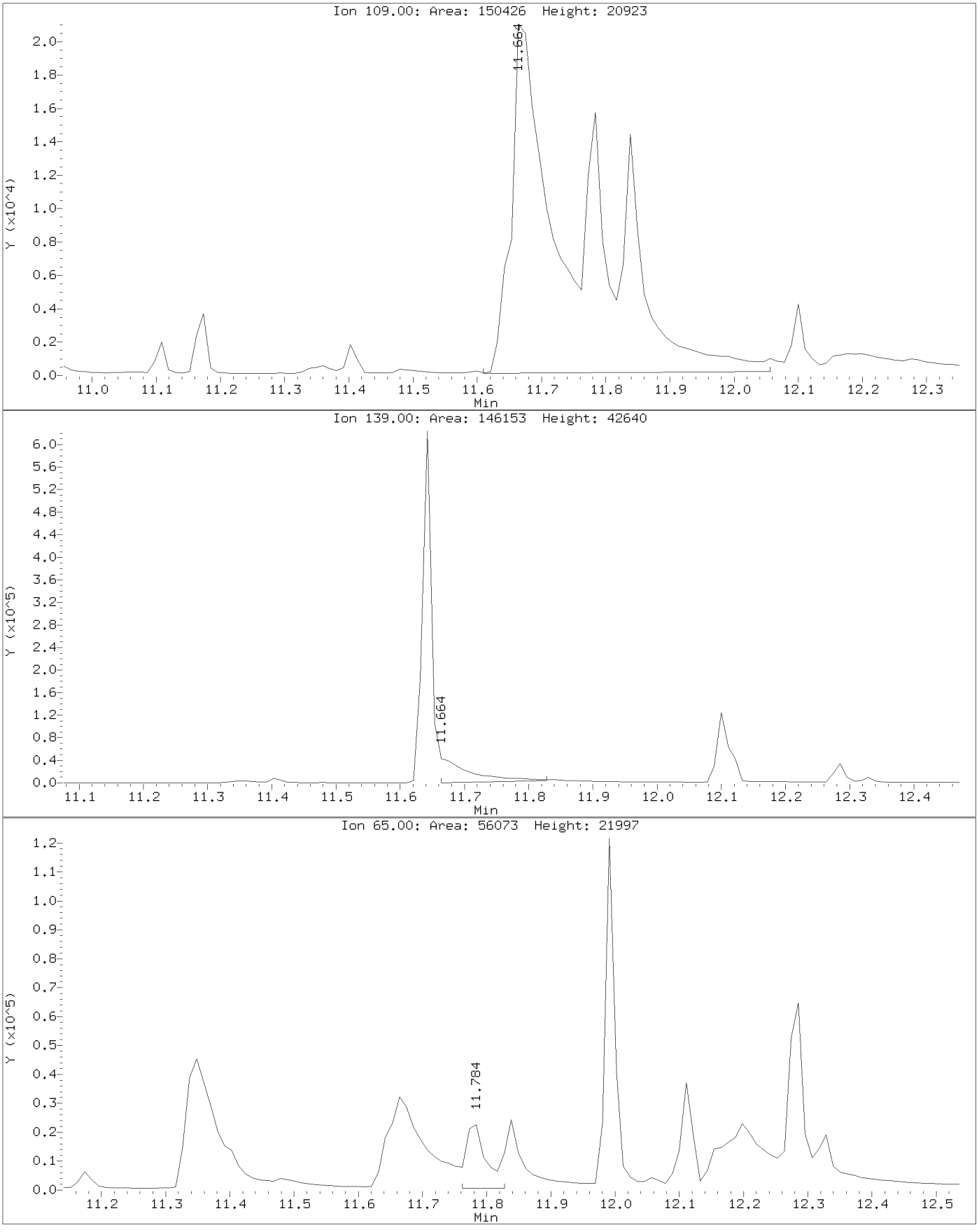




Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3621.D
Injection Date: 28-JUL-2021 17:15
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitrophenol
CAS Number: 100-02-7

AFTER MANUAL INTEGRATION



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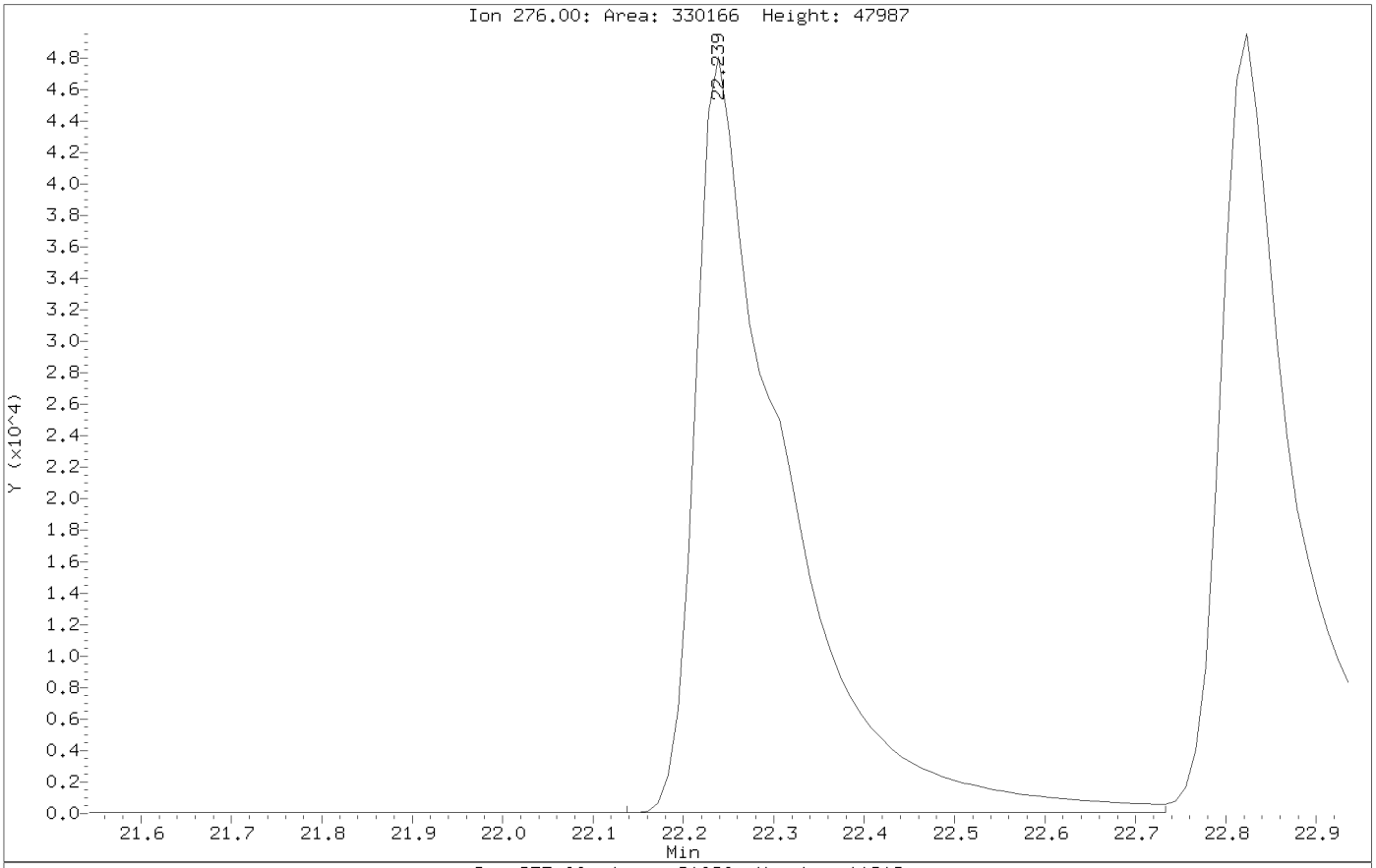
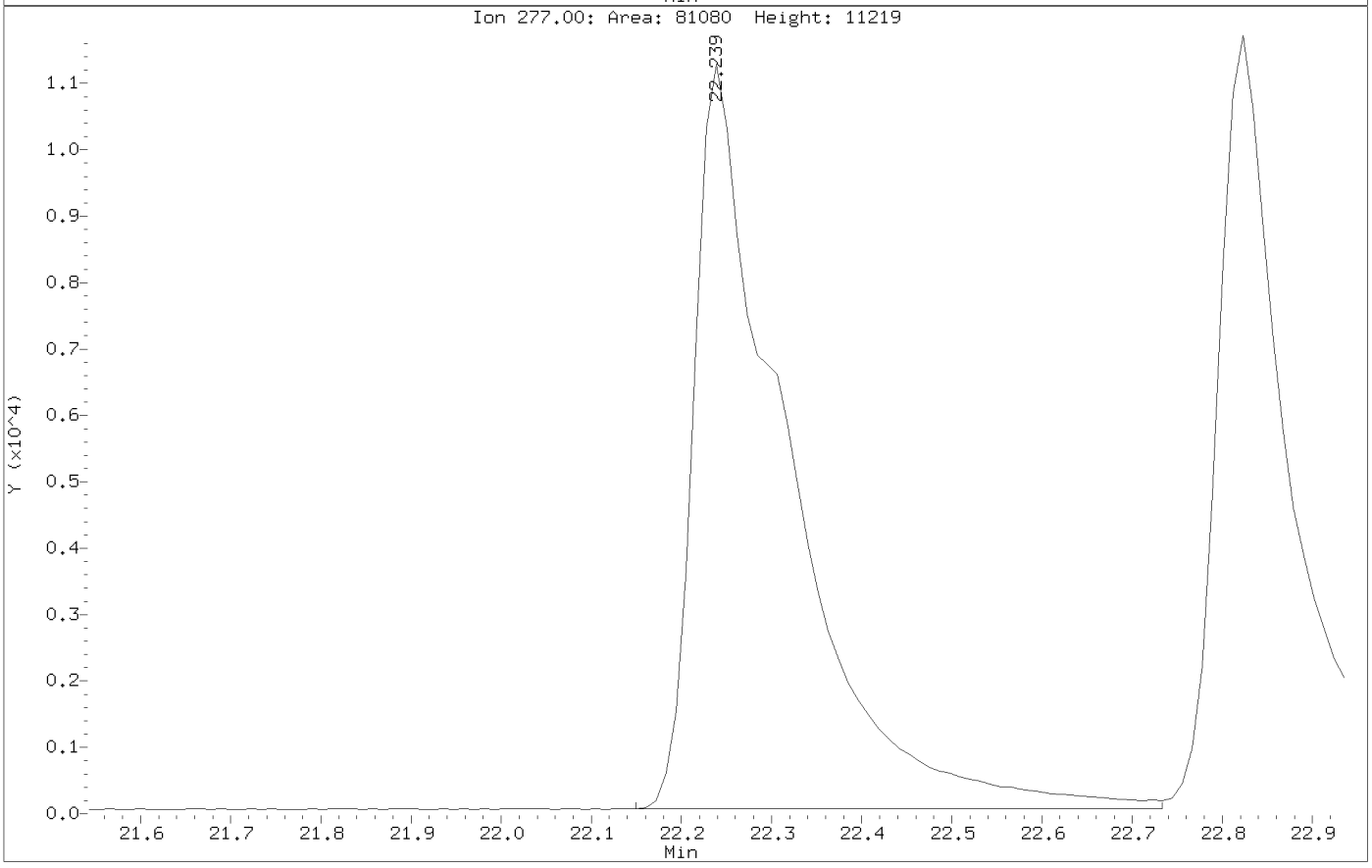
Injection Date: 28-JUL-2021 17:15
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

BEFORE MANUAL INTEGRATION

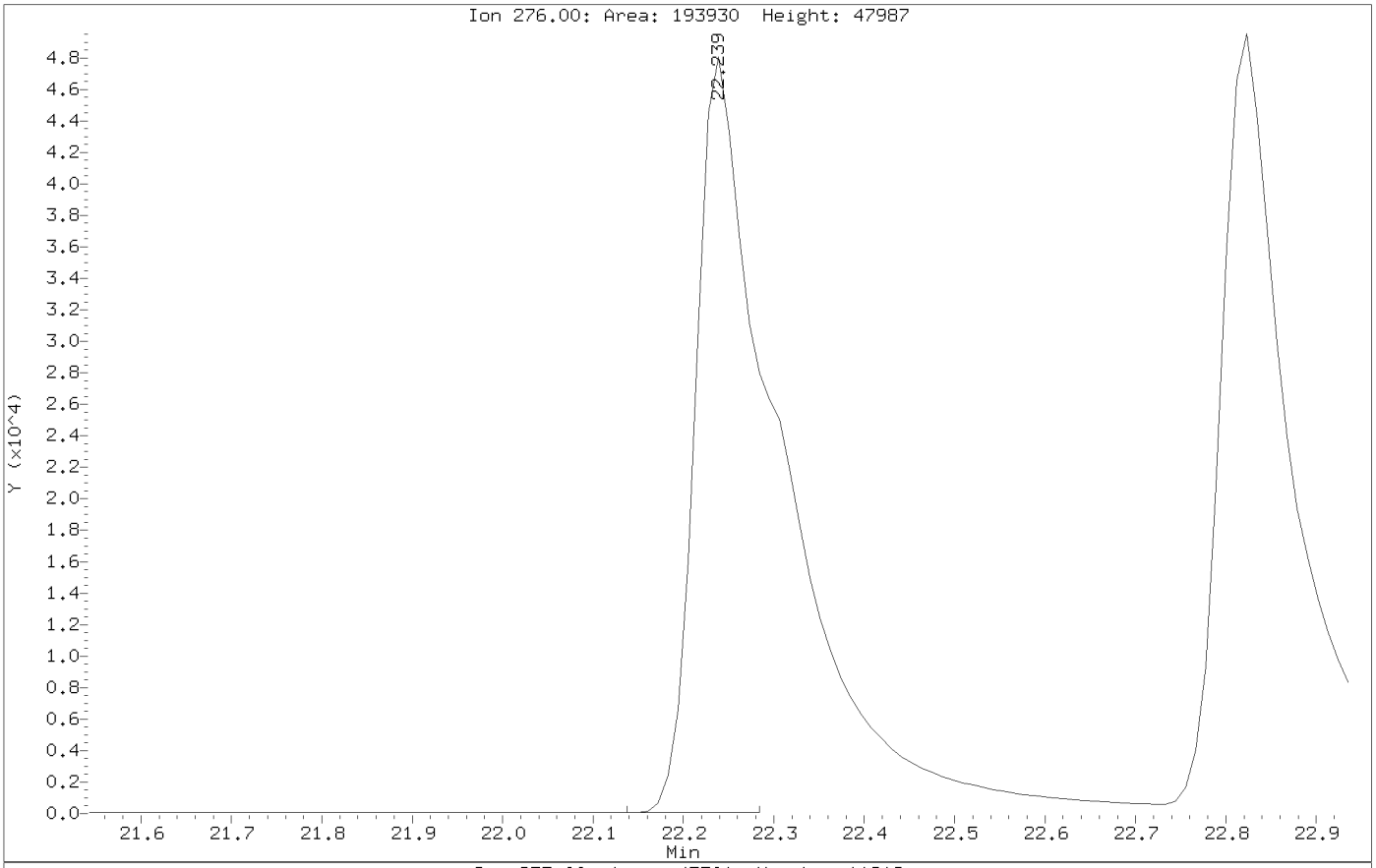


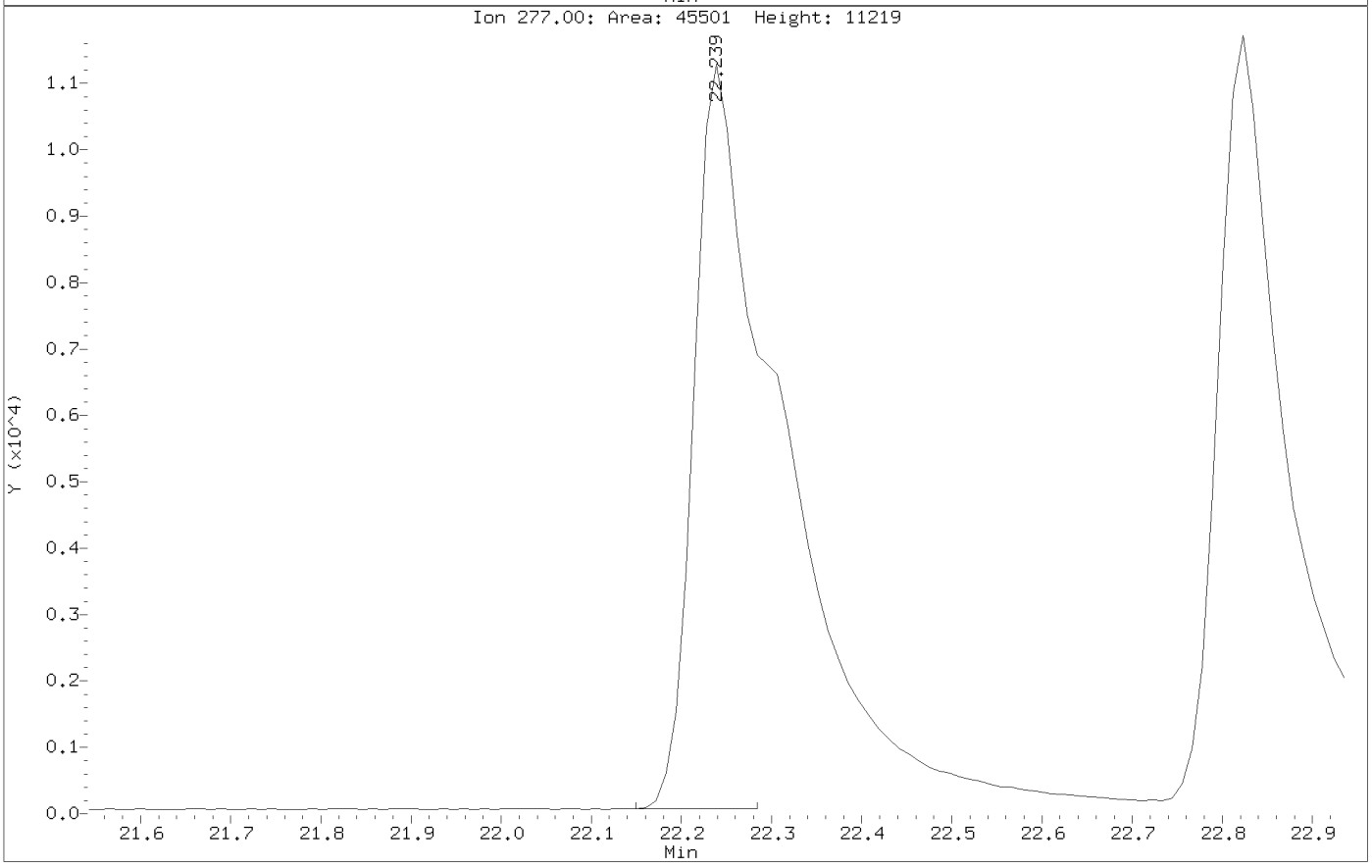


Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3621.D
Injection Date: 28-JUL-2021 17:15
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

AFTER MANUAL INTEGRATION





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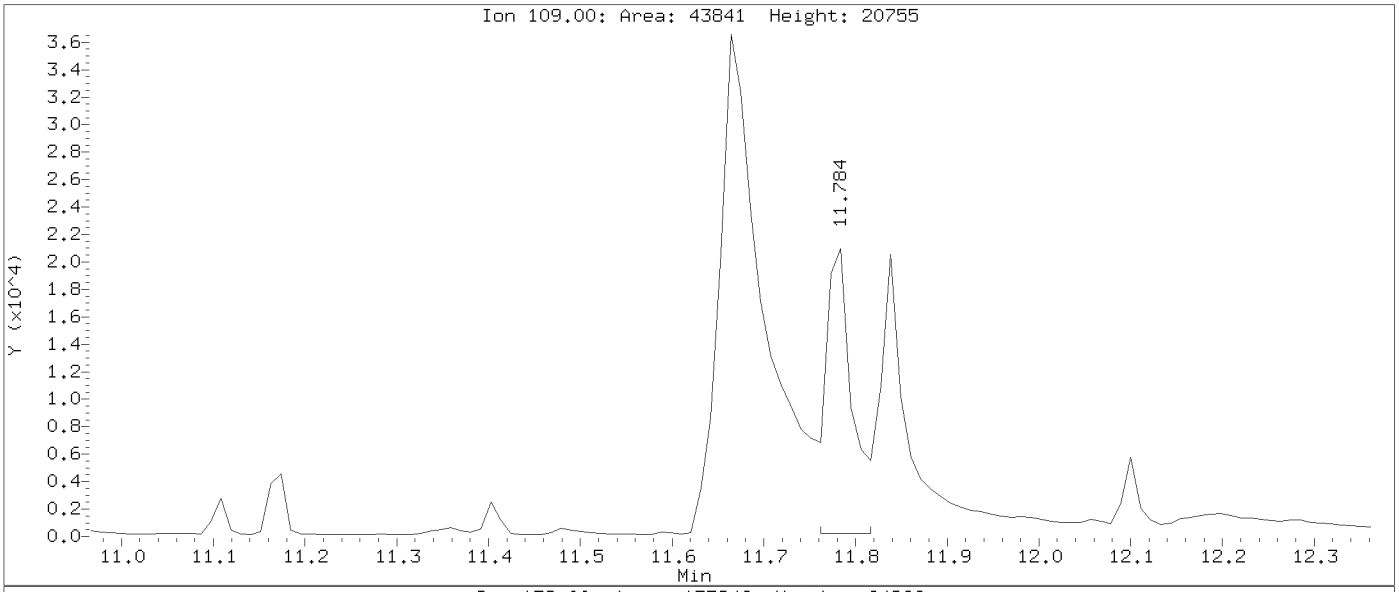
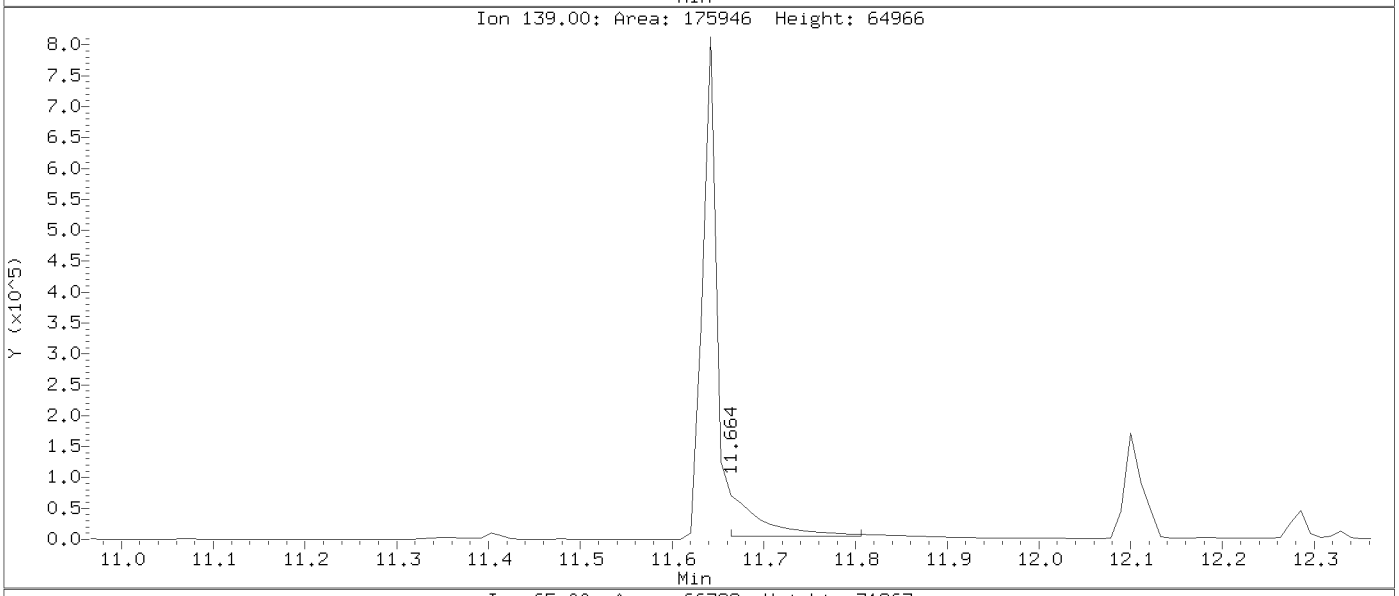
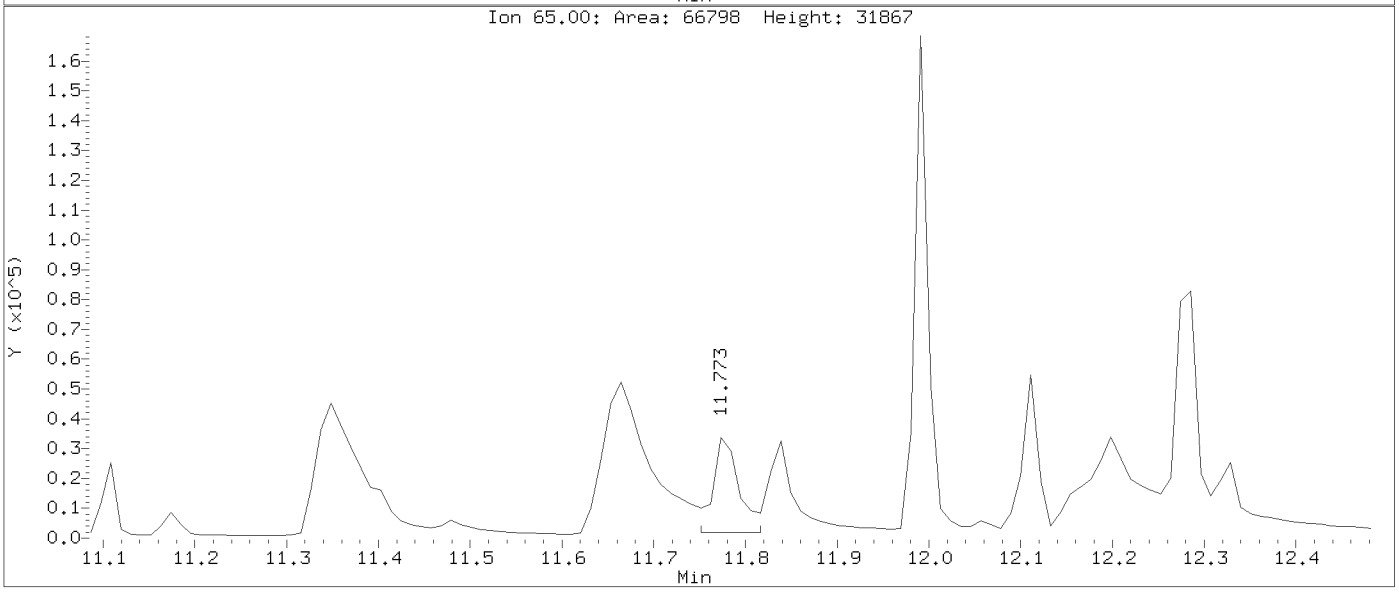
Injection Date: 28-JUL-2021 17:52
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitrophenol
CAS Number: 100-02-7

BEFORE MANUAL INTEGRATION



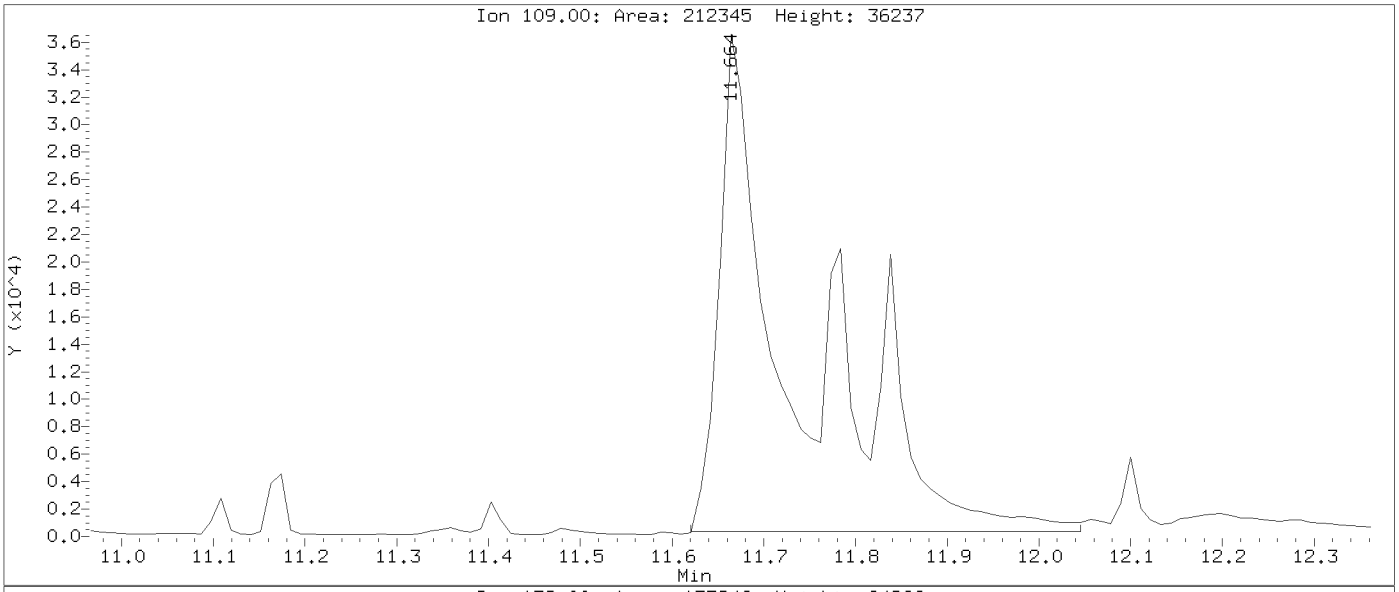


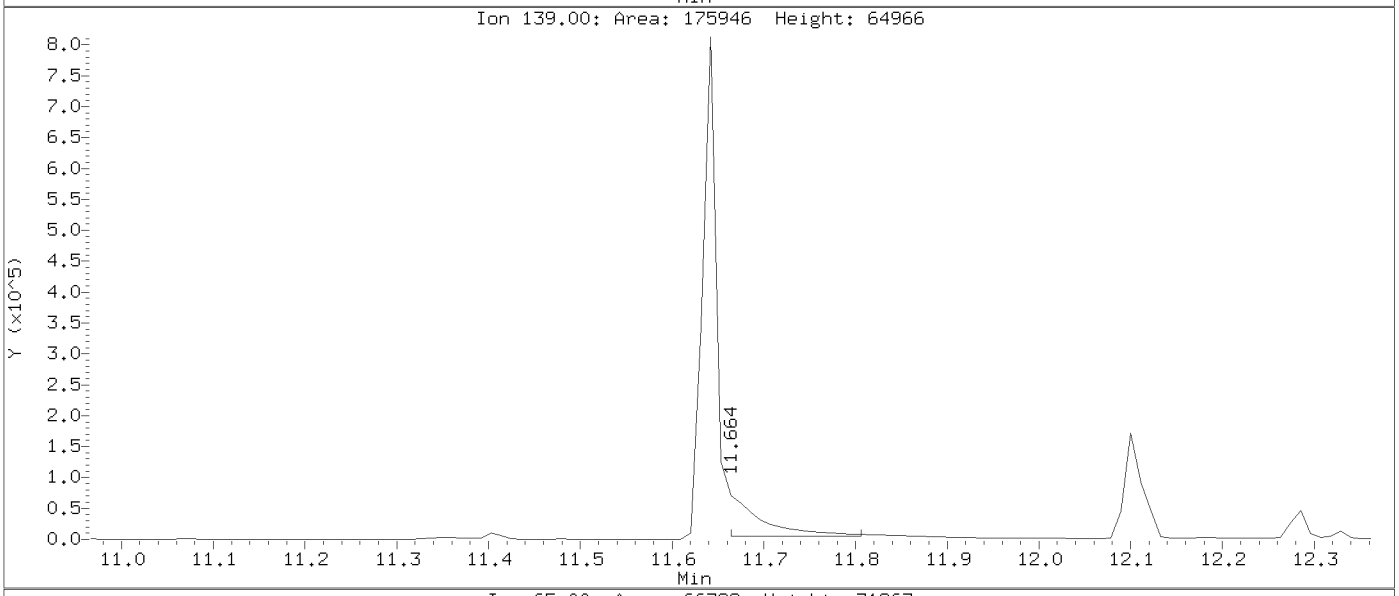


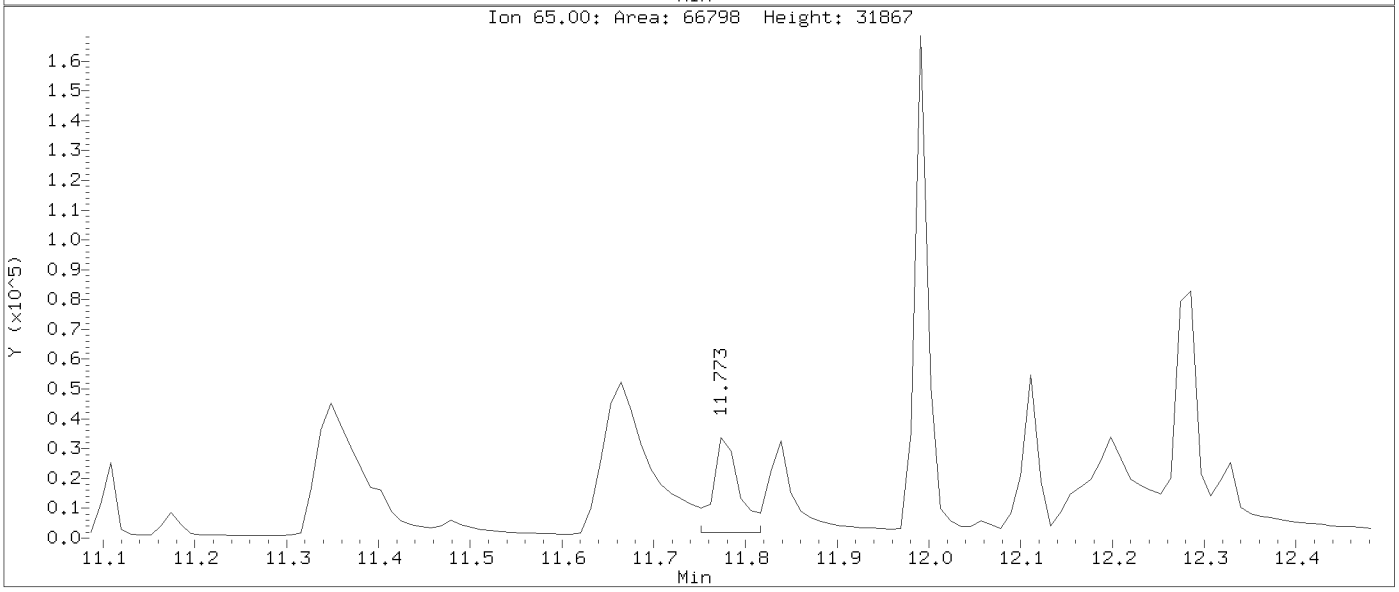
Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3622.D
Injection Date: 28-JUL-2021 17:52
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitrophenol
CAS Number: 100-02-7

AFTER MANUAL INTEGRATION







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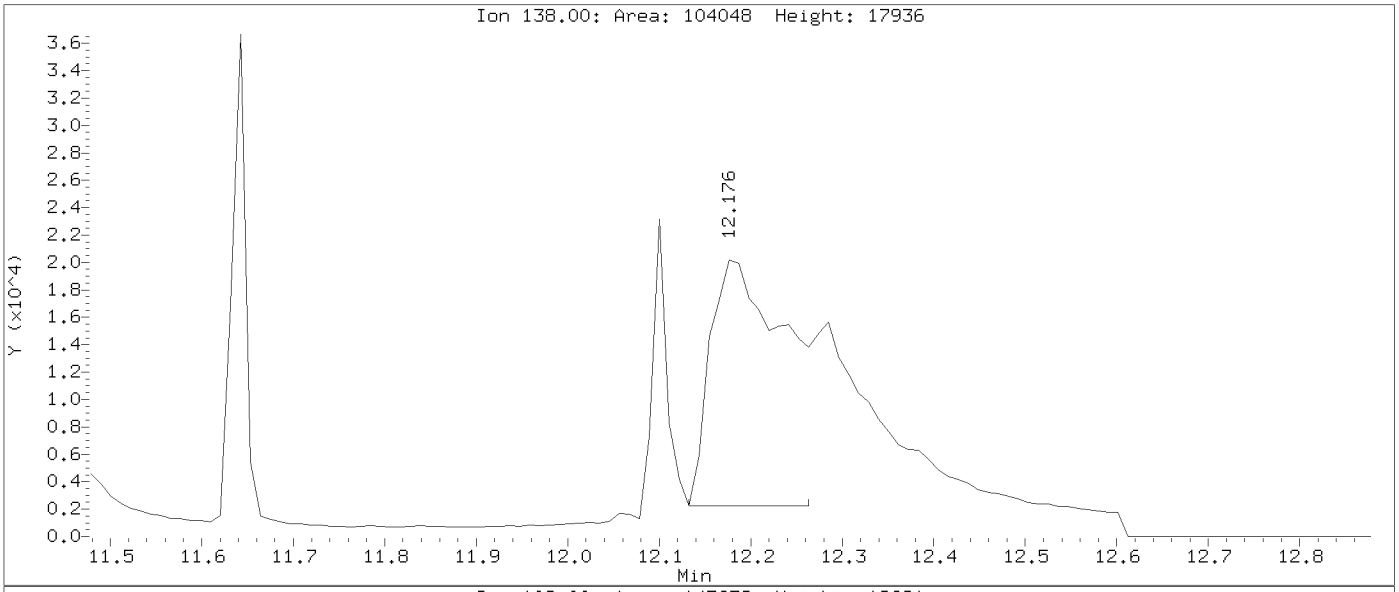
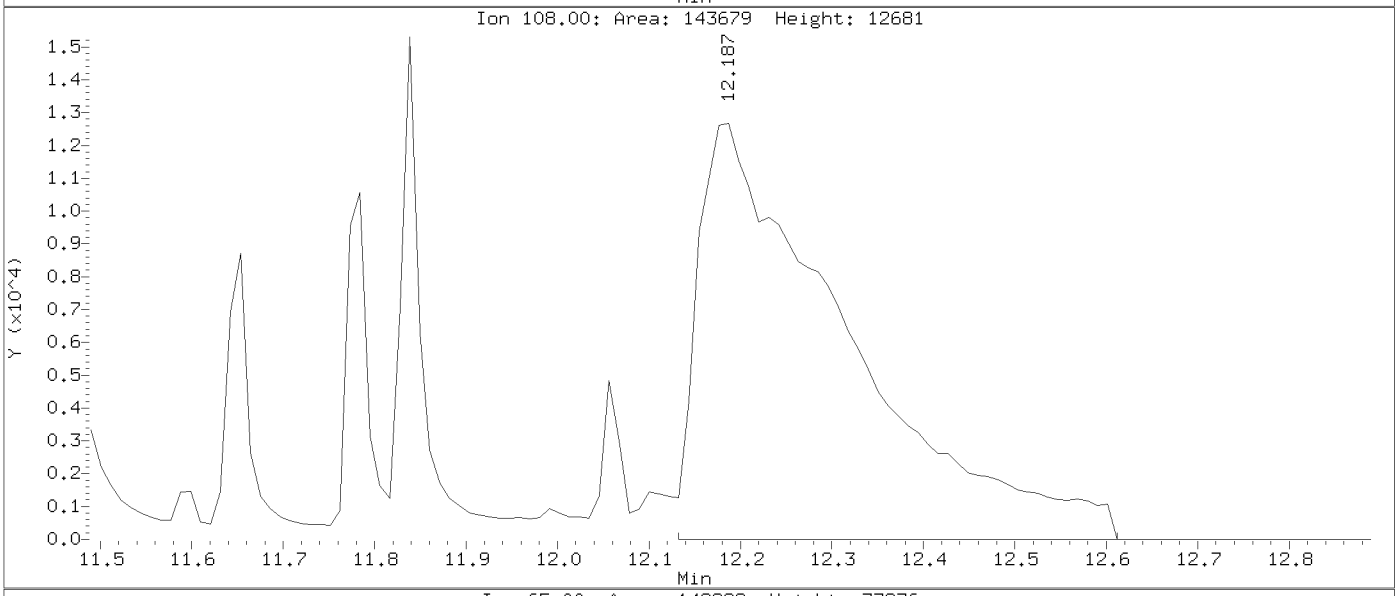
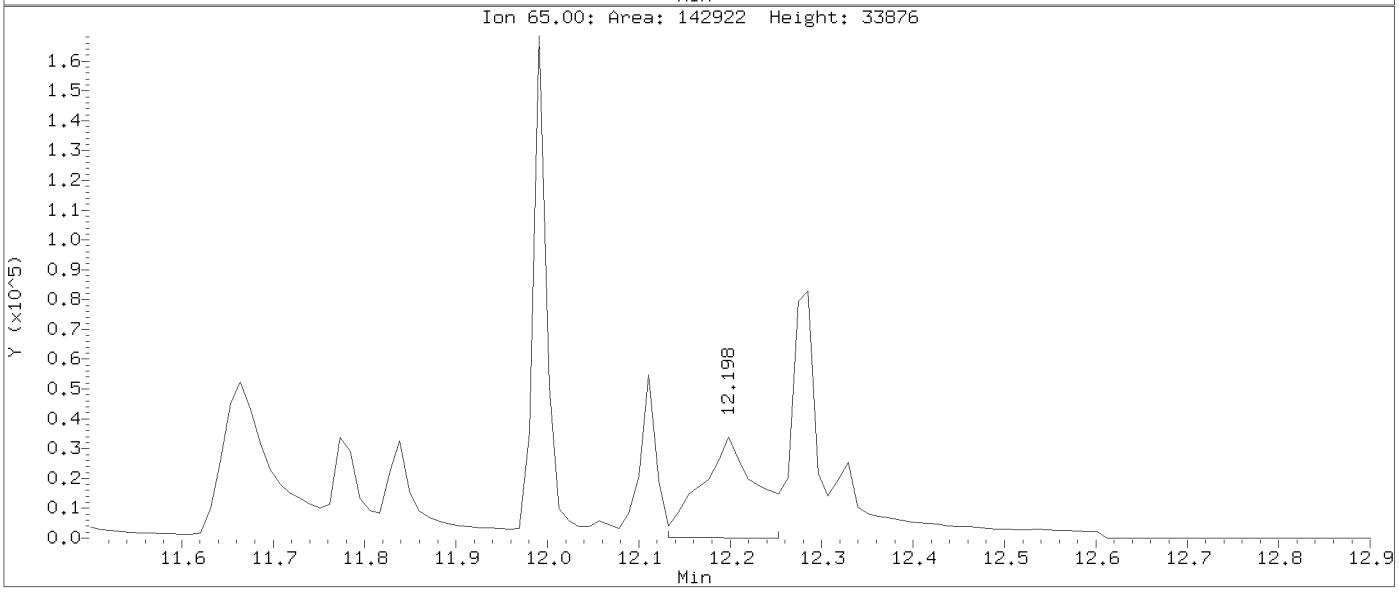
Injection Date: 28-JUL-2021 17:52
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitroaniline
CAS Number: 100-01-6

BEFORE MANUAL INTEGRATION







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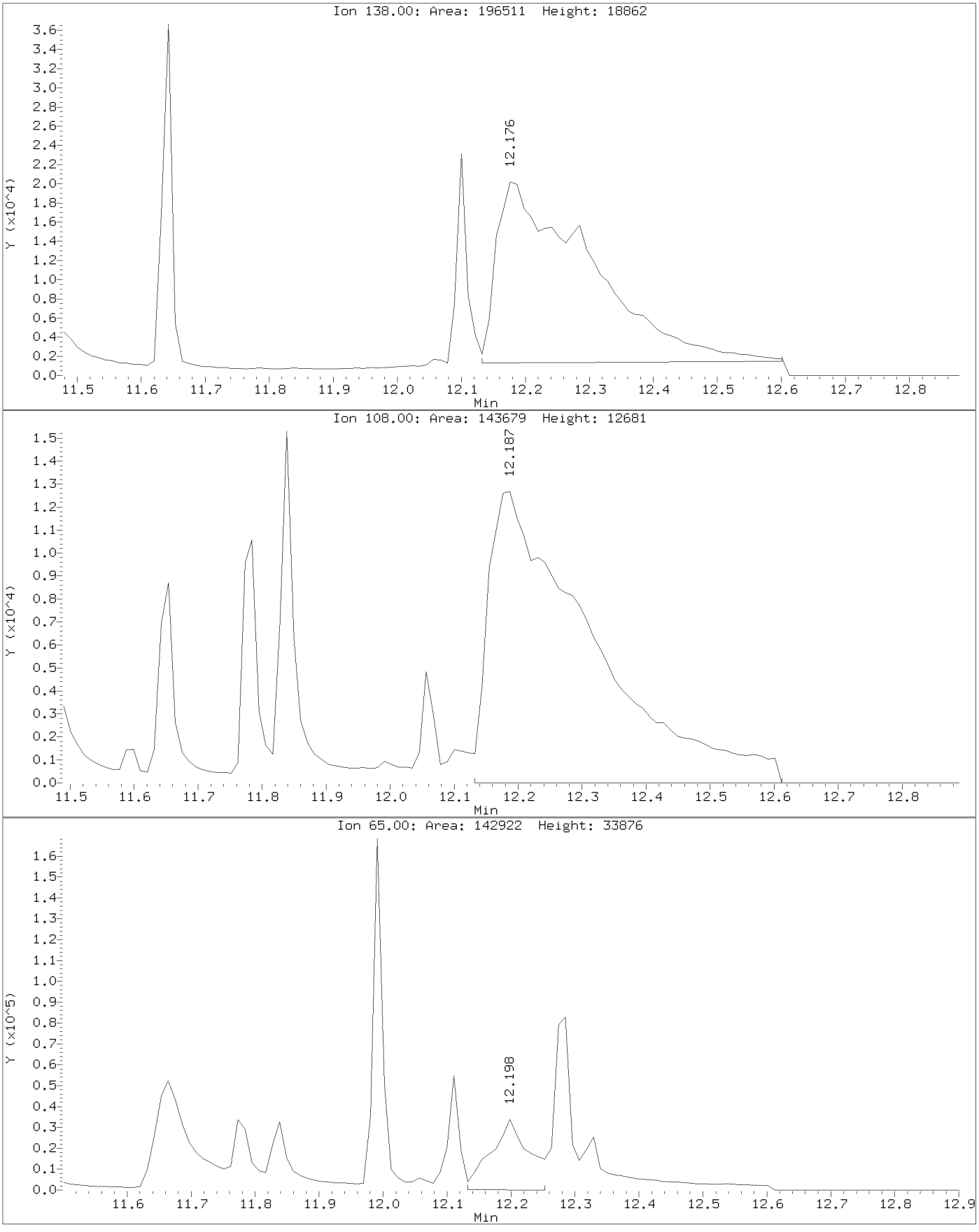
Injection Date: 28-JUL-2021 17:52
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitroaniline
CAS Number: 100-01-6

AFTER MANUAL INTEGRATION



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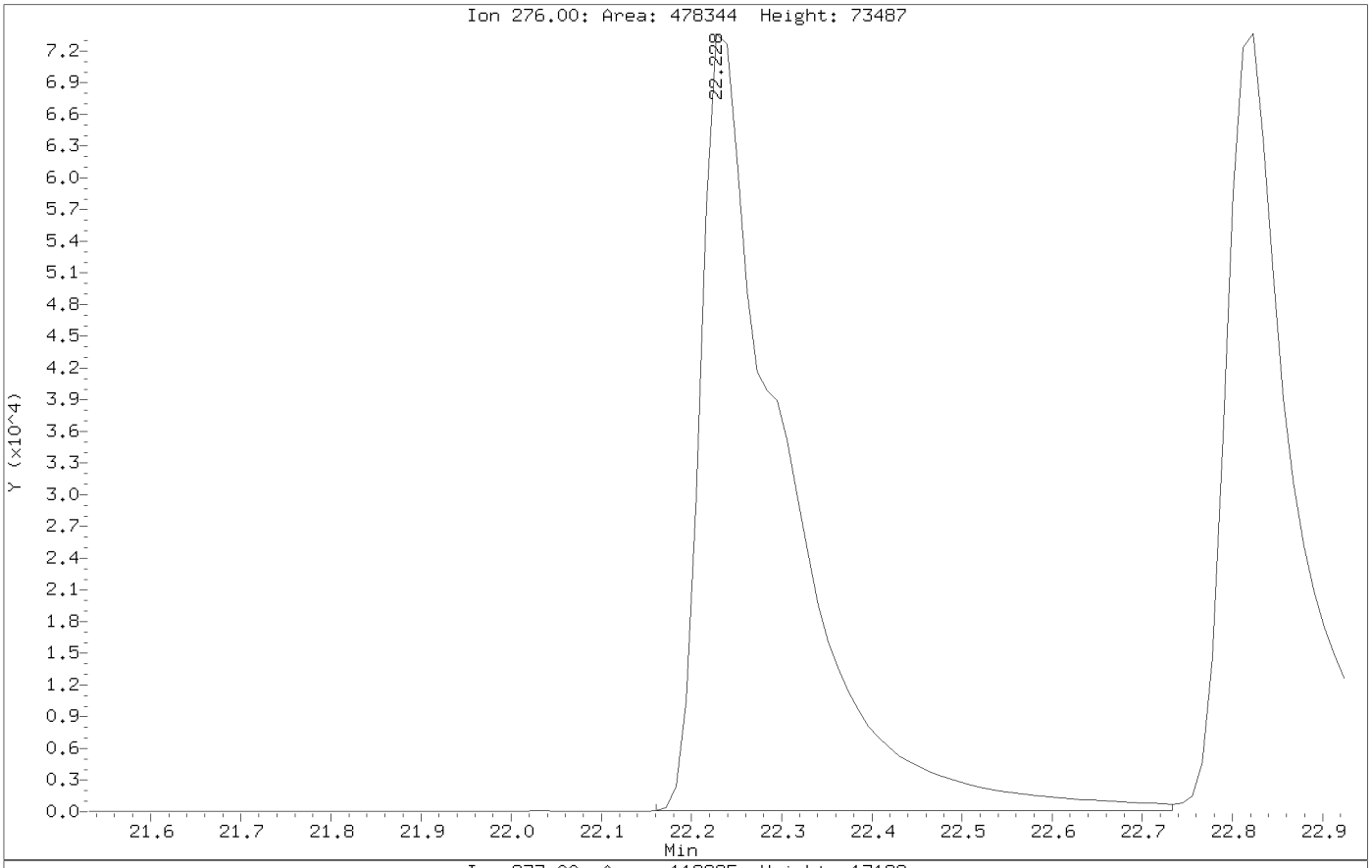
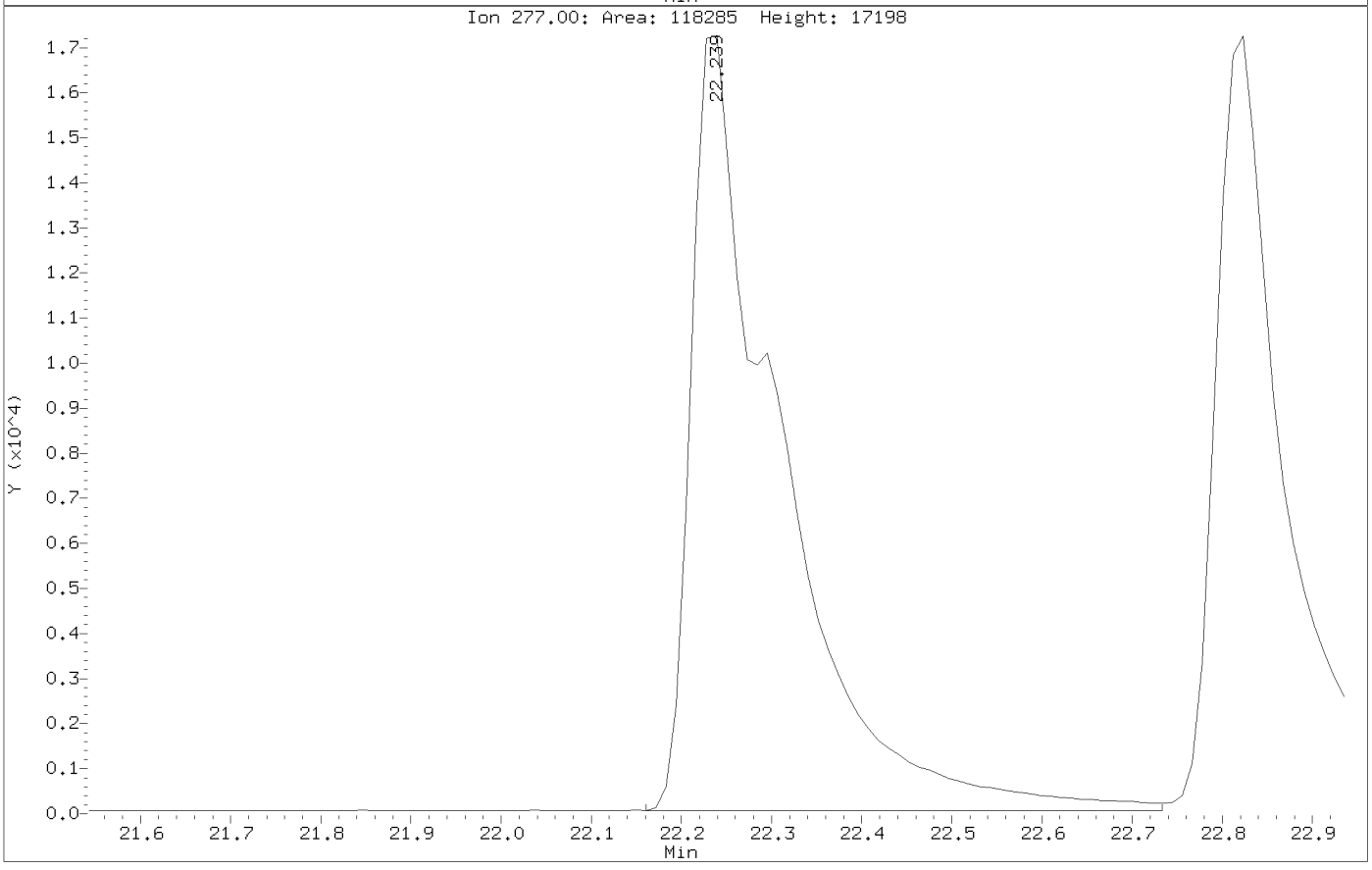
Injection Date: 28-JUL-2021 17:52
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

BEFORE MANUAL INTEGRATION





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Injection Date: 28-JUL-2021 17:52
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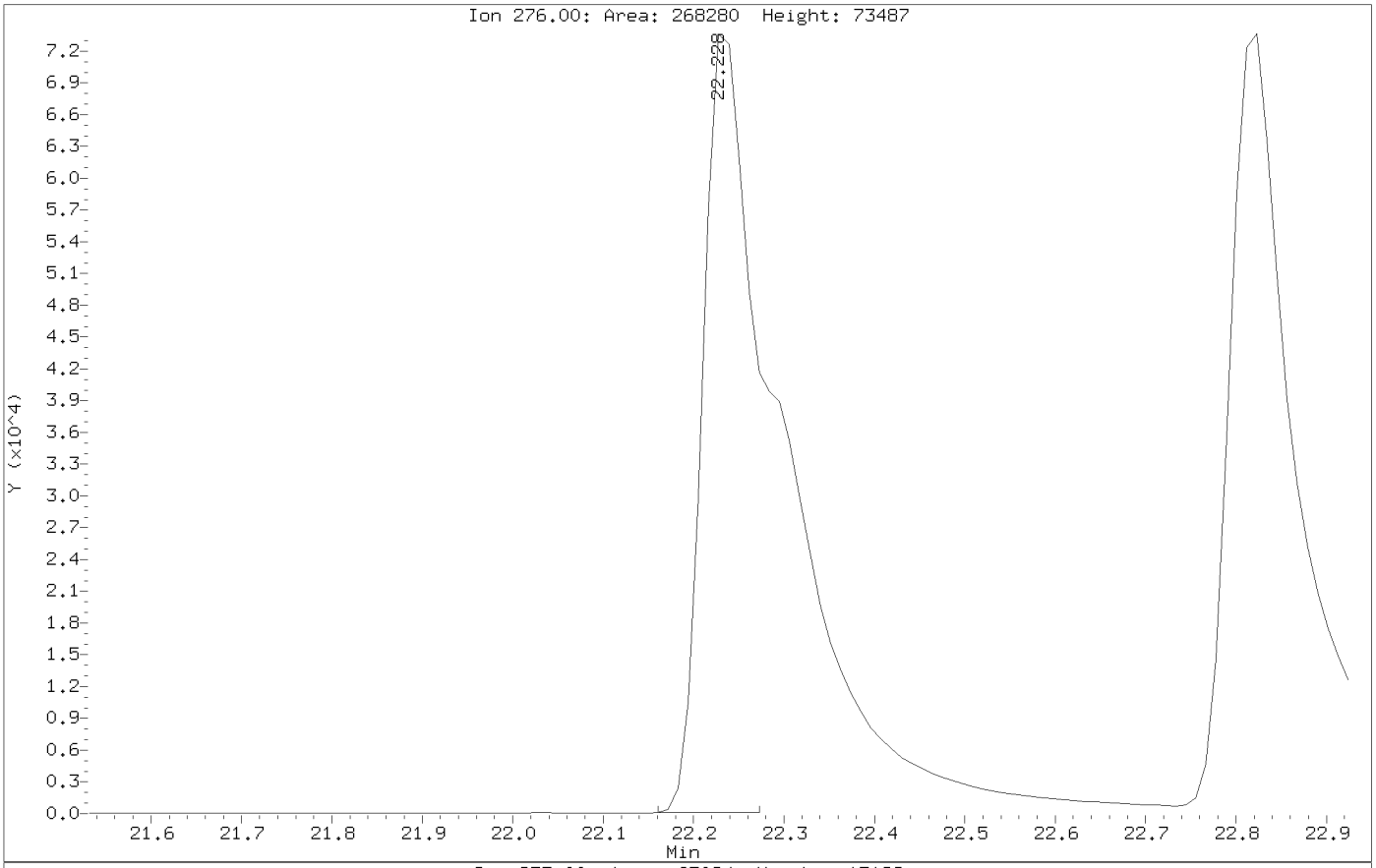
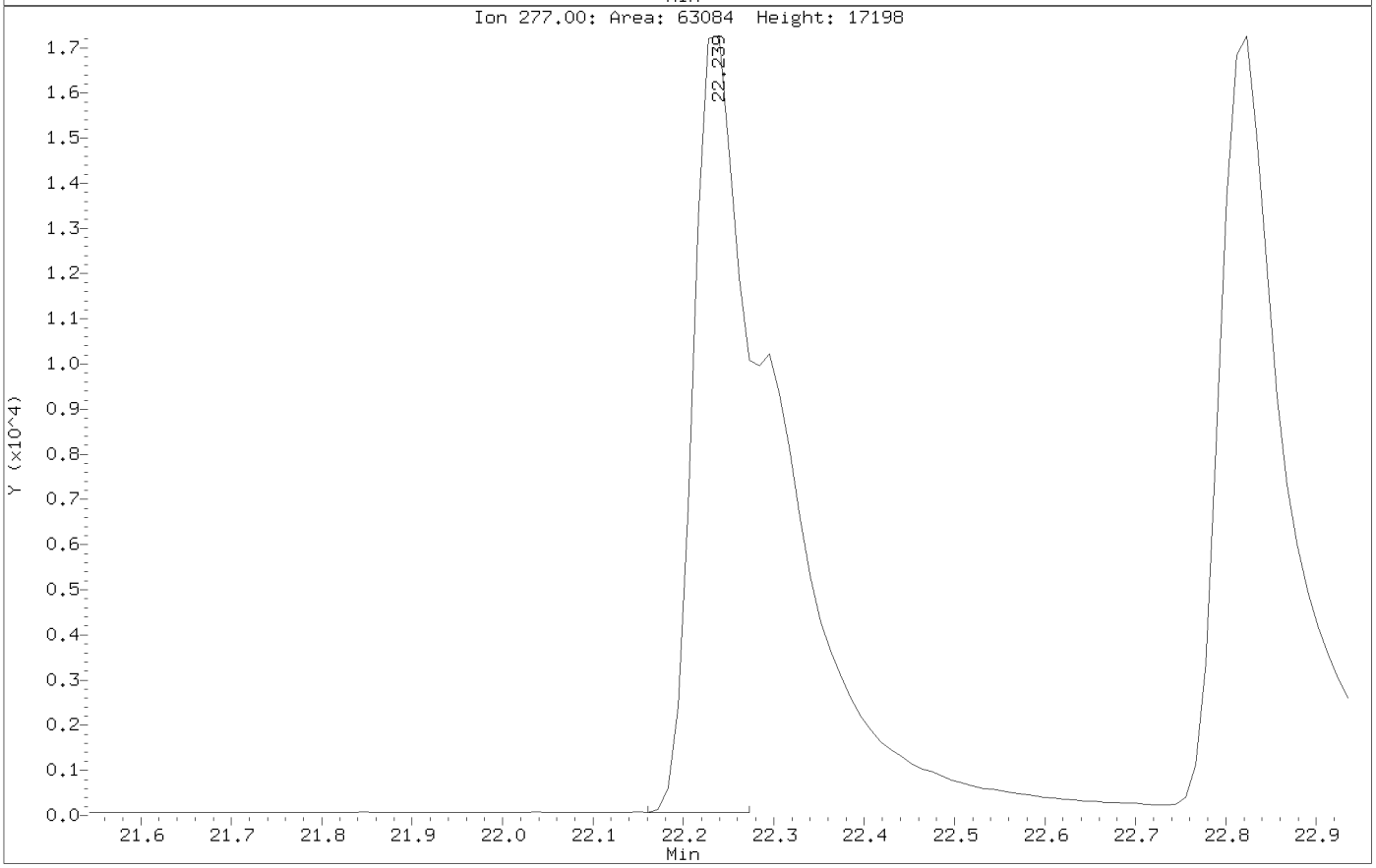
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

AFTER MANUAL INTEGRATION





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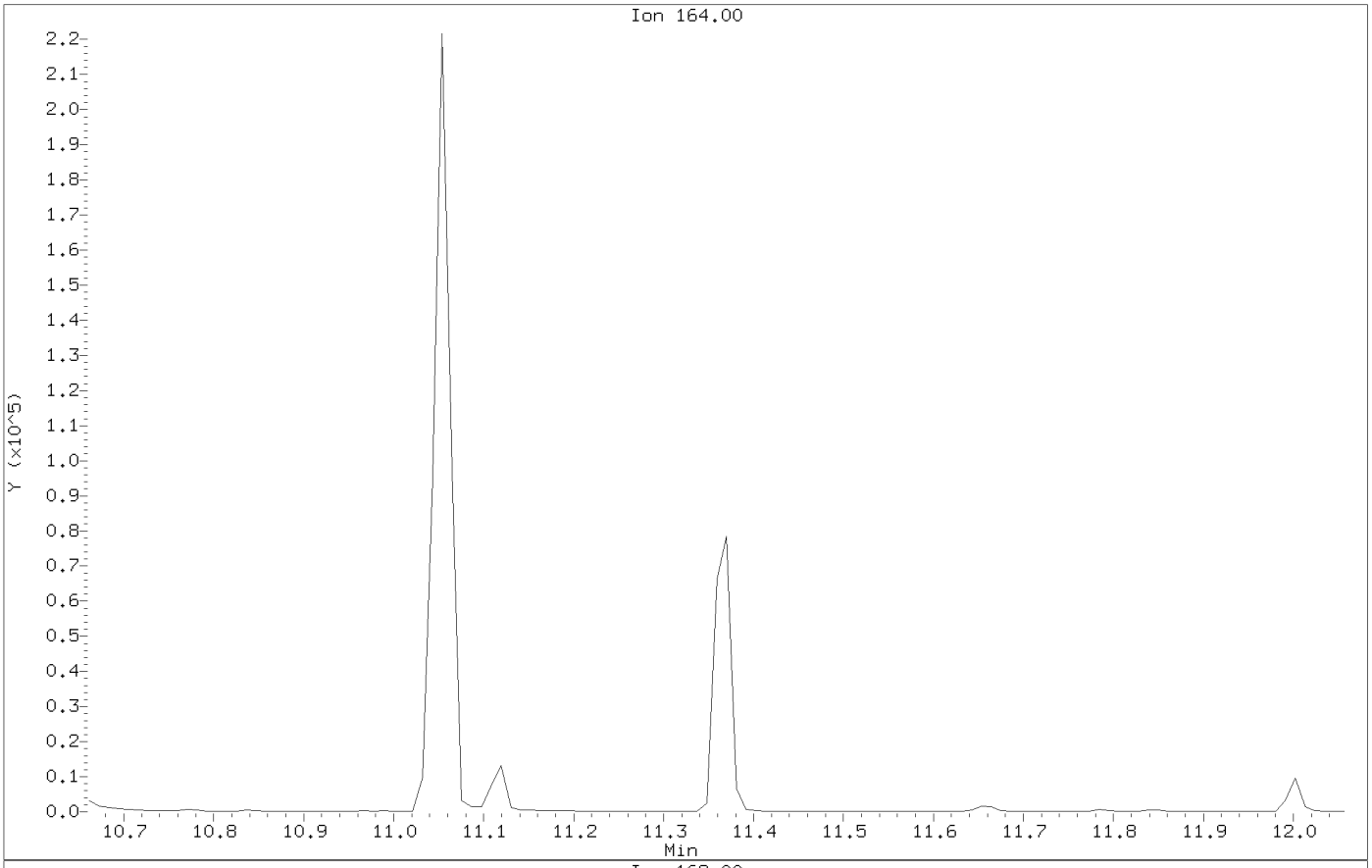
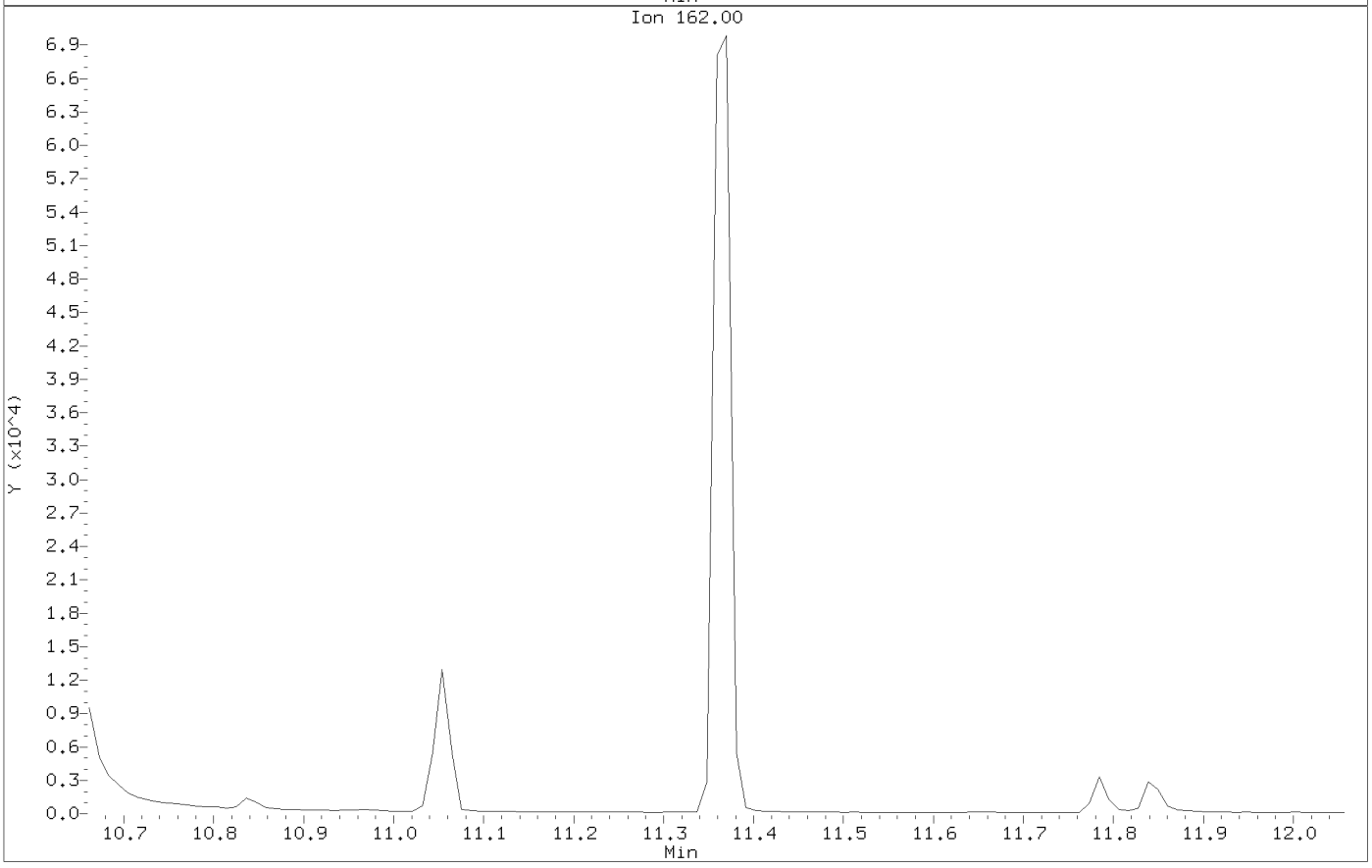
Injection Date: 28-JUL-2021 18:27
Instrument: gcms-n.i
Client Sample ID:

Compound: Acenaphthene-D10
CAS Number: 15067-26-2

BEFORE MANUAL INTEGRATION





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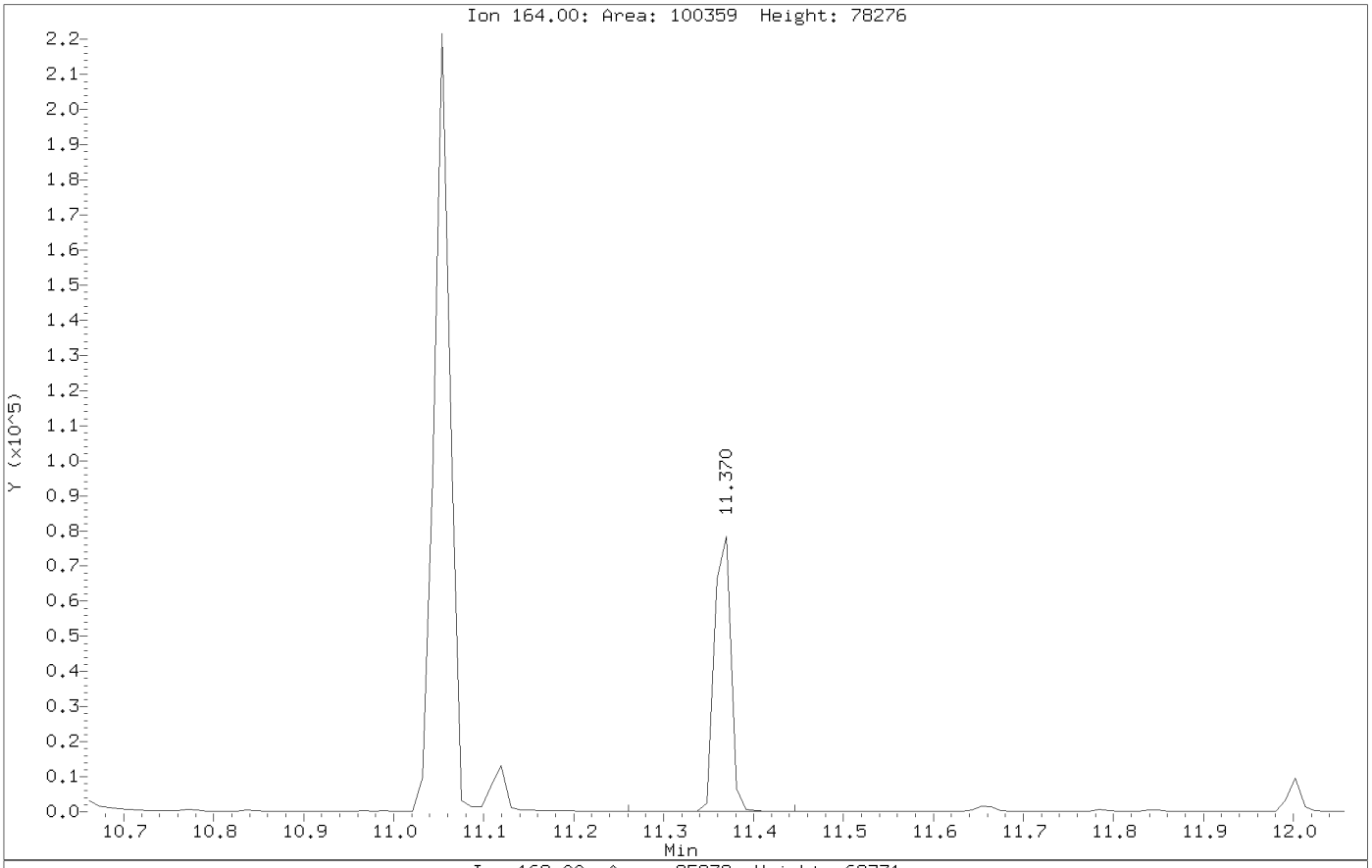
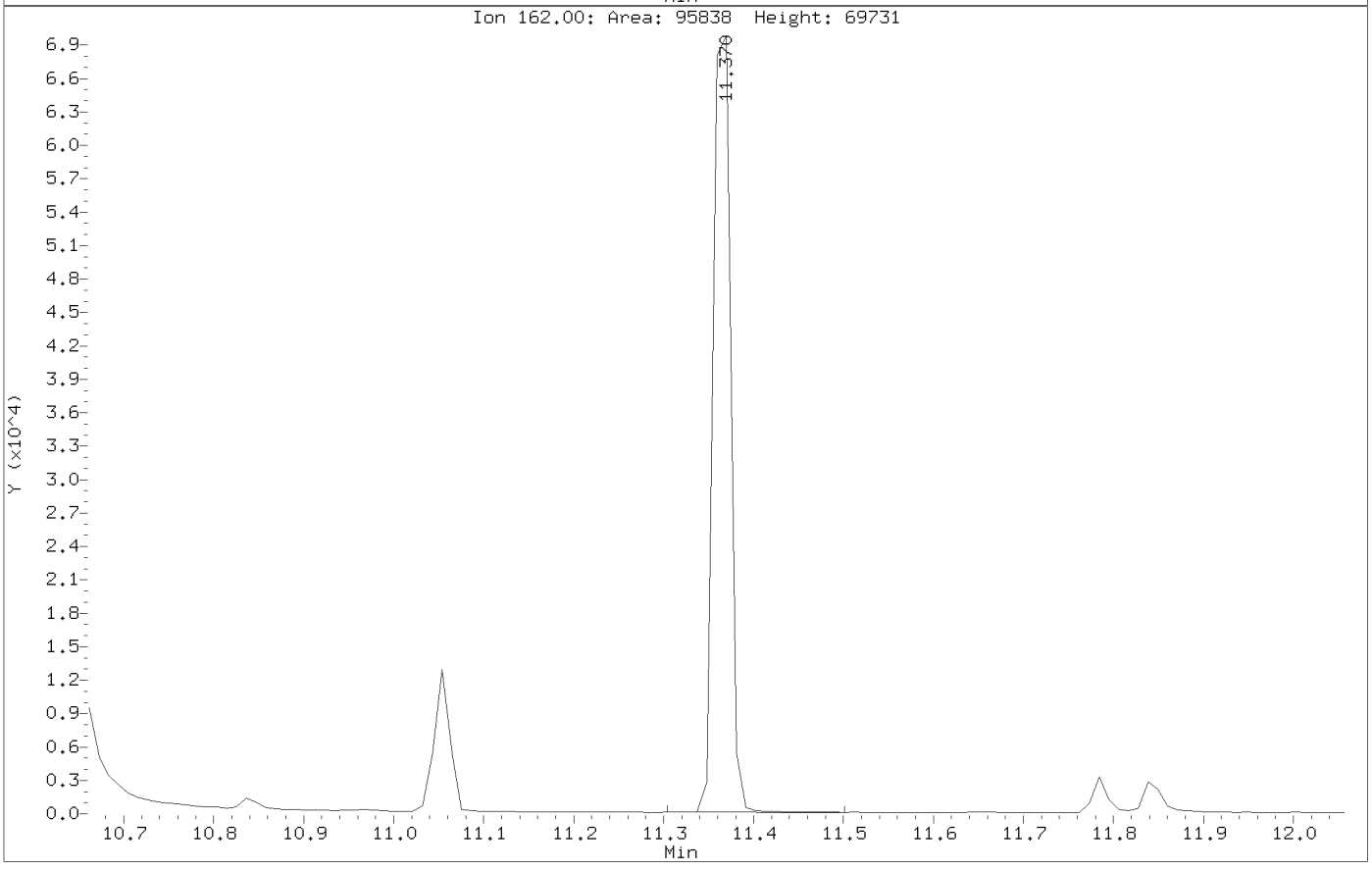
Injection Date: 28-JUL-2021 18:27
Instrument: gcms-n.i
Client Sample ID:

Compound: Acenaphthene-D10
CAS Number: 15067-26-2

AFTER MANUAL INTEGRATION





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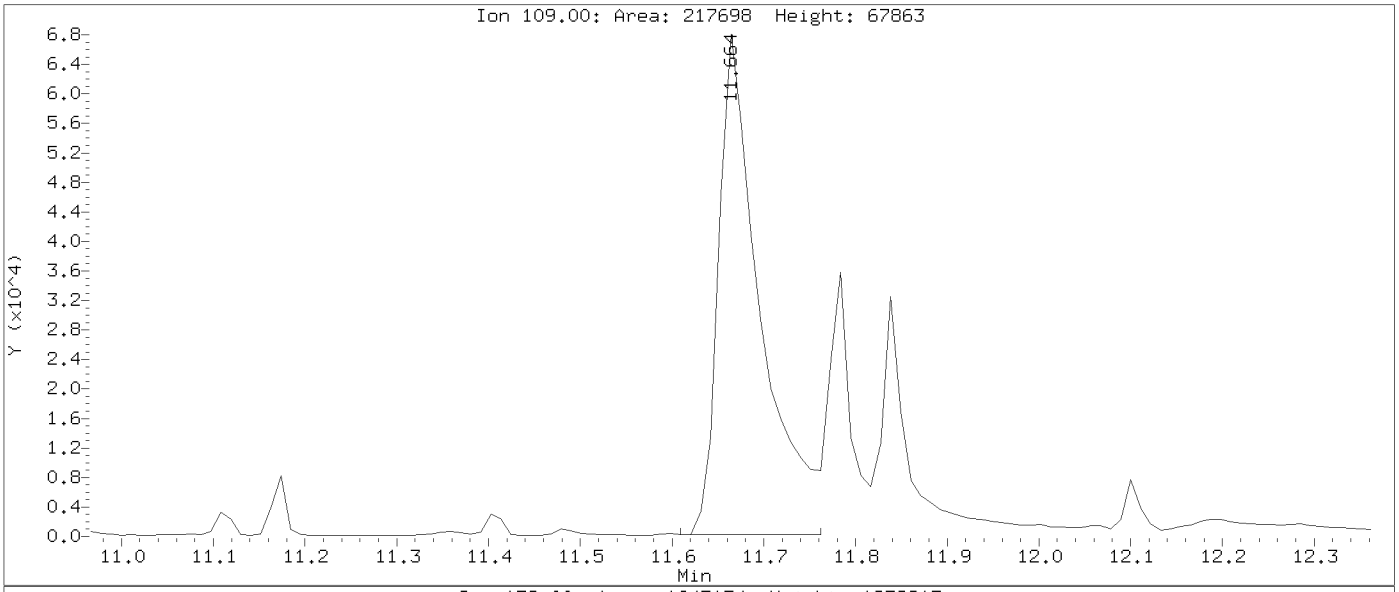
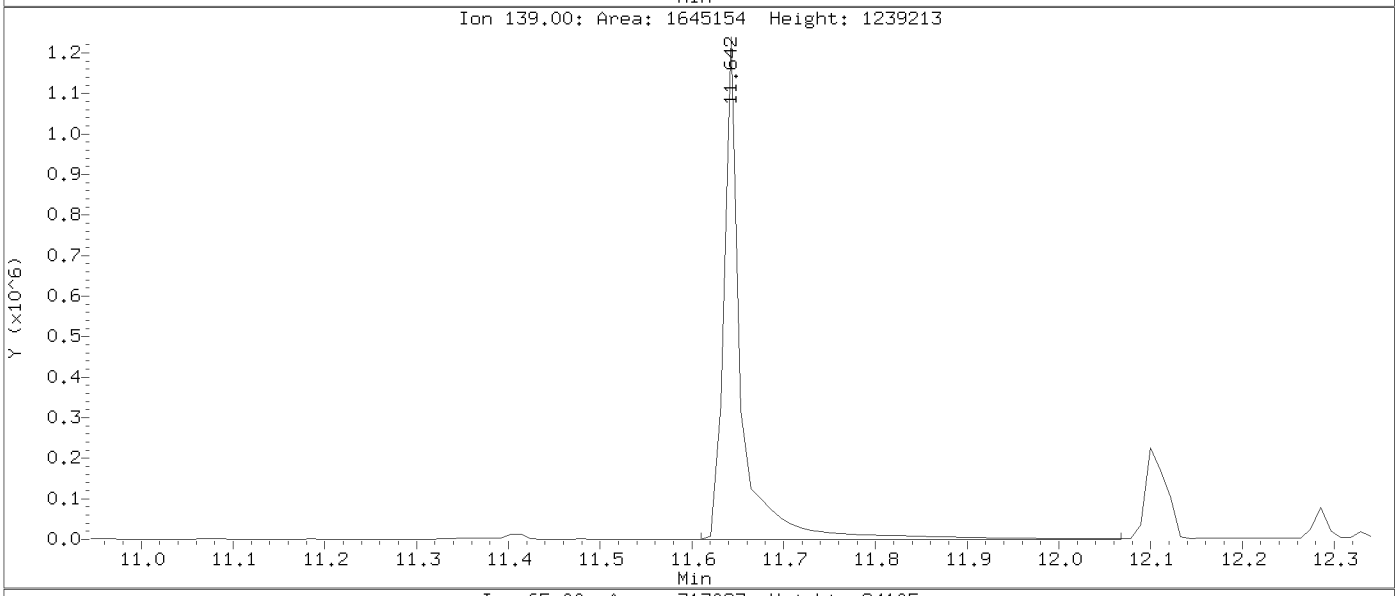
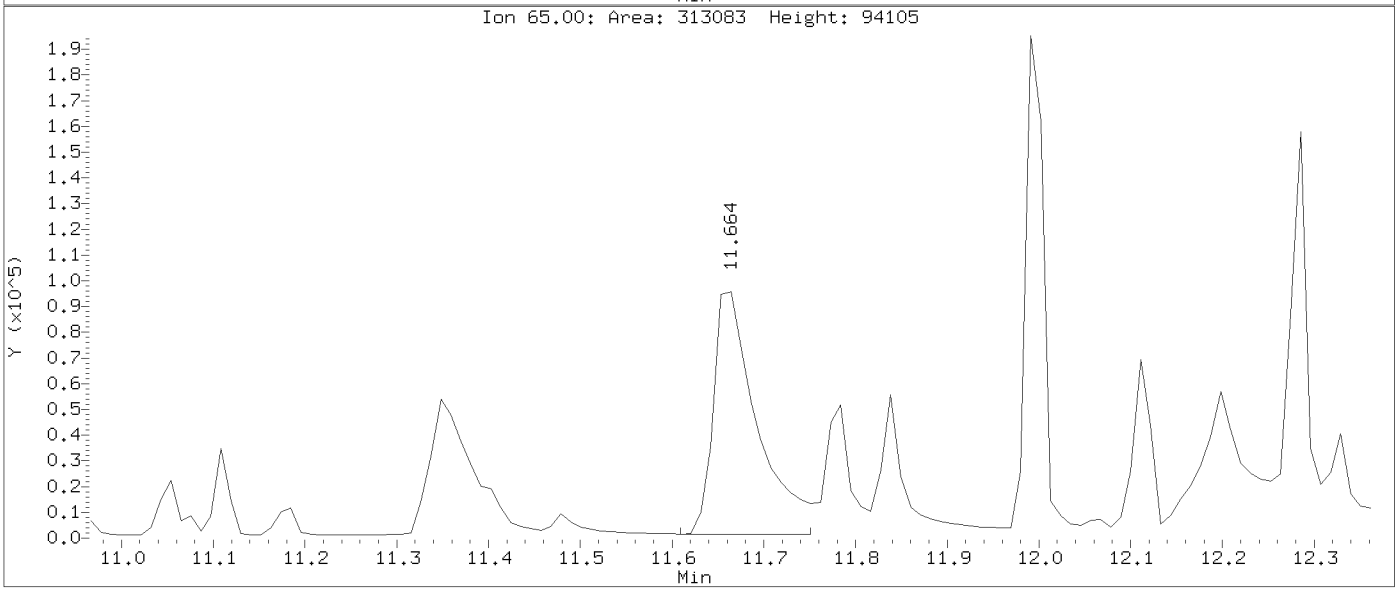
Injection Date: 28-JUL-2021 18:27
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitrophenol
CAS Number: 100-02-7

BEFORE MANUAL INTEGRATION







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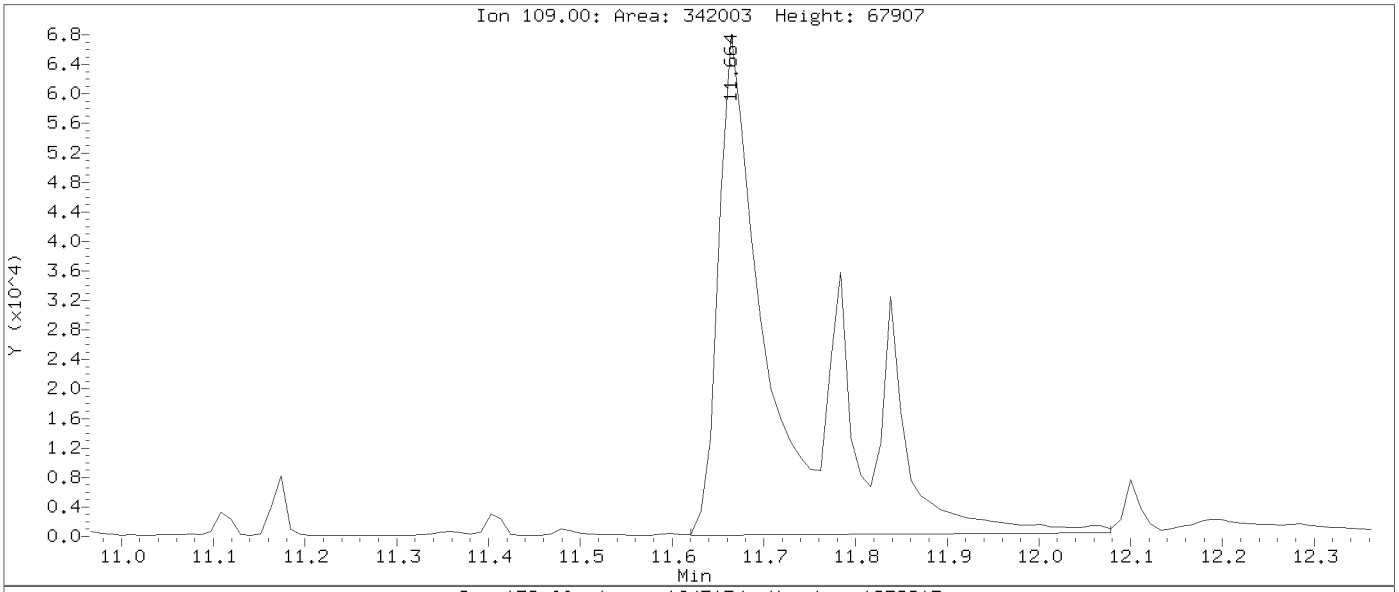
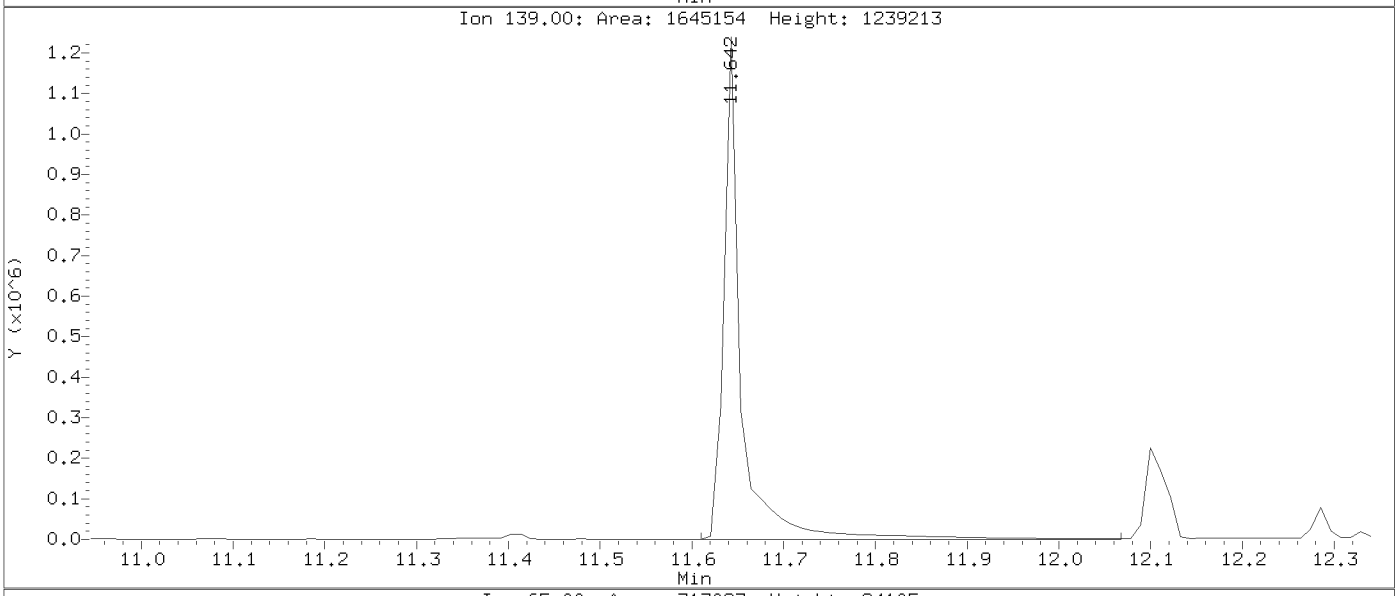
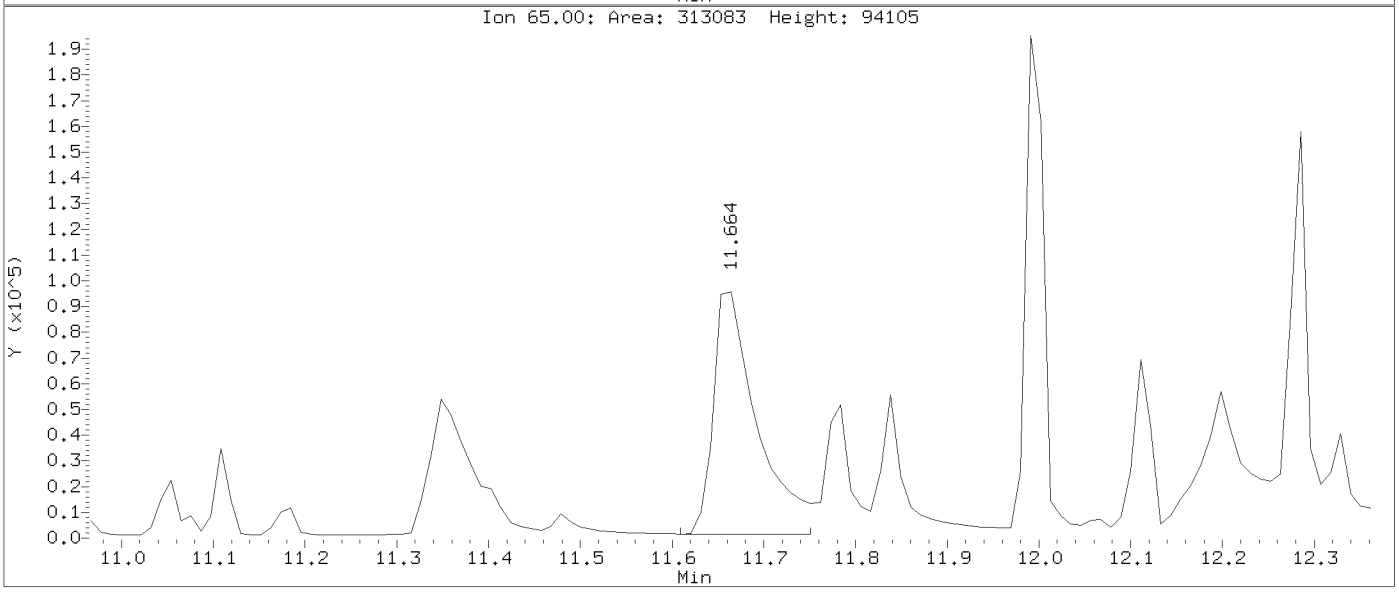
Injection Date: 28-JUL-2021 18:27
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitrophenol
CAS Number: 100-02-7

AFTER MANUAL INTEGRATION



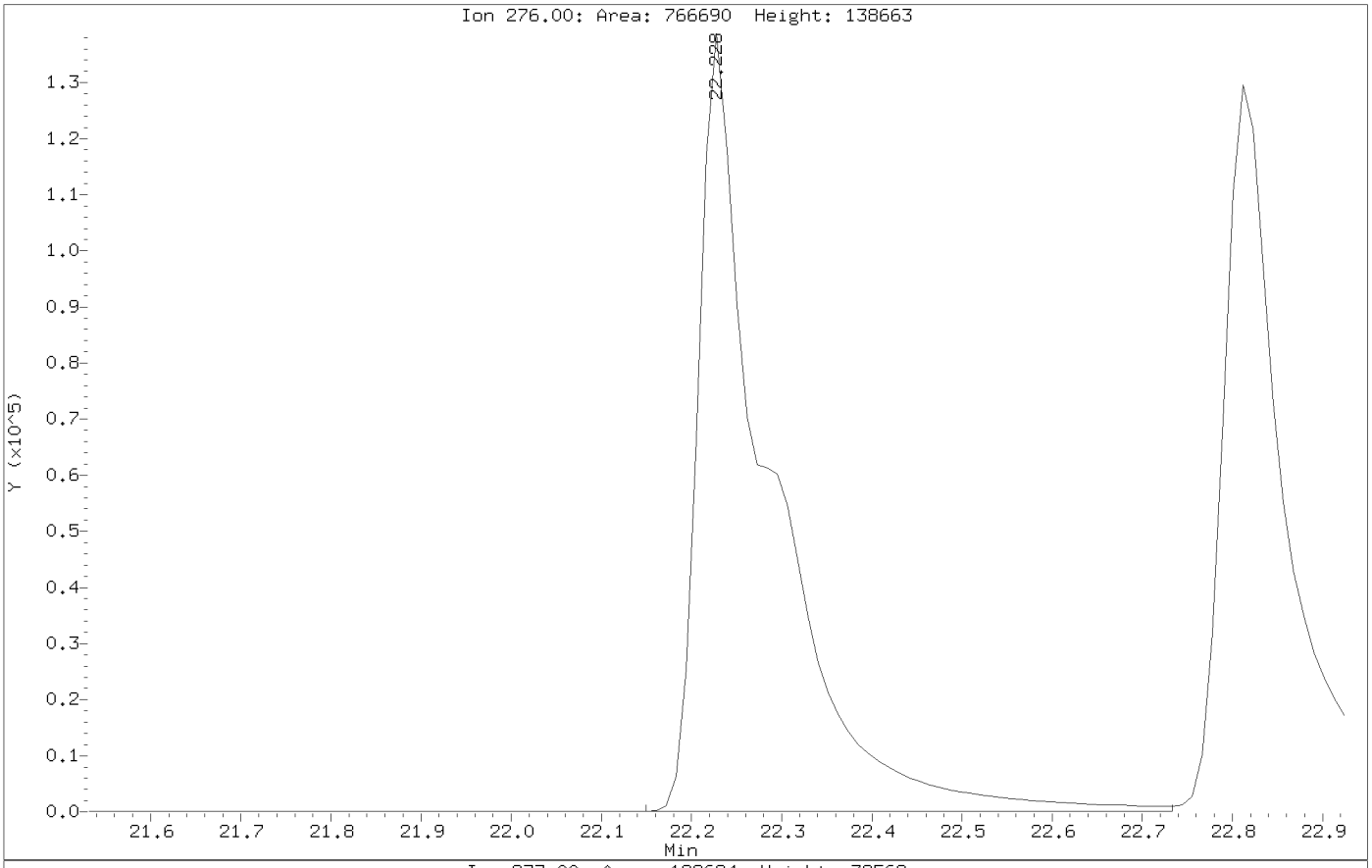


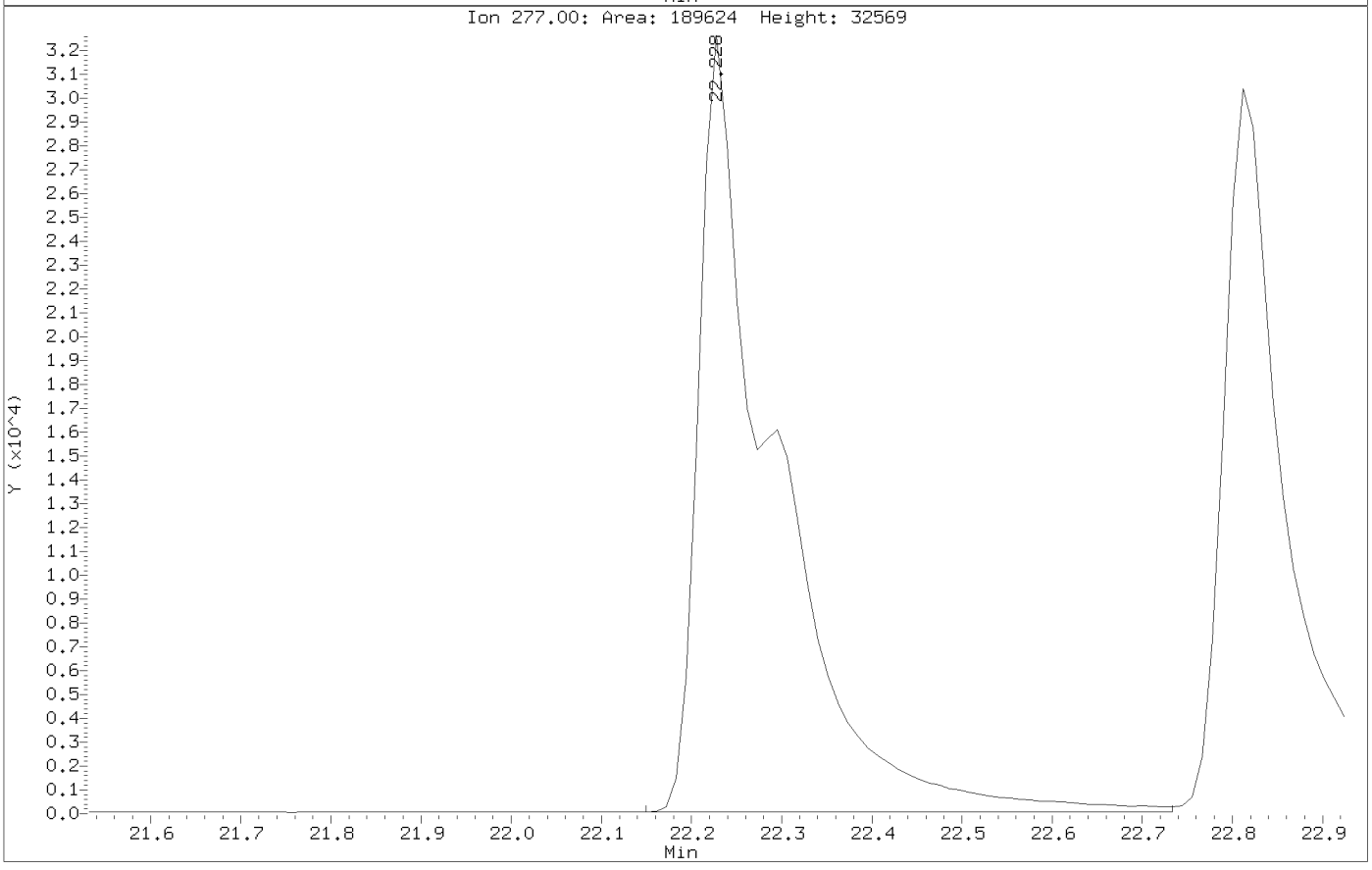


Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3623.D
Injection Date: 28-JUL-2021 18:27
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

BEFORE MANUAL INTEGRATION





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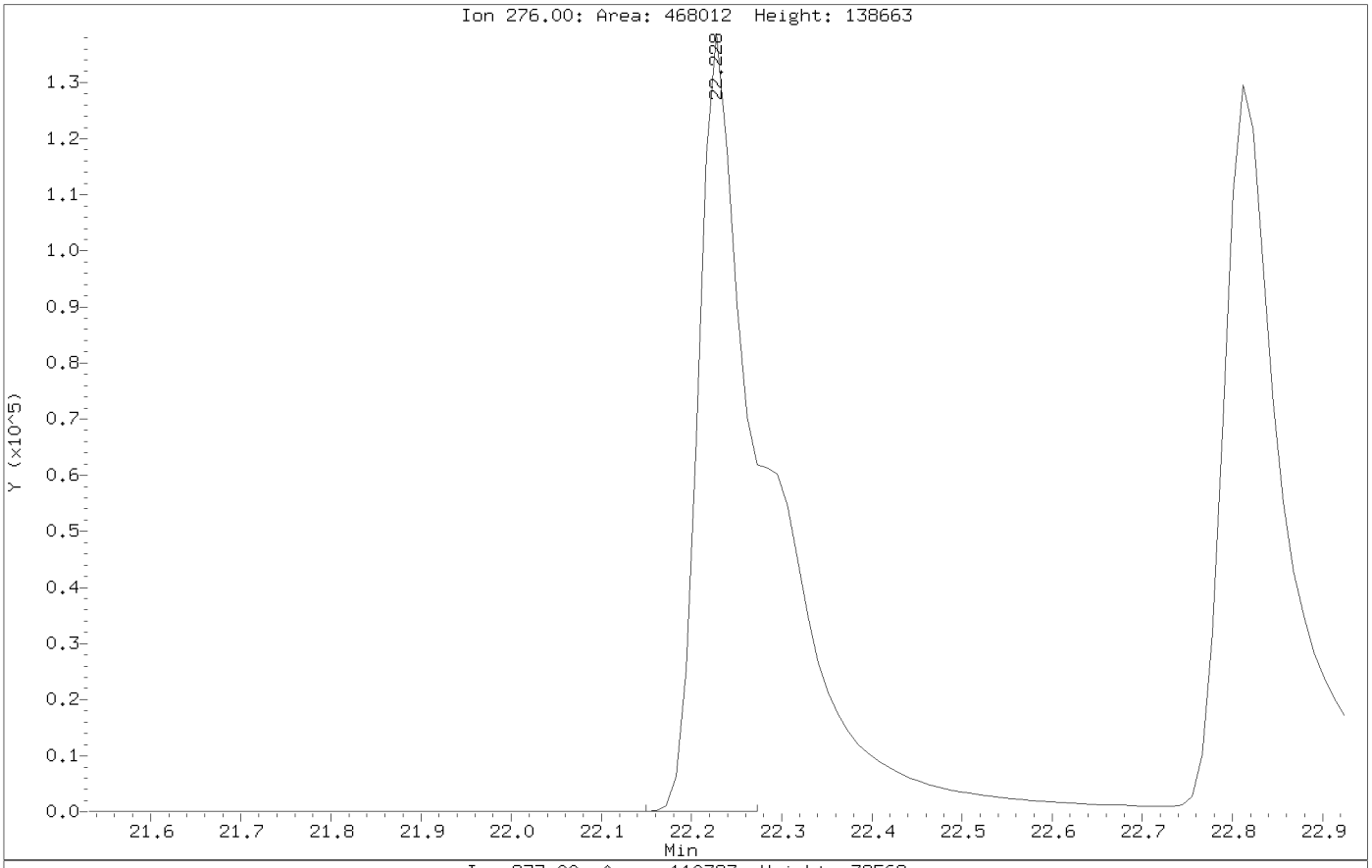
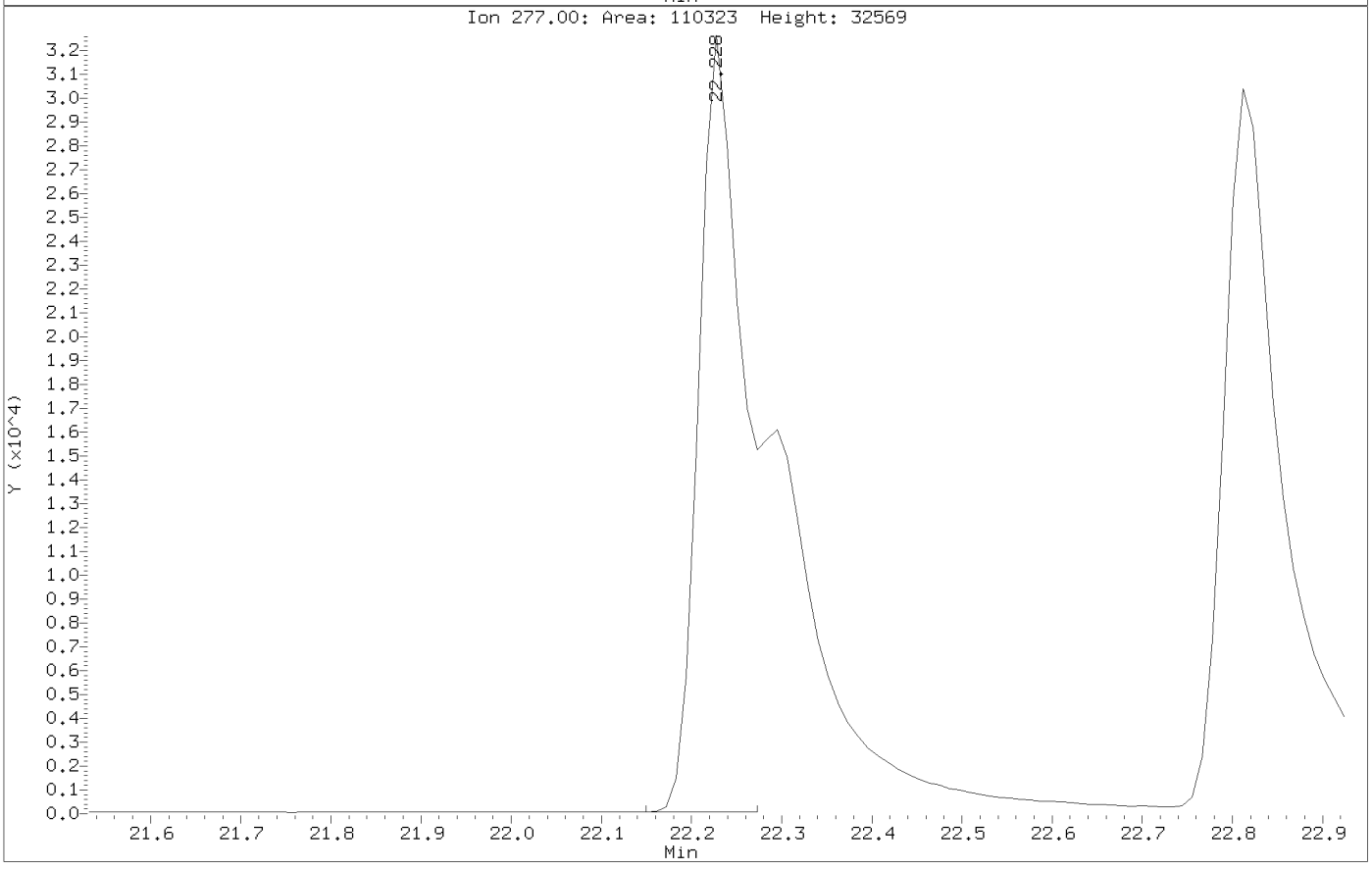
Injection Date: 28-JUL-2021 18:27
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

AFTER MANUAL INTEGRATION





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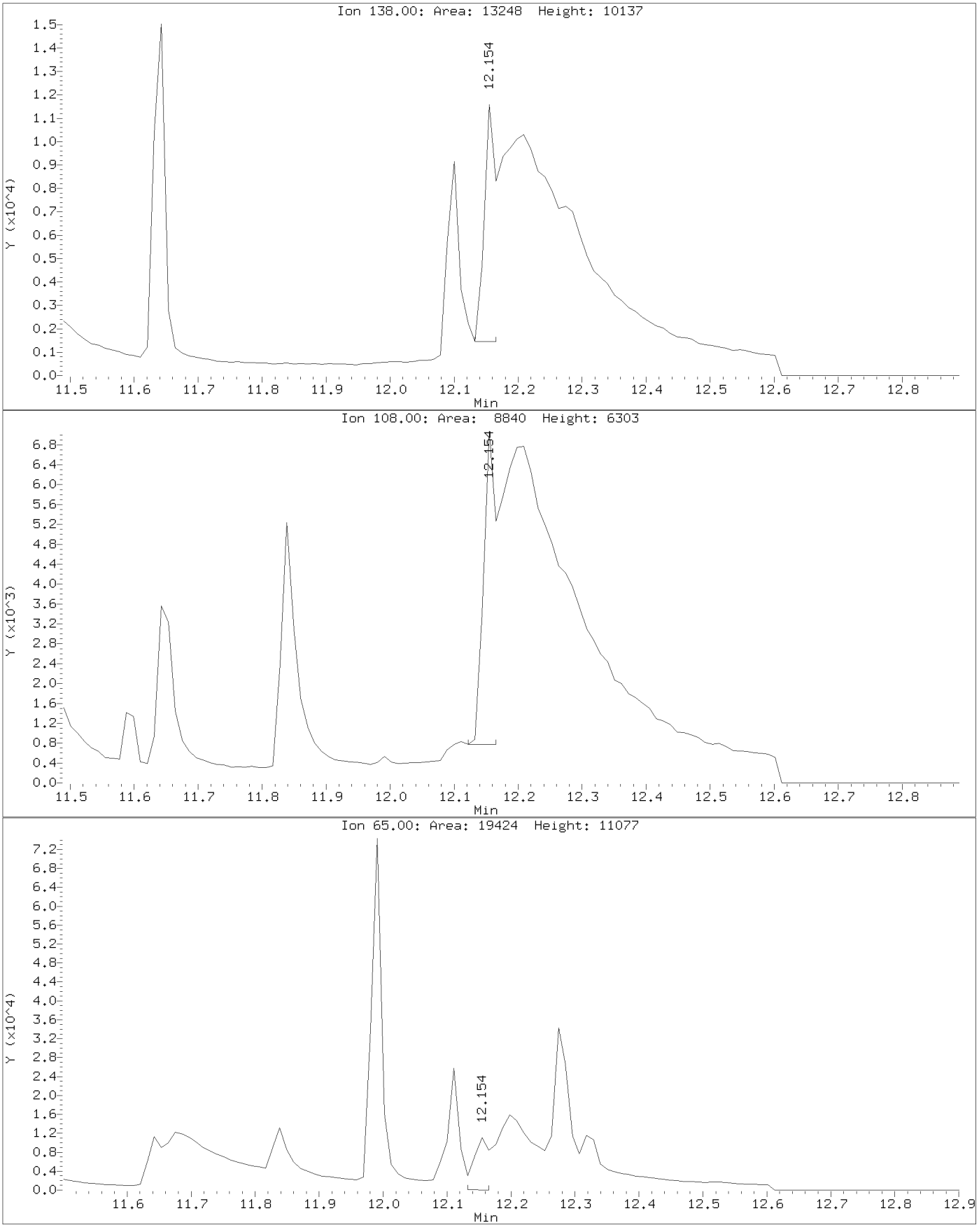
Injection Date: 28-JUL-2021 19:02
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitroaniline
CAS Number: 100-01-6

BEFORE MANUAL INTEGRATION



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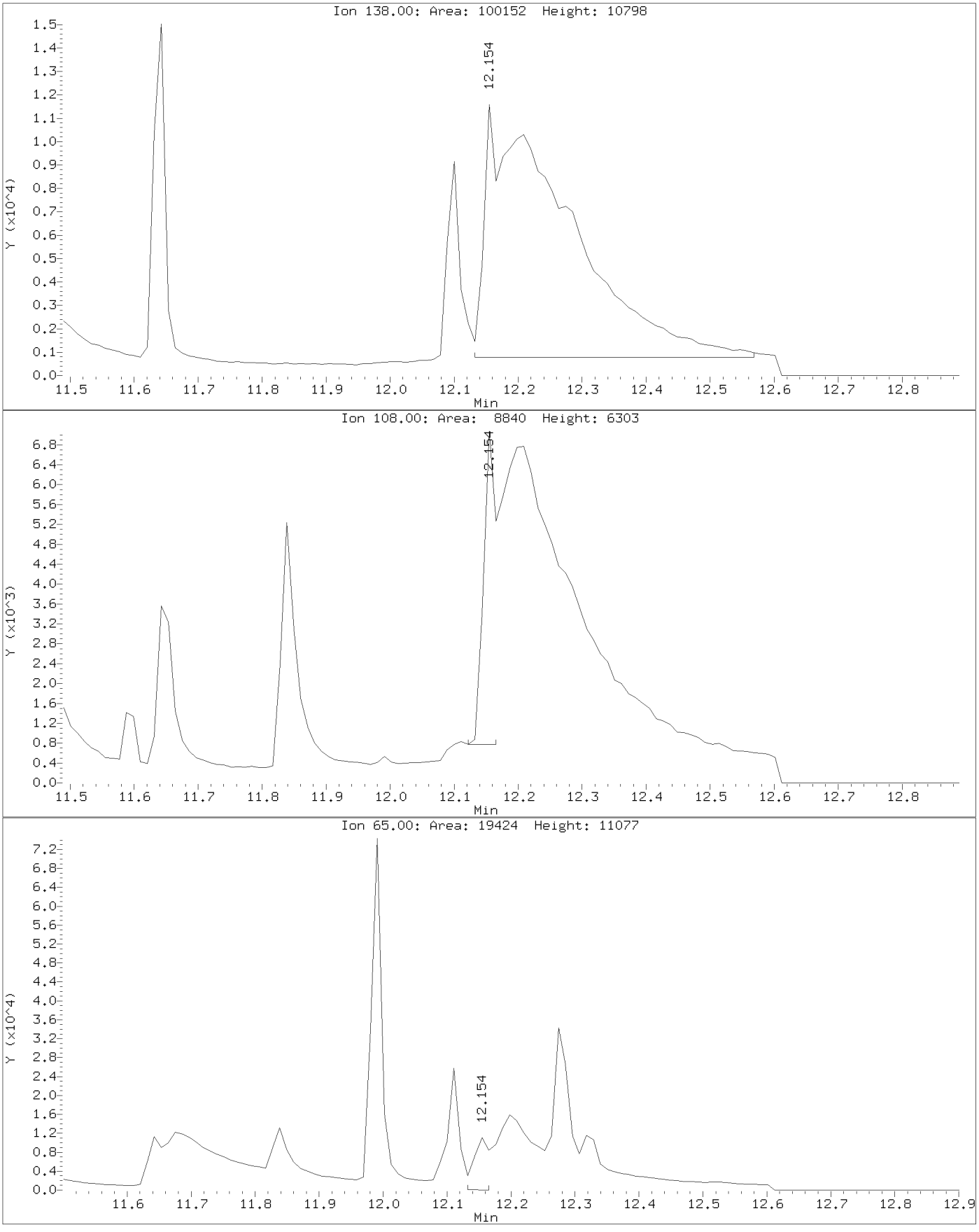
Injection Date: 28-JUL-2021 19:02
Instrument: gcms-n.i
Client Sample ID:

Compound: 4-Nitroaniline
CAS Number: 100-01-6

AFTER MANUAL INTEGRATION



BEFORE MANUAL INTEGRATION

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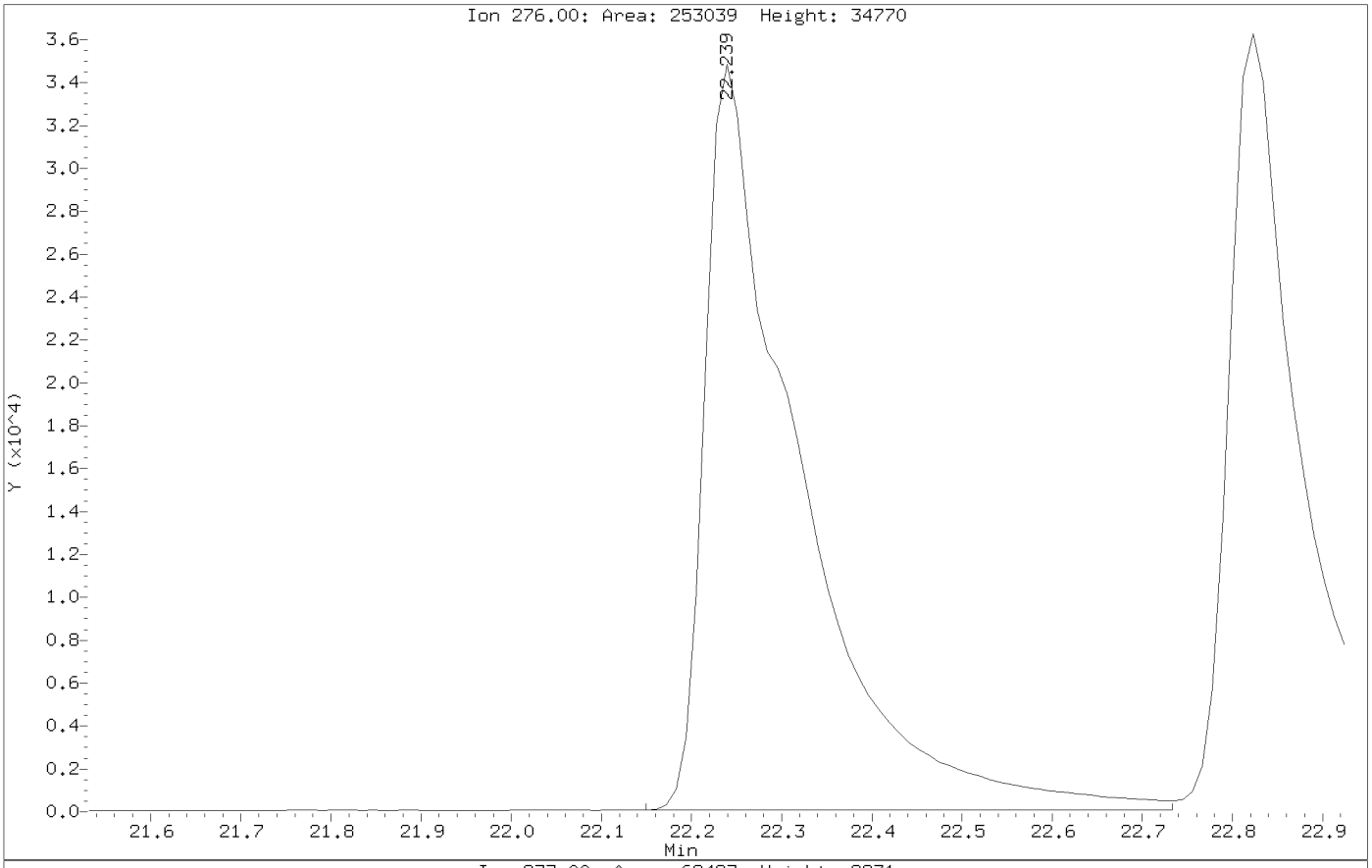
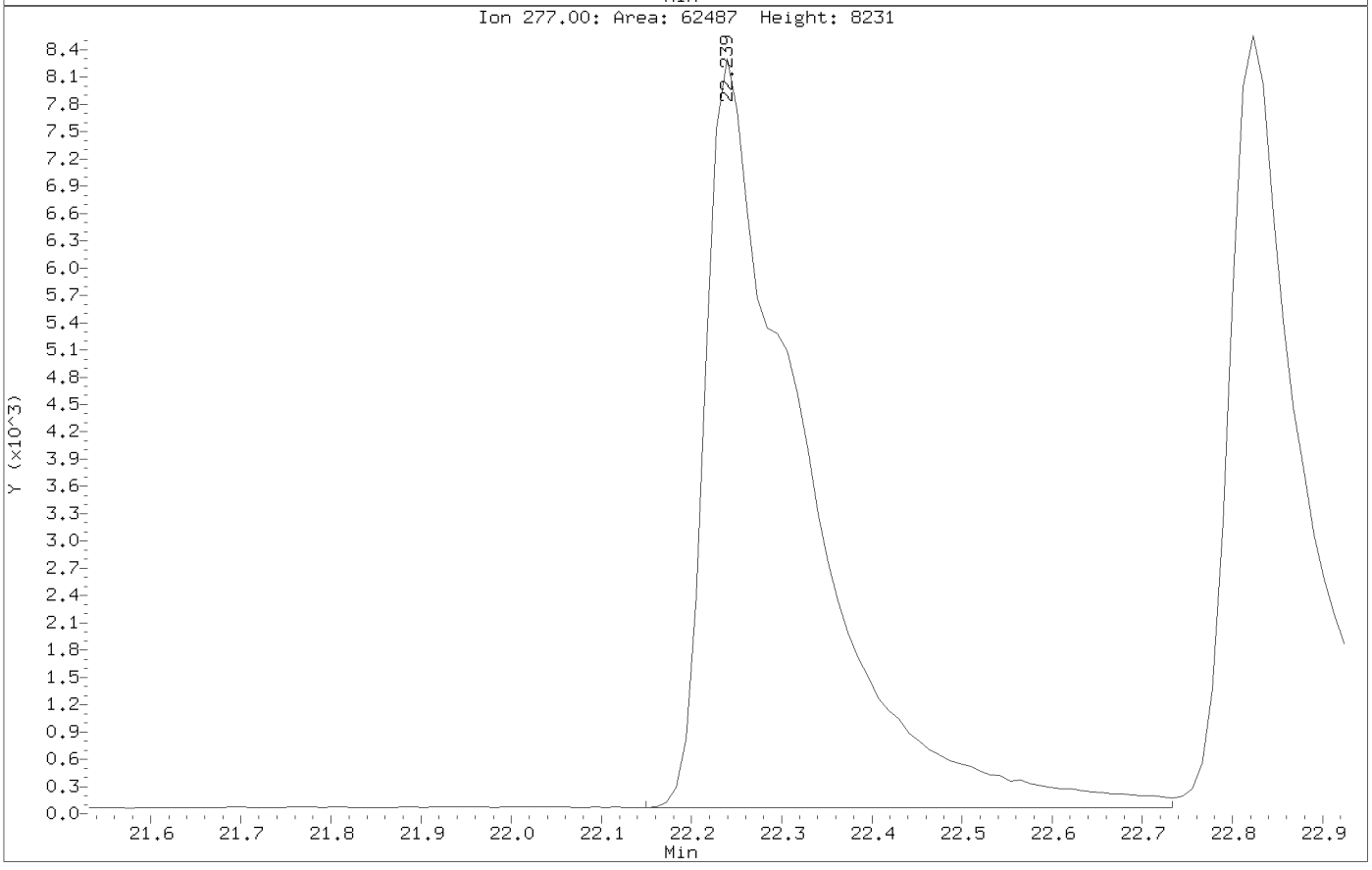
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5





AFTER MANUAL INTEGRATION

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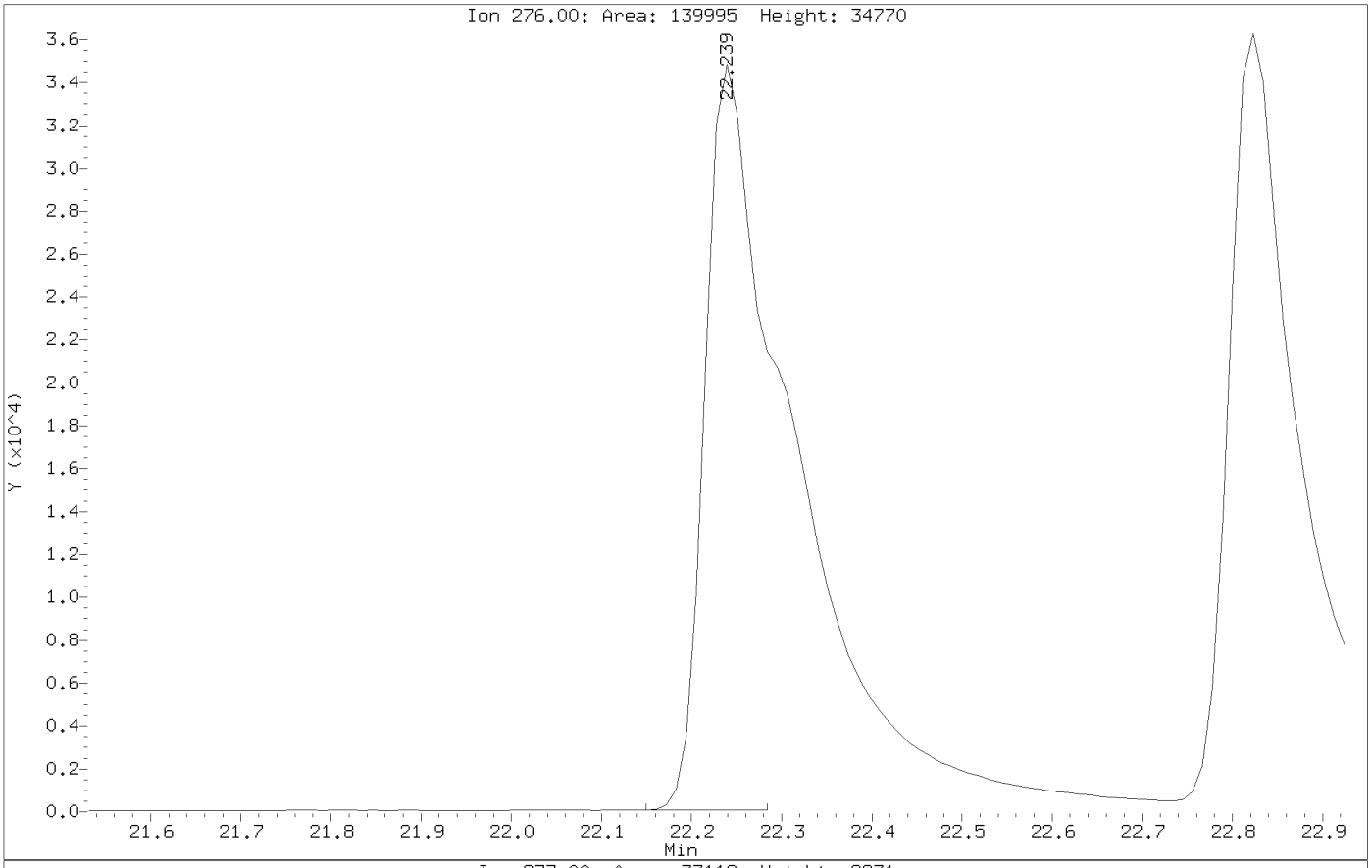
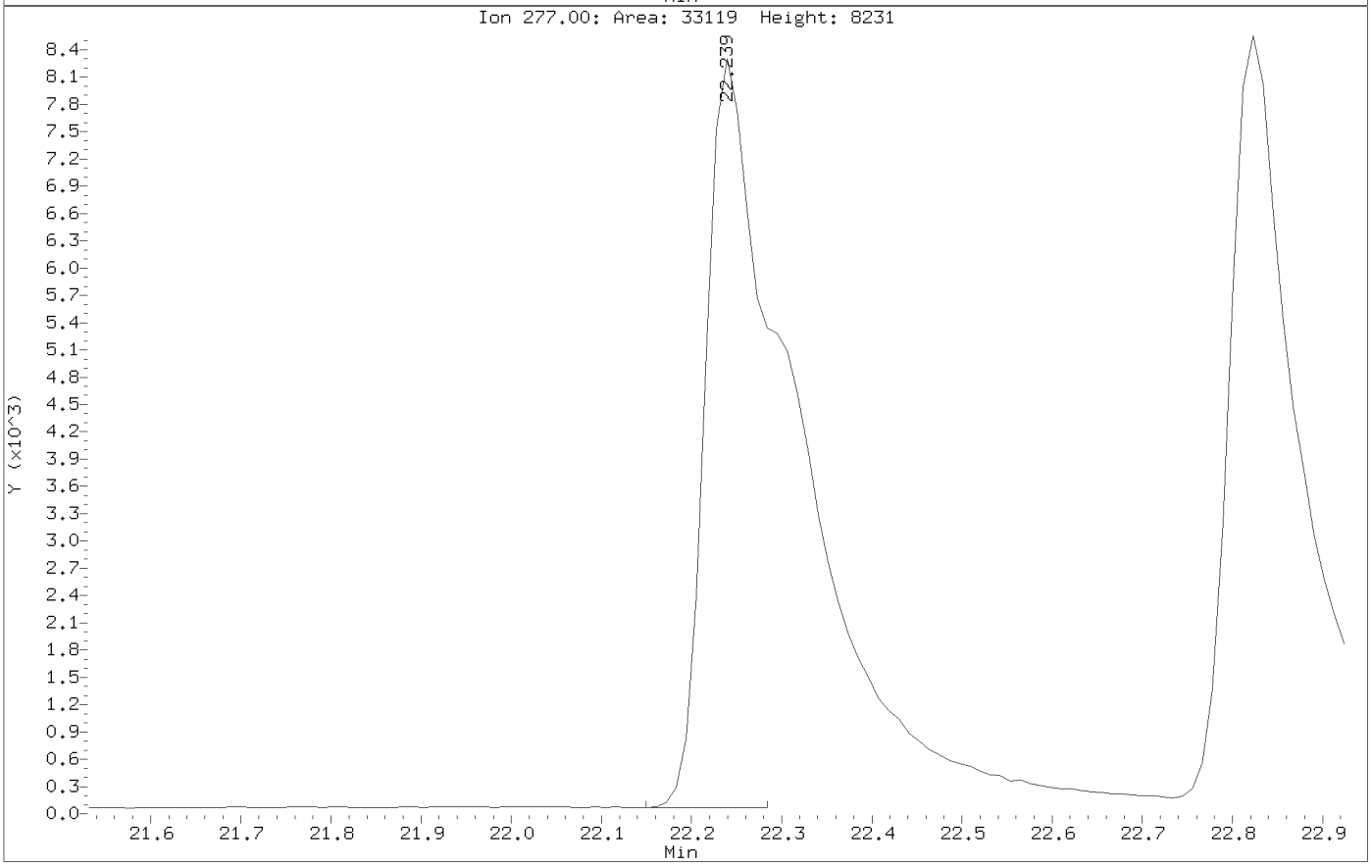
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5





Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site **SDG:** SO4724
Lab ID : WG303306-9 **Analytical Date:** 07/29/21 03:02
Lab File ID : N3638.D **Instrument ID:** GCMS-N
Initial Calibration Date(s): 07/28/21 15:35 07/28/21 18:27 **Column ID:**

	Compound	RRF/Amount	RF2	CCAL RRF2	Min	%D/ %Drift	Max %D/ %Drift	Curve Type	
28	Naphthalene	1.03736	1.07687	1.07687	0.010	3.80875	20.00000	Averaged	
34	2-Methylnaphthalene	0.75682	0.72211	0.72211	0.010	-4.58612	20.00000	Averaged	
35	1-Methylnaphthalene	0.68030	0.68922	0.68922	0.010	1.31101	20.00000	Averaged	
46	Acenaphthylene	2.06533	2.11421	2.11421	0.010	2.36689	20.00000	Averaged	
49	Acenaphthene	1.26345	1.27657	1.27657	0.010	1.03770	20.00000	Averaged	
57	Fluorene	1.33864	1.37718	1.37718	0.010	2.87937	20.00000	Averaged	
67	Phenanthrene	1.10372	1.13848	1.13848	0.010	3.14963	20.00000	Averaged	
68	Anthracene	1.30278	1.25579	1.25579	0.010	-3.60714	20.00000	Averaged	
72	Fluoranthene	1.06273	1.12250	1.12250	0.010	5.62431	20.00000	Averaged	
74	Pyrene	2.40840	2.27965	2.27965	0.010	-5.34599	20.00000	Averaged	
77	Benzo(a)anthracene	1.26478	1.20807	1.20807	0.010	-4.48363	20.00000	Averaged	
79	Chrysene	1.58606	1.66875	1.66875	0.010	5.21367	20.00000	Averaged	
82	Benzo(b)fluoranthene	1.19415	1.18814	1.18814	0.010	-0.50367	20.00000	Averaged	
83	Benzo(k)fluoranthene	1.93405	2.00664	2.00664	0.010	3.75319	20.00000	Averaged	
84	Benzo(a)pyrene	1.19493	1.20562	1.20562	0.010	0.89457	20.00000	Averaged	
86	Indeno(1,2,3-cd)pyrene	2.00000	1.42495	0.22400	0.010	-28.75233	20.00000	Linear	*
87	Dibenzo(a,h)anthracene	0.63876	0.53823	0.53823	0.010	-15.73916	20.00000	Averaged	
88	Benzo(g,h,i)perylene	0.81153	0.70160	0.70160	0.010	-13.54583	20.00000	Averaged	
33	2-Methylnaphthalene-D10	0.53225	0.57902	0.57902	0.010	8.78768	20.00000	Averaged	
56	Fluorene-D10	0.94012	0.94792	0.94792	0.010	0.82982	20.00000	Averaged	
73	Pyrene-D10	1.51629	1.45352	1.45352	0.010	-4.14032	20.00000	Averaged	

*** = Compound out of QC criteria**

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://katahdinlab.com
sales@katahdinlab.com

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3638.D
Report Date: 02-Aug-2021 10:46

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3638.D
Lab Smp Id: WG303306-9
Inj Date : 29-JUL-2021 03:02
Operator : JCG   Inst ID: gcms-n.i
Smp Info : WG303306-9,SO4724
Misc Info : WG303306,WG303306,WG303306-4,SO4724-1
Comment   :
Method   : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 09:00 cgomez   Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27   Cal File: N3623.D
Als bottle: 22   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: sw8270sim+1mn.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	7.390	7.390	(1.000)	62005	0.80000	(a)	
*	27 Naphthalene-D8	136	9.022	9.022	(1.000)	217432	0.80000	(a)	
	28 Naphthalene	128	9.054	9.054	(1.004)	585367	2.00000	2.08	
$	33 2-Methylnaphthalene-D10	152	9.937	9.937	(1.101)	314746	2.00000	2.18	
	34 2-Methylnaphthalene	142	9.977	9.977	(1.106)	392524	2.00000	1.91	
	35 1-Methylnaphthalene	142	10.105	10.105	(1.120)	374646	2.00000	2.03	
	46 Acenaphthylene	152	11.173	11.173	(0.984)	621515	2.00000	2.05	
*	48 Acenaphthene-D10	164	11.359	11.369	(1.000)	117588	0.80000	(a)	
	49 Acenaphthene	153	11.402	11.413	(1.004)	375272	2.00000	2.02	
$	56 Fluorene-D10	174	12.056	12.067	(1.061)	278661	2.00000	2.02	
	57 Fluorene	166	12.100	12.110	(1.065)	404851	2.00000	2.06	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	178035	0.80000	(a)	
	67 Phenanthrene	178	13.385	13.385	(1.003)	506724	2.00000	2.06	
	68 Anthracene	178	13.442	13.454	(1.007)	558936	2.00000	1.93	
	72 Fluoranthene	202	14.985	14.985	(1.122)	499612	2.00000	2.11	
$	73 Pyrene-D10	212	15.262	15.262	(0.891)	330900	2.00000	1.92	
	74 Pyrene	202	15.285	15.285	(0.892)	518974	2.00000	1.89	
	77 Benzo(a)anthracene	228	17.117	17.117	(0.999)	275024	2.00000	1.91	
*	78 Chrysene-D12	240	17.139	17.139	(1.000)	91062	0.80000	(a)	
	79 Chrysene	228	17.183	17.183	(1.003)	379900	2.00000	2.10	

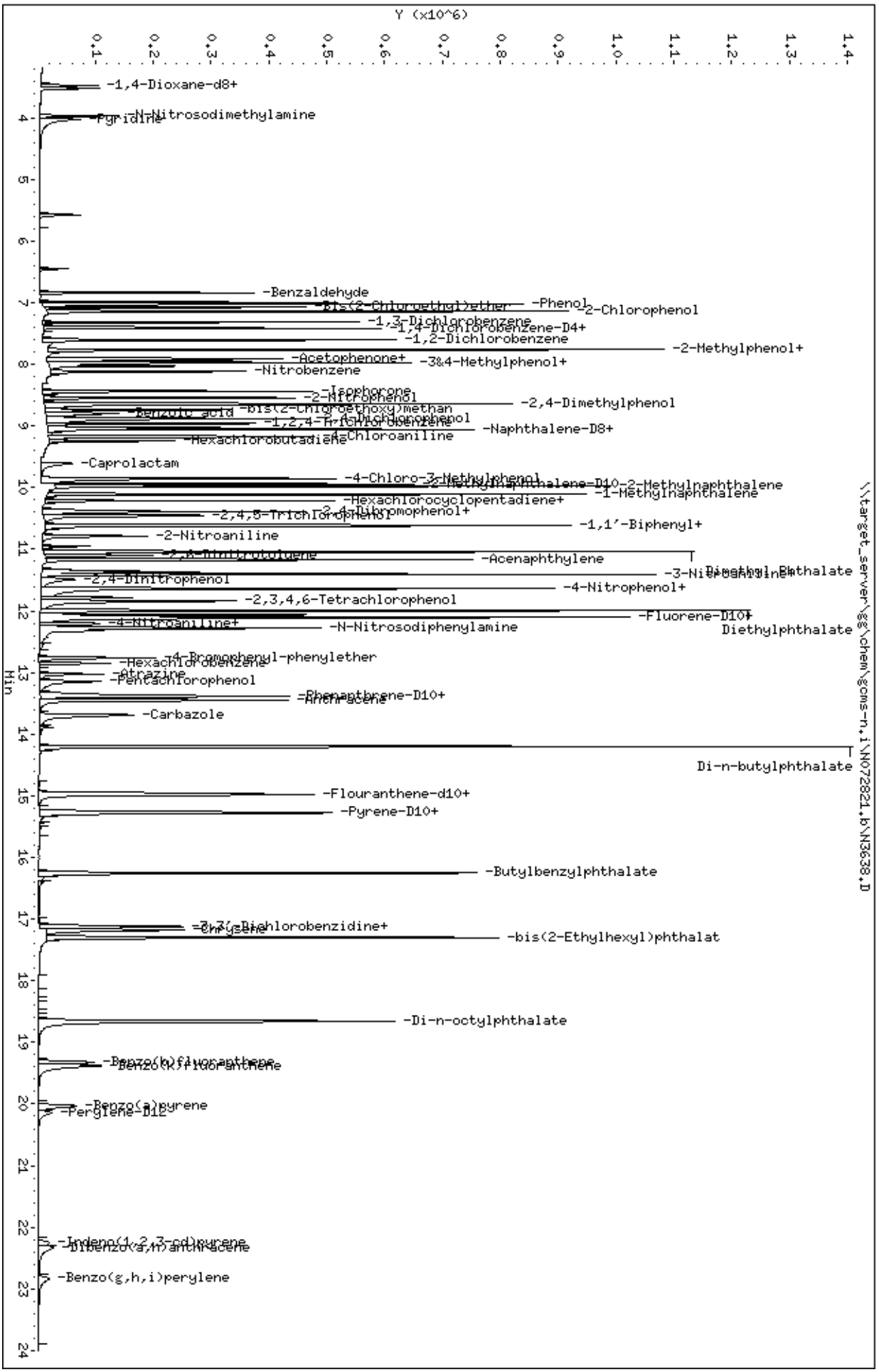
Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3638.D
Report Date: 02-Aug-2021 10:46

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
82	Benzo(b)fluoranthene	252	19.320	19.320	(0.959)	174558	2.00000	1.99	
83	Benzo(k)fluoranthene	252	19.387	19.376	(0.962)	294811	2.00000	2.08(H)	
84	Benzo(a)pyrene	252	20.027	20.016	(0.994)	177126	2.00000	2.02	
* 85	Perylene-D12	264	20.150	20.139	(1.000)	58767	0.80000	(a)	
86	Indeno(1,2,3-cd)pyrene	276	22.250	22.227	(1.298)	50995	2.00000	1.42(M)	M3
87	Dibenzo(a,h)anthracene	278	22.328	22.306	(1.108)	79075	2.00000	1.68	
88	Benzo(g,h,i)perylene	276	22.834	22.811	(1.133)	103078	2.00000	1.73	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

11:01 am, Aug 02, 2021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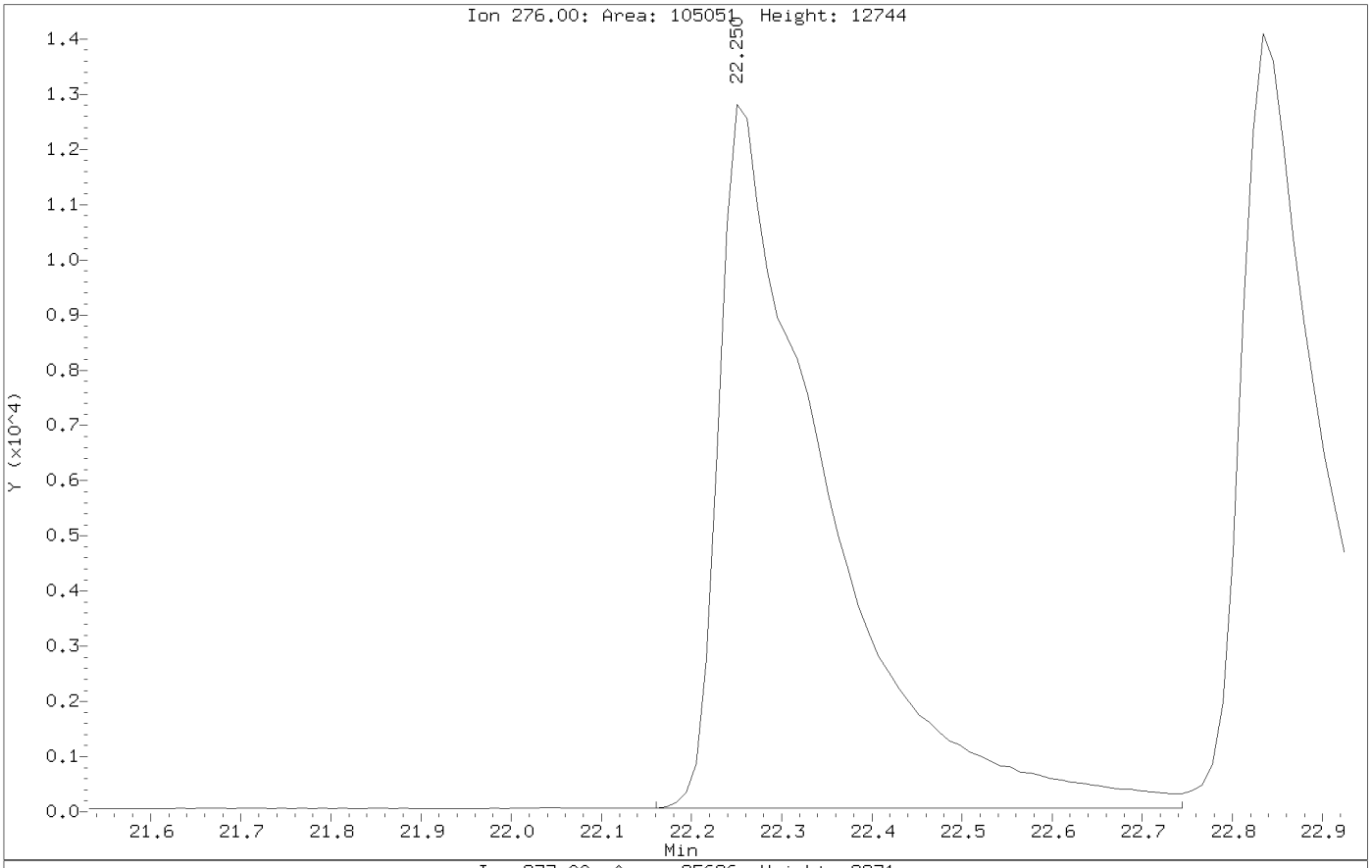
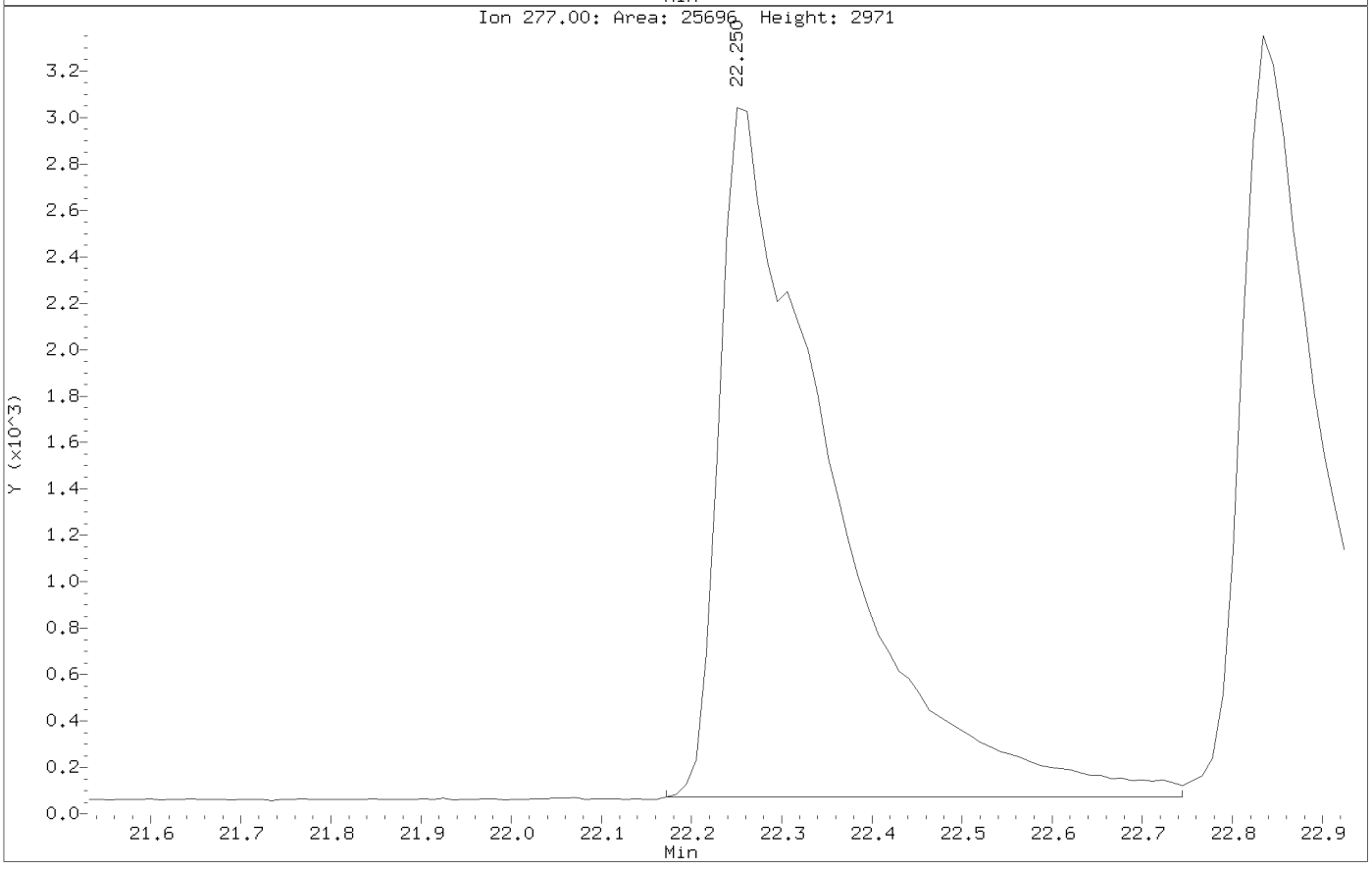
Date : 29-JUL-2021 03:02
Client ID:
Sample Info: WG303306-9,SD4724
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N072821,b\N3638,D
Y (x10^6)
Min
-1,4-Dioxane-d8+
-N-Nitrosodimethylamine
-Pyridine
-Benzaldehyde
-Phenol
-2-Chlorophenol
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-2-Methylphenol+
-Acetophenone+
-3&4-Methylphenol+
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-2,4-Dimethylphenol
-Benzoic acid
-bis(2-Chloroethoxy)methan
-2,4-Dichlorophenol
-1,2,4-Trichlorobenzene
-Naphthalene-D8+
-4-Chloroanilline
-Hexachlorobutadiene
-Caprolactam
-4-Chloro-3-Methylphenol
-2-Methylnaphthalene-D10
-2-Methylnaphthalene
-1-Methylnaphthalene
-Hexachlorocyclopentadiene+
-2,4,6-Trichlorophenol
-2,4-Dibromophenol+
-1,1'-Biphenyl+
-2-Nitroaniline
-2,6-Dinitrotoluene
-Acenaphthylene
-3-Nitroaniline
-Dimethyl Phthalate
-2,4-Dinitrophenol
-4-Nitrophenol+
-2,3,4,6-Tetrachlorophenol
-Fluorene-D10+
-4-Nitroaniline+
-N-Nitrosodiphenylamine
Diethylphthalate
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
Di-n-butylphthalate
-Flouranthene-d10+
-Pyrene-D10+
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-Chrysene
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene
-Benzo(k)fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene
-Dibenzo(a,h)anthracene
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3638.D
Injection Date: 29-JUL-2021 03:02
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

BEFORE MANUAL INTEGRATION





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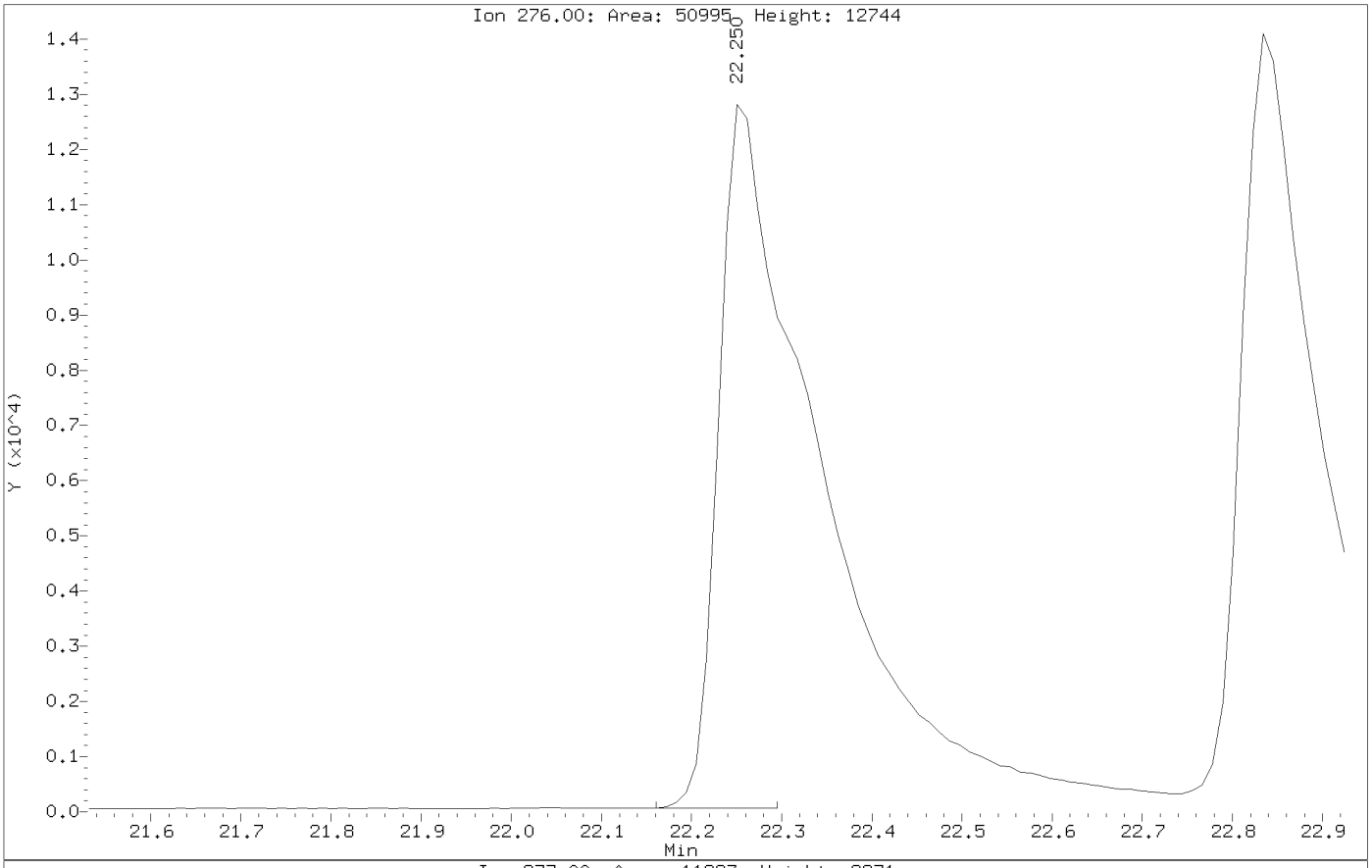
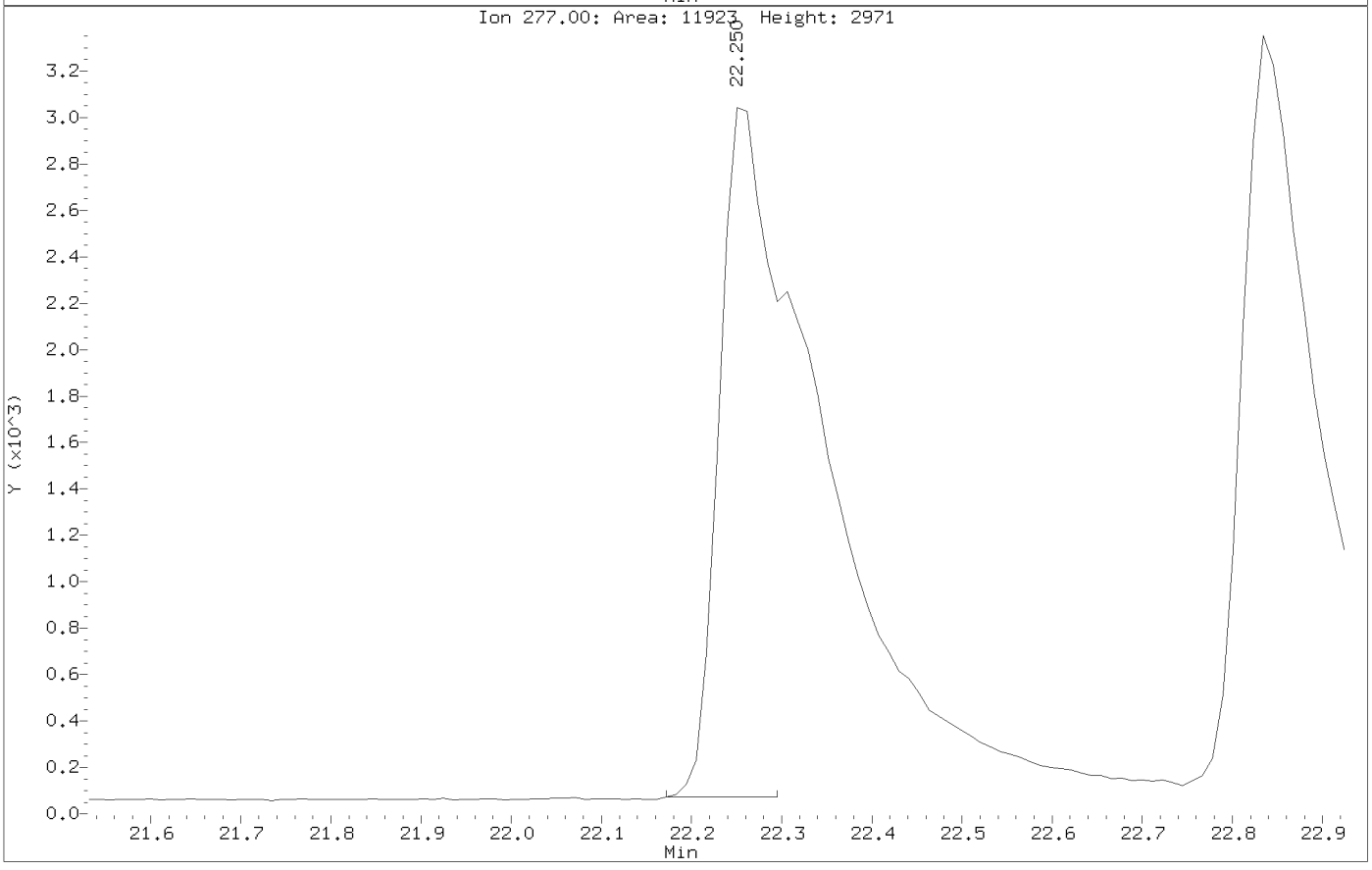
Injection Date: 29-JUL-2021 03:02
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

AFTER MANUAL INTEGRATION





Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site **SDG:** SO4724
Lab ID : WG303383-2 **Analytical Date:** 07/29/21 12:44
Lab File ID : N3642.D **Instrument ID:** GCMS-N
Initial Calibration Date(s): 07/28/21 15:35 07/28/21 18:27 **Column ID:**

Compound	RRF/Amount	RF2	CCAL RRF2	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
28 Naphthalene	1.03736	1.06481	1.06481	0.010	2.64619	20.00000	Averaged
34 2-Methylnaphthalene	0.75682	0.69717	0.69717	0.010	-7.88143	20.00000	Averaged
35 1-Methylnaphthalene	0.68030	0.66003	0.66003	0.010	-2.97971	20.00000	Averaged
46 Acenaphthylene	2.06533	2.11094	2.11094	0.010	2.20857	20.00000	Averaged
49 Acenaphthene	1.26345	1.26223	1.26223	0.010	-0.09687	20.00000	Averaged
57 Fluorene	1.33864	1.30165	1.30165	0.010	-2.76333	20.00000	Averaged
67 Phenanthrene	1.10372	1.12705	1.12705	0.010	2.11345	20.00000	Averaged
68 Anthracene	1.30278	1.24091	1.24091	0.010	-4.74930	20.00000	Averaged
72 Fluoranthene	1.06273	1.00157	1.00157	0.010	-5.75488	20.00000	Averaged
74 Pyrene	2.40840	2.59962	2.59962	0.010	7.93951	20.00000	Averaged
77 Benzo(a)anthracene	1.26478	1.13905	1.13905	0.010	-9.94068	20.00000	Averaged
79 Chrysene	1.58606	1.71468	1.71468	0.010	8.10942	20.00000	Averaged
82 Benzo(b)fluoranthene	1.19415	1.09603	1.09603	0.010	-8.21661	20.00000	Averaged
83 Benzo(k)fluoranthene	1.93405	1.94496	1.94496	0.010	0.56389	20.00000	Averaged
84 Benzo(a)pyrene	1.19493	1.18712	1.18712	0.010	-0.65320	20.00000	Averaged
86 Indeno(1,2,3-cd)pyrene	2.00000	1.91860	0.30160	0.010	-4.07011	20.00000	Linear
87 Dibenzo(a,h)anthracene	0.63876	0.70808	0.70808	0.010	10.85139	20.00000	Averaged
88 Benzo(g,h,i)perylene	0.81153	0.89550	0.89550	0.010	10.34607	20.00000	Averaged
33 2-Methylnaphthalene-D10	0.53225	0.53432	0.53432	0.010	0.38925	20.00000	Averaged
56 Fluorene-D10	0.94012	0.91941	0.91941	0.010	-2.20281	20.00000	Averaged
73 Pyrene-D10	1.51629	1.63102	1.63102	0.010	7.56612	20.00000	Averaged

*** = Compound out of QC criteria**

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sales@katahdinlab.com

Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\N3642.D
Report Date: 02-Aug-2021 10:51

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072921.b\N3642.D
Lab Smp Id: WG303383-2
Inj Date : 29-JUL-2021 12:44
Operator : JCG   Inst ID: gcms-n.i
Smp Info : WG303383-2,SO4724
Misc Info : WG303383,WG303383,WG303306-4,SO4724-2
Comment   :
Method   : \\target_server\gg\chem\gcms-n.i\N072921.b\NSPSIM94.m
Meth Date : 30-Jul-2021 08:11 gcms-n.i   Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27   Cal File: N3623.D
Als bottle: 2   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: sw8270sim+1mn.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	7.390	7.390	(1.000)	49892	0.80000	(a)	
*	27 Naphthalene-D8	136	9.022	9.022	(1.000)	168736	0.80000	(a)	
	28 Naphthalene	128	9.054	9.054	(1.004)	449181	2.00000	2.05	
$	33 2-Methylnaphthalene-D10	152	9.937	9.937	(1.101)	225399	2.00000	2.01	
	34 2-Methylnaphthalene	142	9.976	9.977	(1.106)	294094	2.00000	1.84	
	35 1-Methylnaphthalene	142	10.104	10.105	(1.120)	278427	2.00000	1.94	
	46 Acenaphthylene	152	11.173	11.173	(0.984)	454069	2.00000	2.04	
*	48 Acenaphthene-D10	164	11.358	11.369	(1.000)	86041	0.80000	(a)	
	49 Acenaphthene	153	11.401	11.413	(1.004)	271509	2.00000	2.00	
$	56 Fluorene-D10	174	12.066	12.067	(1.062)	197768	2.00000	1.96	
	57 Fluorene	166	12.099	12.110	(1.065)	279988	2.00000	1.94	
*	66 Phenanthrene-D10	188	13.349	13.350	(1.000)	113950	0.80000	(a)	
	67 Phenanthrene	178	13.384	13.385	(1.003)	321067	2.00000	2.04	
	68 Anthracene	178	13.453	13.454	(1.008)	353504	2.00000	1.90	
	72 Fluoranthene	202	14.984	14.985	(1.122)	285323	2.00000	1.88	
$	73 Pyrene-D10	212	15.262	15.262	(0.891)	186609	2.00000	2.15	
	74 Pyrene	202	15.284	15.285	(0.892)	297429	2.00000	2.16	
	77 Benzo(a)anthracene	228	17.116	17.117	(0.999)	130322	2.00000	1.80	
*	78 Chrysene-D12	240	17.138	17.139	(1.000)	45765	0.80000	(a)	
	79 Chrysene	228	17.183	17.183	(1.003)	196181	2.00000	2.16	

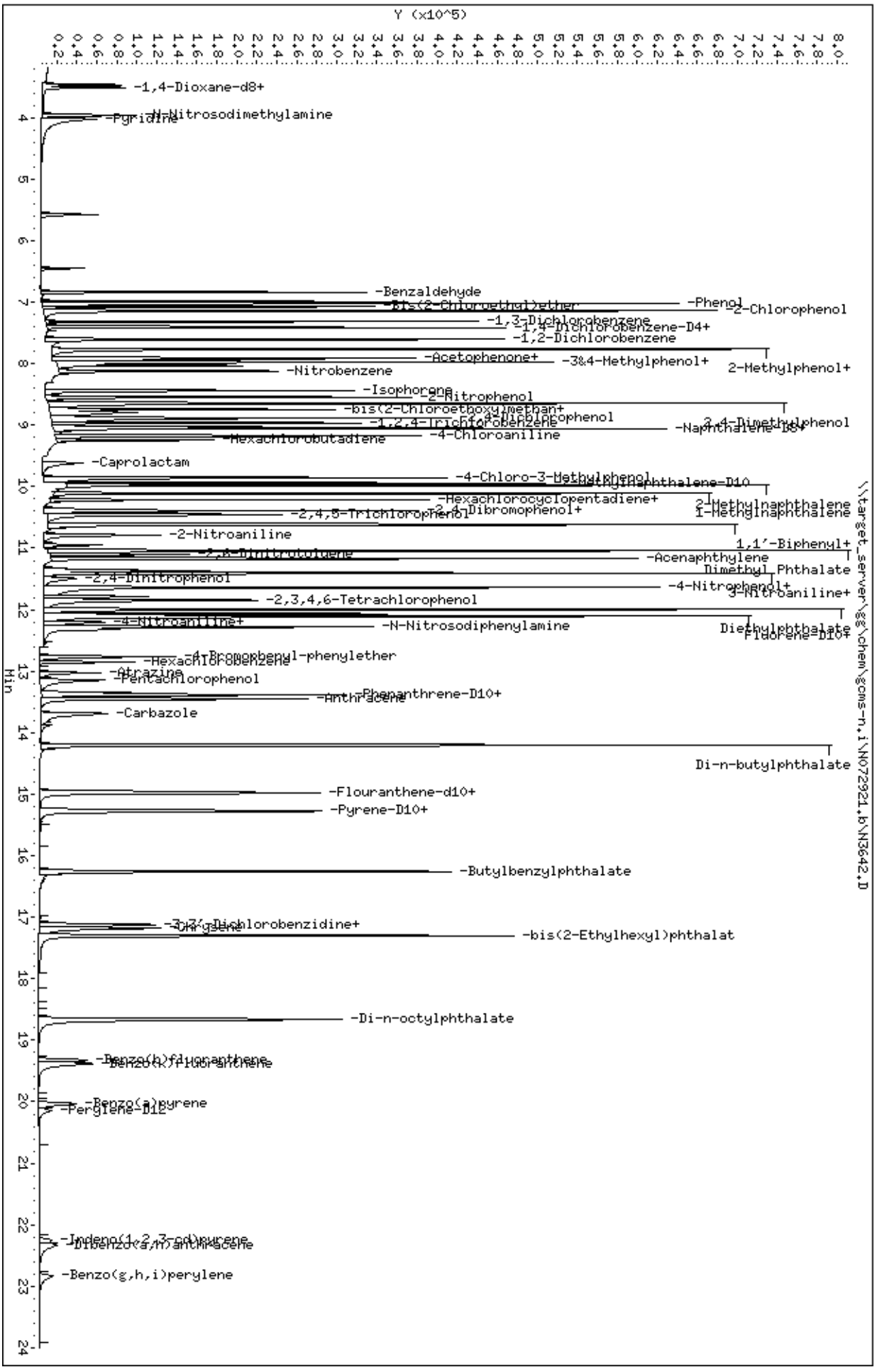
Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\N3642.D
Report Date: 02-Aug-2021 10:51

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
82	Benzo(b)fluoranthene	252	19.330	19.320	(0.959)	86803	2.00000	1.84	
83	Benzo(k)fluoranthene	252	19.386	19.376	(0.962)	154036	2.00000	2.01(H)	
84	Benzo(a)pyrene	252	20.026	20.016	(0.994)	94017	2.00000	1.99	
* 85	Perylene-D12	264	20.150	20.139	(1.000)	31679	0.80000	(a)	
86	Indeno(1,2,3-cd)pyrene	276	22.260	22.227	(1.299)	34507	2.00000	1.92(M)	M3
87	Dibenzo(a,h)anthracene	278	22.328	22.306	(1.108)	56078	2.00000	2.22	
88	Benzo(g,h,i)perylene	276	22.833	22.811	(1.133)	70921	2.00000	2.21	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

11:02 am, Aug 02, 2021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Date : 29-JUL-2021 12:44
Client ID:
Sample Info: WG303383-2,SD4724
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N072921,b\N3642,D
Y (x10^5)
Min
-1,4-Dioxane-d8+
-Pyridine
-N-Nitrosodimethylamine
-Benzaldehyde
-Phenol
-2-Chlorophenol
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-Acetophenone+
-3&4-Methylphenol+
2-Methylphenol+
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-bis(2-Chloroethoxy)methan+
-2,4-Dichlorophenol
-1,2,4-Trichlorobenzene
-Naphthalene-D8+
2,4-Dimethylphenol
-Hexachlorobutadiene
-4-Chloroaniline
-Caprolactam
-4-Chloro-3-Methylphenol
-2-Methylnaphthalene-D10
-Hexachlorocyclopentadiene+
2-Methylnaphthalene
1-Methylnaphthalene
-2,4,5-Trichlorophenol
-2-Nitroaniline
1,1'-Biphenyl+
-2,6-Dinitrotoluene
-Acenaphthylene
Dimethyl Phthalate
-2,4-Dinitrophenol
-4-Nitrophenol+
3-Nitroaniline+
-2,3,4,6-Tetrachlorophenol
-4-Nitroaniline+
-N-Nitrosodiphenylamine
Diethylphthalate
Fluorene-D10+
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
Di-n-butylphthalate
-Flouranthene-d10+
-Pyrene-D10+
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-Chrysene
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene
-Benzo(k)fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene
-Dibenzo(a,h)anthracene
-Benzo(g,h,i)perylene

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Injection Date: 29-JUL-2021 12:44
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

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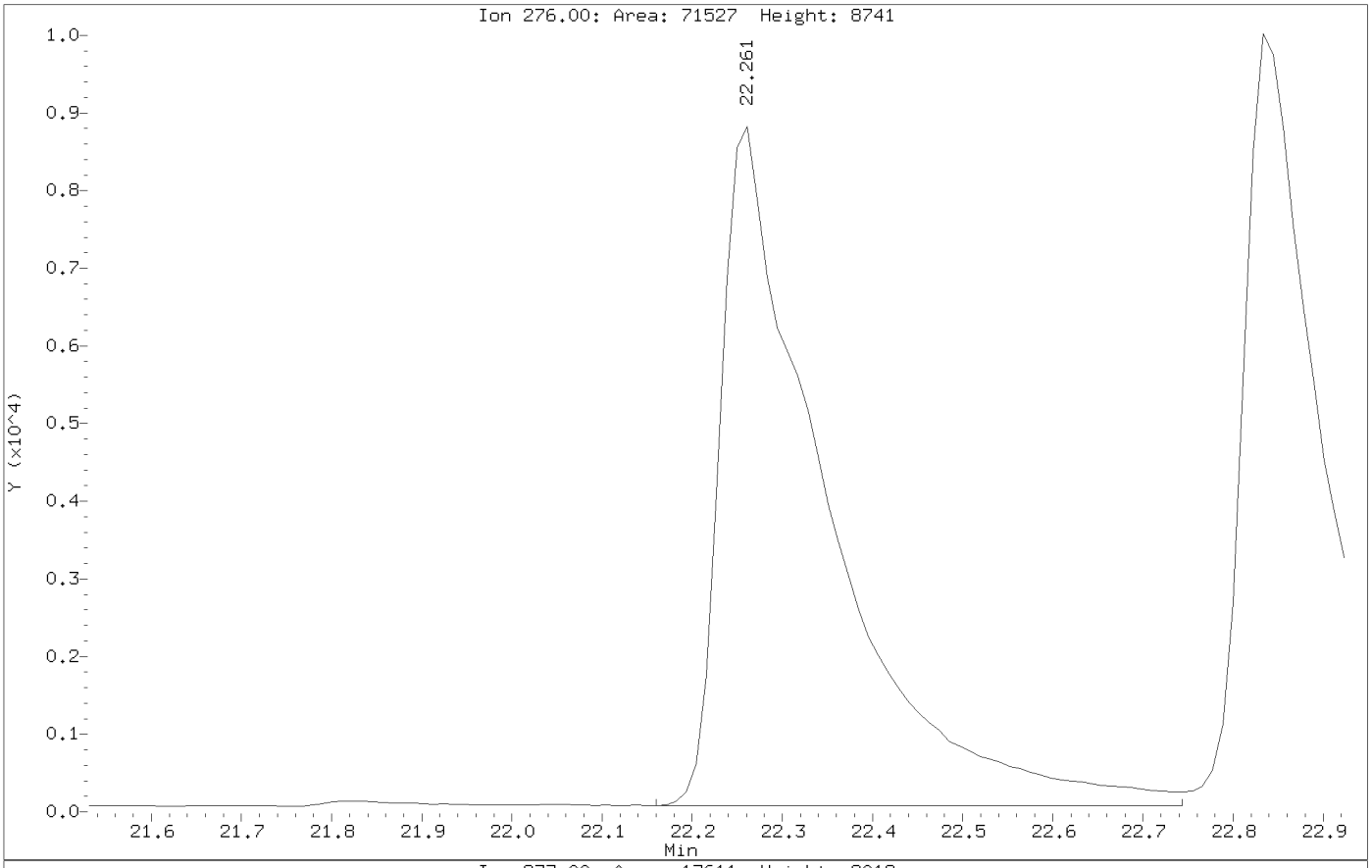

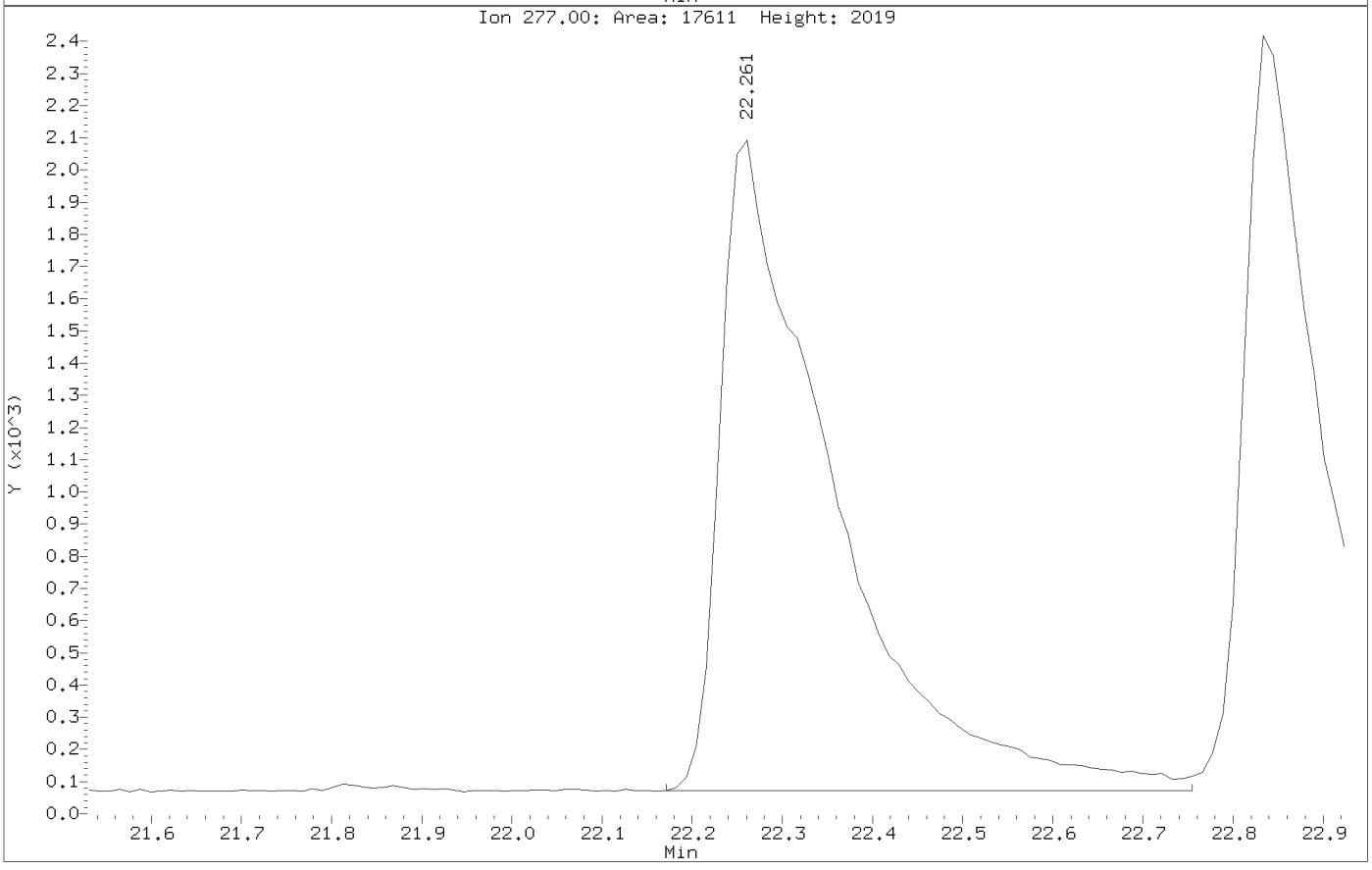

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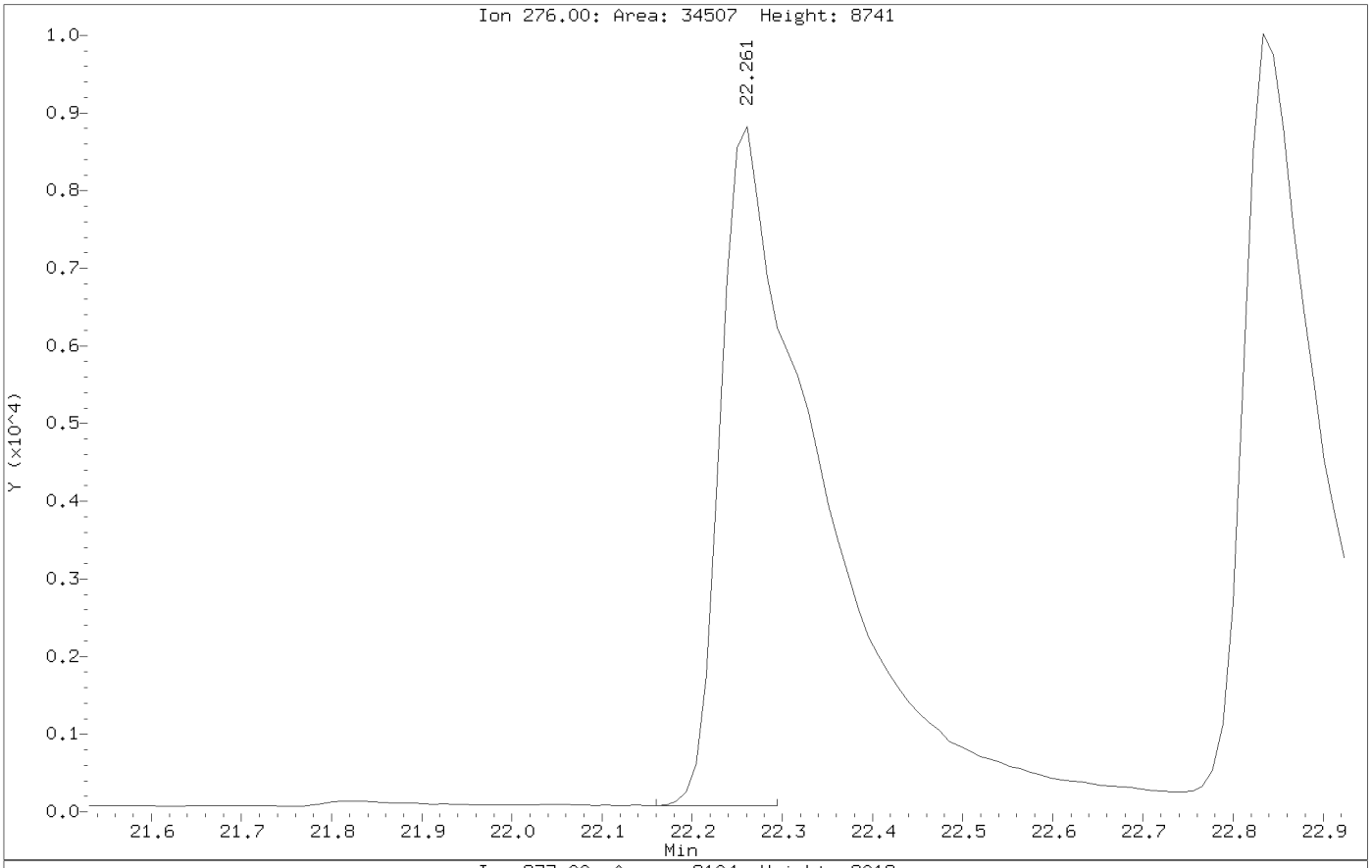
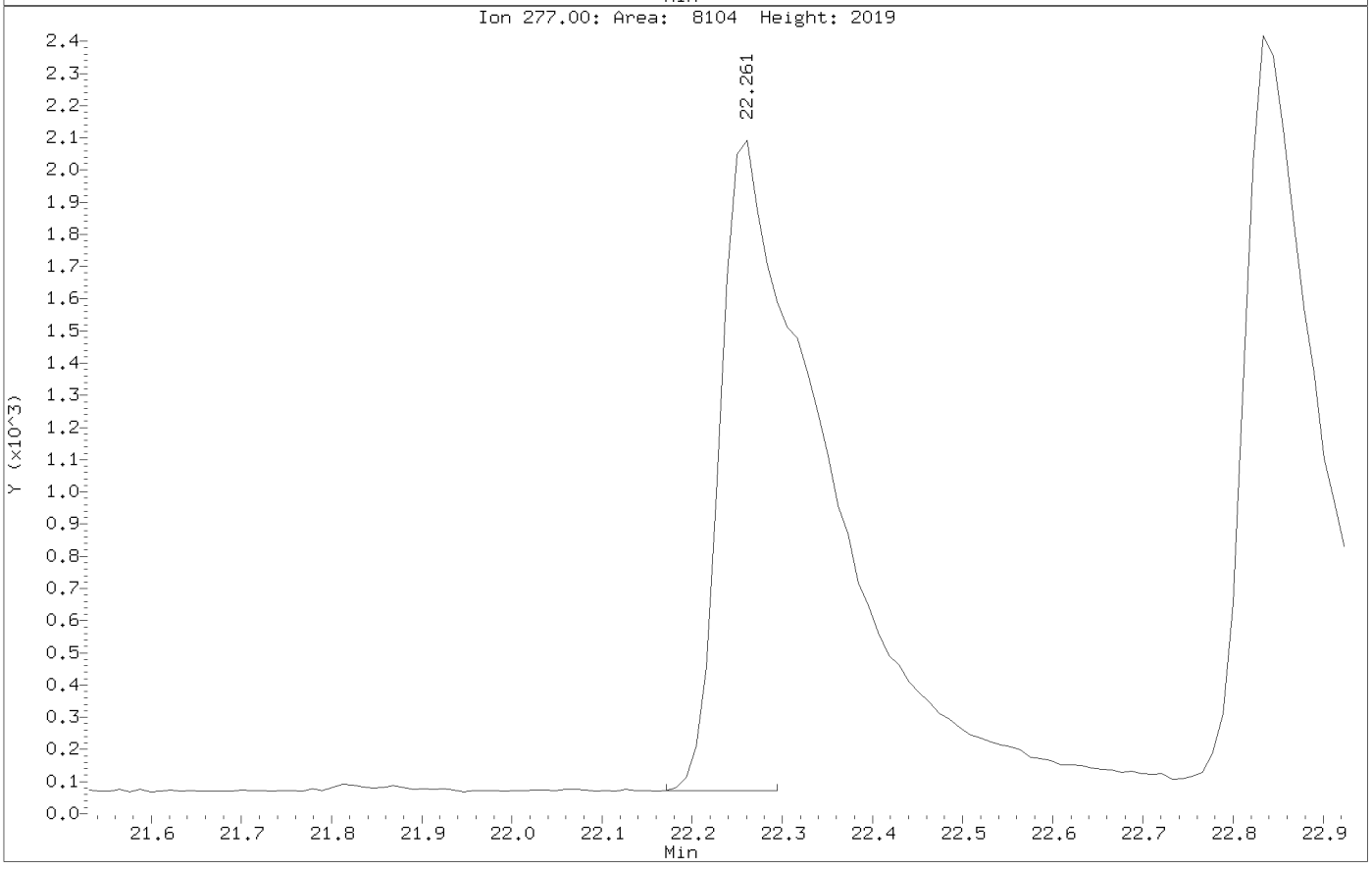
Injection Date: 29-JUL-2021 12:44
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

AFTER MANUAL INTEGRATION





Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site **SDG:** SO4724
Lab ID : WG303383-3 **Analytical Date:** 07/29/21 18:12
Lab File ID : N3652.D **Instrument ID:** GCMS-N
Initial Calibration Date(s): 07/28/21 15:35 07/28/21 18:27 **Column ID:**

Compound	RRF/Amount	RF2	CCAL RRF2	Min	%D/ %Drift	Max %D/ %Drift	Curve Type
28 Naphthalene	1.03736	1.03651	1.03651	0.010	-0.08208	20.00000	Averaged
34 2-Methylnaphthalene	0.75682	0.69290	0.69290	0.010	-8.44549	20.00000	Averaged
35 1-Methylnaphthalene	0.68030	0.65338	0.65338	0.010	-3.95667	20.00000	Averaged
46 Acenaphthylene	2.06533	2.04719	2.04719	0.010	-0.87832	20.00000	Averaged
49 Acenaphthene	1.26345	1.24883	1.24883	0.010	-1.15734	20.00000	Averaged
57 Fluorene	1.33864	1.31268	1.31268	0.010	-1.93954	20.00000	Averaged
67 Phenanthrene	1.10372	1.14347	1.14347	0.010	3.60201	20.00000	Averaged
68 Anthracene	1.30278	1.21442	1.21442	0.010	-6.78233	20.00000	Averaged
72 Fluoranthene	1.06273	1.04603	1.04603	0.010	-1.57188	20.00000	Averaged
74 Pyrene	2.40840	2.03366	2.03366	0.010	-15.55967	20.00000	Averaged
77 Benzo(a)anthracene	1.26478	1.09443	1.09443	0.010	-13.46908	20.00000	Averaged
79 Chrysene	1.58606	1.38968	1.38968	0.010	-12.38183	20.00000	Averaged
82 Benzo(b)fluoranthene	1.19415	1.09736	1.09736	0.010	-8.10556	20.00000	Averaged
83 Benzo(k)fluoranthene	1.93405	1.79950	1.79950	0.010	-6.95718	20.00000	Averaged
84 Benzo(a)pyrene	1.19493	1.06752	1.06752	0.010	-10.66186	20.00000	Averaged
86 Indeno(1,2,3-cd)pyrene	2.00000	2.09134	0.32876	0.010	4.56724	20.00000	Linear
87 Dibenzo(a,h)anthracene	0.63876	0.65484	0.65484	0.010	2.51717	20.00000	Averaged
88 Benzo(g,h,i)perylene	0.81153	0.80242	0.80242	0.010	-1.12289	20.00000	Averaged
33 2-Methylnaphthalene-D10	0.53225	0.54341	0.54341	0.010	2.09688	20.00000	Averaged
56 Fluorene-D10	0.94012	0.90464	0.90464	0.010	-3.77450	20.00000	Averaged
73 Pyrene-D10	1.51629	1.29242	1.29242	0.010	-14.76478	20.00000	Averaged

*** = Compound out of QC criteria**

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http://katahdinlab.com
sales@katahdinlab.com

Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\N3652.D
Report Date: 02-Aug-2021 10:51

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072921.b\N3652.D
Lab Smp Id: WG303383-3
Inj Date : 29-JUL-2021 18:12
Operator : JCG   Inst ID: gcms-n.i
Smp Info : WG303383-3,SO4724
Misc Info : WG303383,WG303383,WG303306-4,SO4724-2
Comment   :
Method   : \\target_server\gg\chem\gcms-n.i\N072921.b\NSPSIM94.m
Meth Date : 30-Jul-2021 08:11 gcms-n.i   Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27   Cal File: N3623.D
Als bottle: 12   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE   Compound Sublist: sw8270sim+1mn.sub
Target Version: 4.12

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	AMOUNTS ON-COL (ug/ml)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	7.390	7.390	(1.000)	53952	0.80000	(a)	
*	27 Naphthalene-D8	136	9.022	9.022	(1.000)	190257	0.80000	(a)	
	28 Naphthalene	128	9.054	9.054	(1.004)	493009	2.00000	2.00	
$	33 2-Methylnaphthalene-D10	152	9.937	9.937	(1.101)	258470	2.00000	2.04	
	34 2-Methylnaphthalene	142	9.977	9.977	(1.106)	329573	2.00000	1.83	
	35 1-Methylnaphthalene	142	10.105	10.105	(1.120)	310777	2.00000	1.92	
	46 Acenaphthylene	152	11.162	11.173	(0.983)	496786	2.00000	1.98	
*	48 Acenaphthene-D10	164	11.359	11.369	(1.000)	97067	0.80000	(a)	
	49 Acenaphthene	153	11.402	11.413	(1.004)	303051	2.00000	1.98	
$	56 Fluorene-D10	174	12.056	12.067	(1.061)	219526	2.00000	1.92	
	57 Fluorene	166	12.100	12.110	(1.065)	318544	2.00000	1.96	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	133618	0.80000	(a)	
	67 Phenanthrene	178	13.373	13.385	(1.002)	381972	2.00000	2.07	
	68 Anthracene	178	13.442	13.454	(1.007)	405672	2.00000	1.86	
	72 Fluoranthene	202	14.974	14.985	(1.122)	349420	2.00000	1.97	
$	73 Pyrene-D10	212	15.251	15.262	(0.890)	229194	2.00000	1.70	
	74 Pyrene	202	15.273	15.285	(0.891)	360645	2.00000	1.69	
	77 Benzo(a)anthracene	228	17.117	17.117	(0.999)	194083	2.00000	1.73	
*	78 Chrysene-D12	240	17.139	17.139	(1.000)	70935	0.80000	(a)	
	79 Chrysene	228	17.183	17.183	(1.003)	246442	2.00000	1.75	
	82 Benzo(b)fluoranthene	252	19.320	19.320	(0.959)	129181	2.00000	1.84	

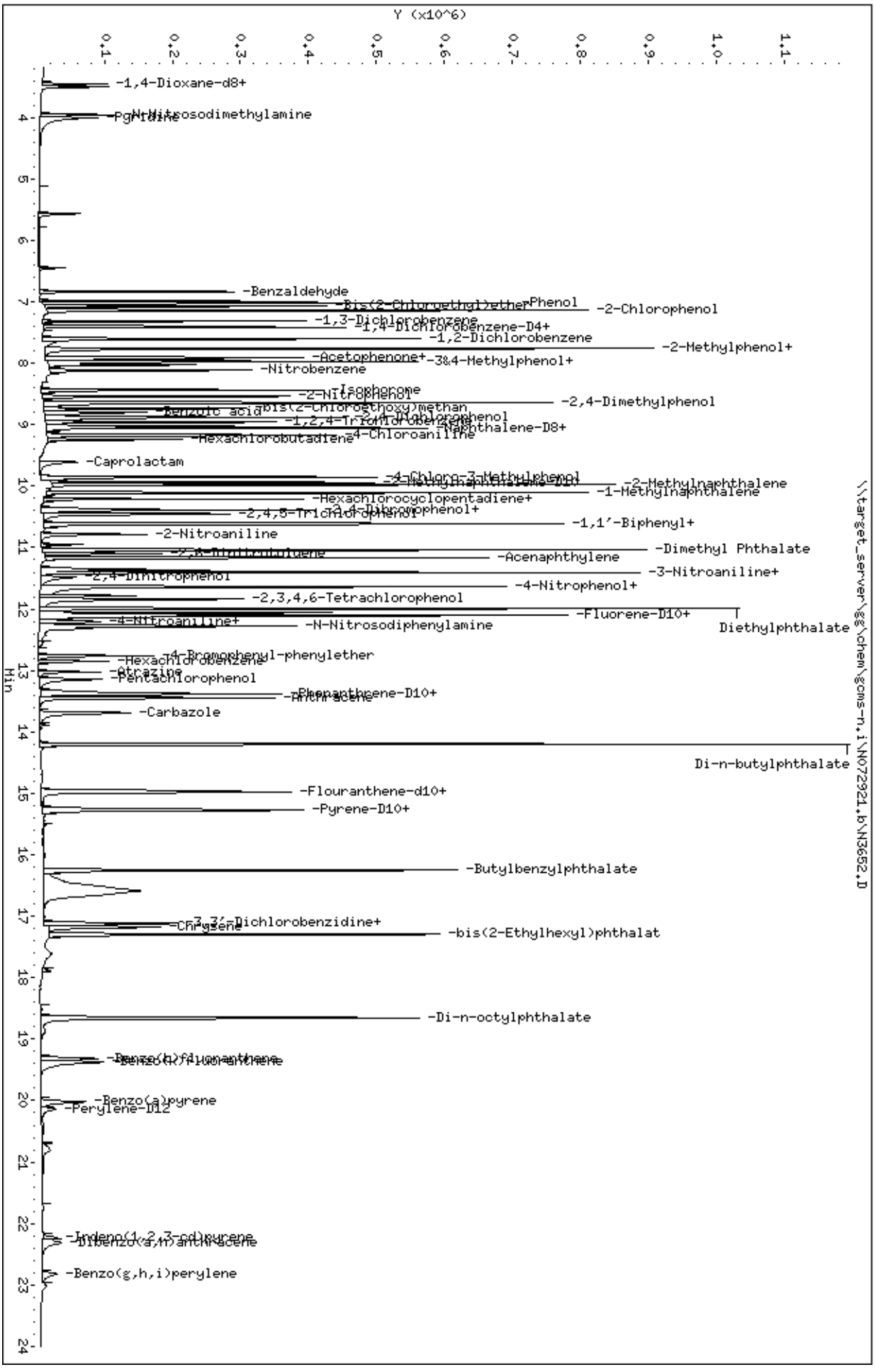
Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\N3652.D
Report Date: 02-Aug-2021 10:51

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/ml)	ON-COL (ug/ml)	REVIEW CODE
83	Benzo(k)fluoranthene	252	19.376	19.376	(0.962)	211837	2.00000	1.86(H)	
84	Benzo(a)pyrene	252	20.016	20.016	(0.994)	125669	2.00000	1.79	
* 85	Perylene-D12	264	20.139	20.139	(1.000)	47088	0.80000	(a)	
86	Indeno(1,2,3-cd)pyrene	276	22.239	22.227	(1.298)	58301	2.00000	2.09(M)	M3
87	Dibenzo(a,h)anthracene	278	22.317	22.306	(1.108)	77088	2.00000	2.05	
88	Benzo(g,h,i)perylene	276	22.822	22.811	(1.133)	94461	2.00000	1.98	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

11:03 am, Aug 02, 2021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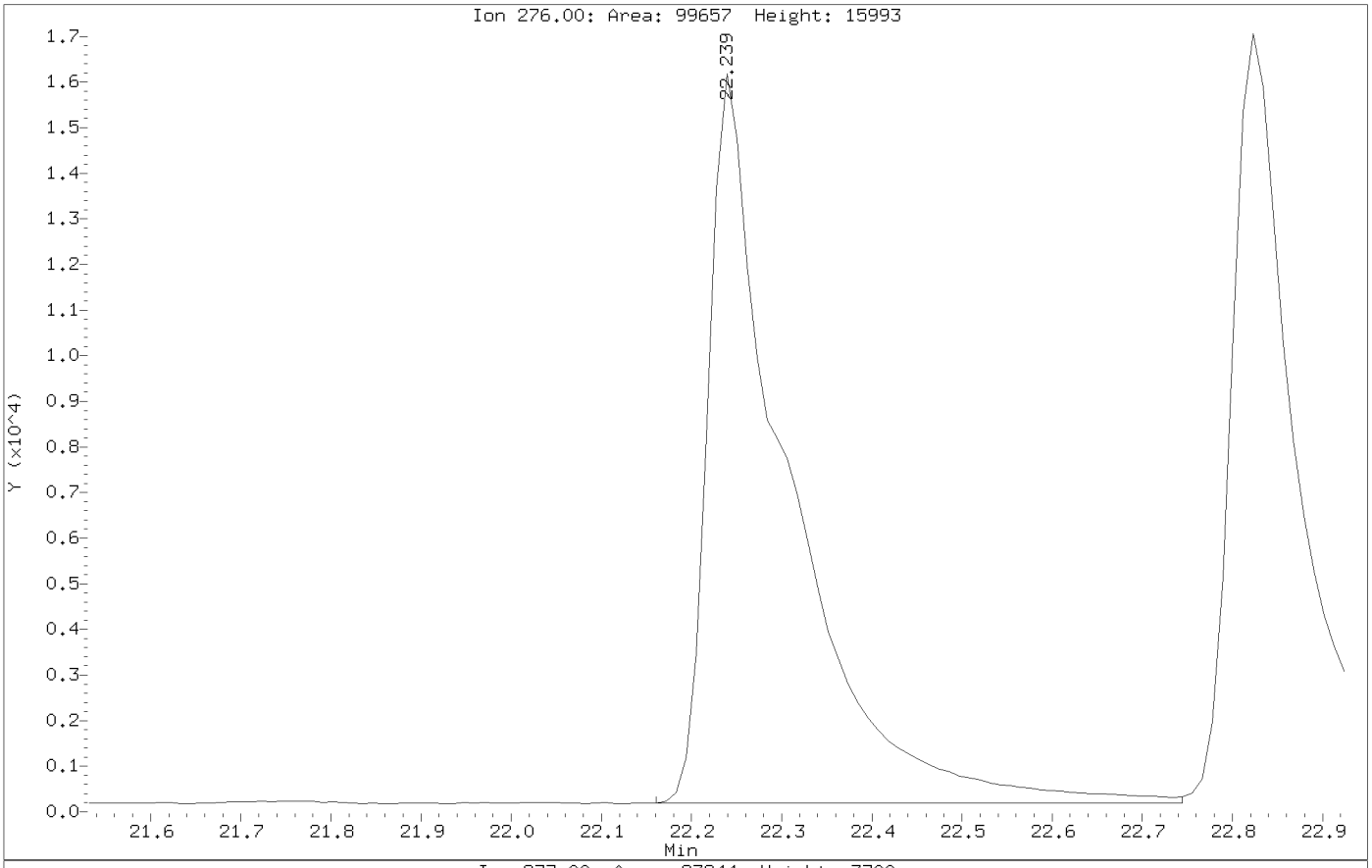
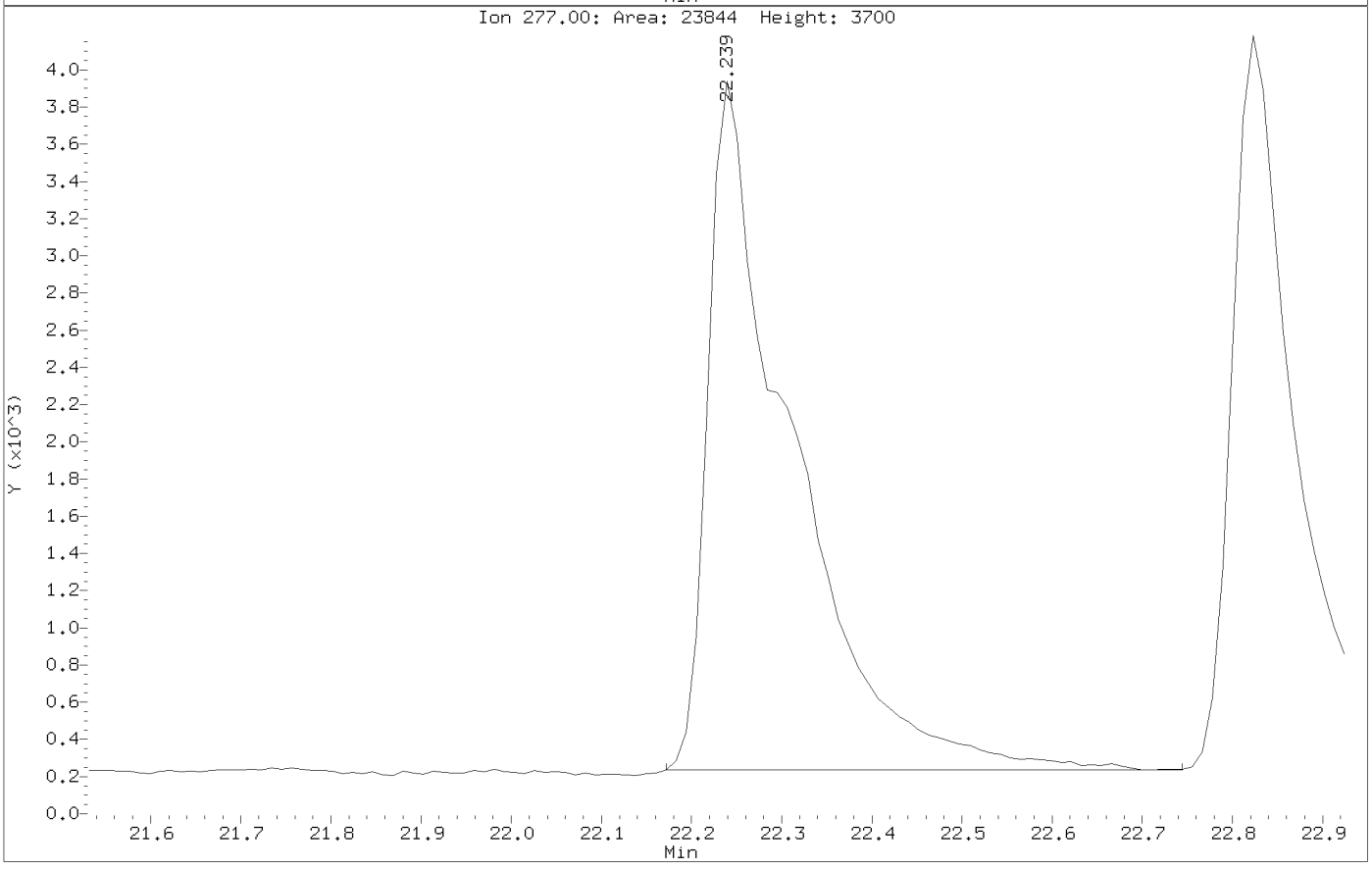
Date : 29-JUL-2021 18:12
Client ID:
Sample Info: WG303383-3,S04724
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N072921,b\N3652.D
Y (x10^6)
Min
-1,4-Dioxane-d8+
-N-Nitrosodimethylamine
-Pyridine
-Benzaldehyde
-Phenol
-2-Chlorophenol
-Bis(2-Chloroethyl)ether
-1,3-Dichlorobenzene
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-2-Methylphenol+
-Acetophenone+
-3&4-Methylphenol+
-Nitrobenzene
-Isophorone
-2-Nitrophenol
-2,4-Dimethylphenol
-Benzoic acid
-bis(2-Chloroethoxy)methan
-2,4-Dichlorophenol
-1,2,4-Trichlorobenzene
-Naphthalene-D8+
-4-Chloroaniline
-Hexachlorobutadiene
-Caprolactam
-4-Chloro-3-Methylphenol
-2-Methylnaphthalene-D10
-2-Methylnaphthalene
-1-Methylnaphthalene
-Hexachlorocyclopentadiene+
-2,4,6-Trichlorophenol+
-2,4,5-Trichlorophenol
-1,1'-Biphenyl+
-2-Nitroaniline
-Dimethyl Phthalate
-2,6-Dinitrotoluene
-Acenaphthylene
-3-Nitroaniline+
-2,4-Dinitrophenol
-4-Nitrophenol+
-2,3,4,6-Tetrachlorophenol
-Fluorene-D10+
-4-Nitroaniline+
-N-Nitrosodiphenylamine
Diethylphthalate
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
Di-n-butylphthalate
-Flouranthene-d10+
-Pyrene-D10+
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-Chrysene
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene
-Benzo(k)fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene
-Dibenzo(a,h)anthracene
-Benzo(g,h,i)perylene

Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\N3652.D
Injection Date: 29-JUL-2021 18:12
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

BEFORE MANUAL INTEGRATION





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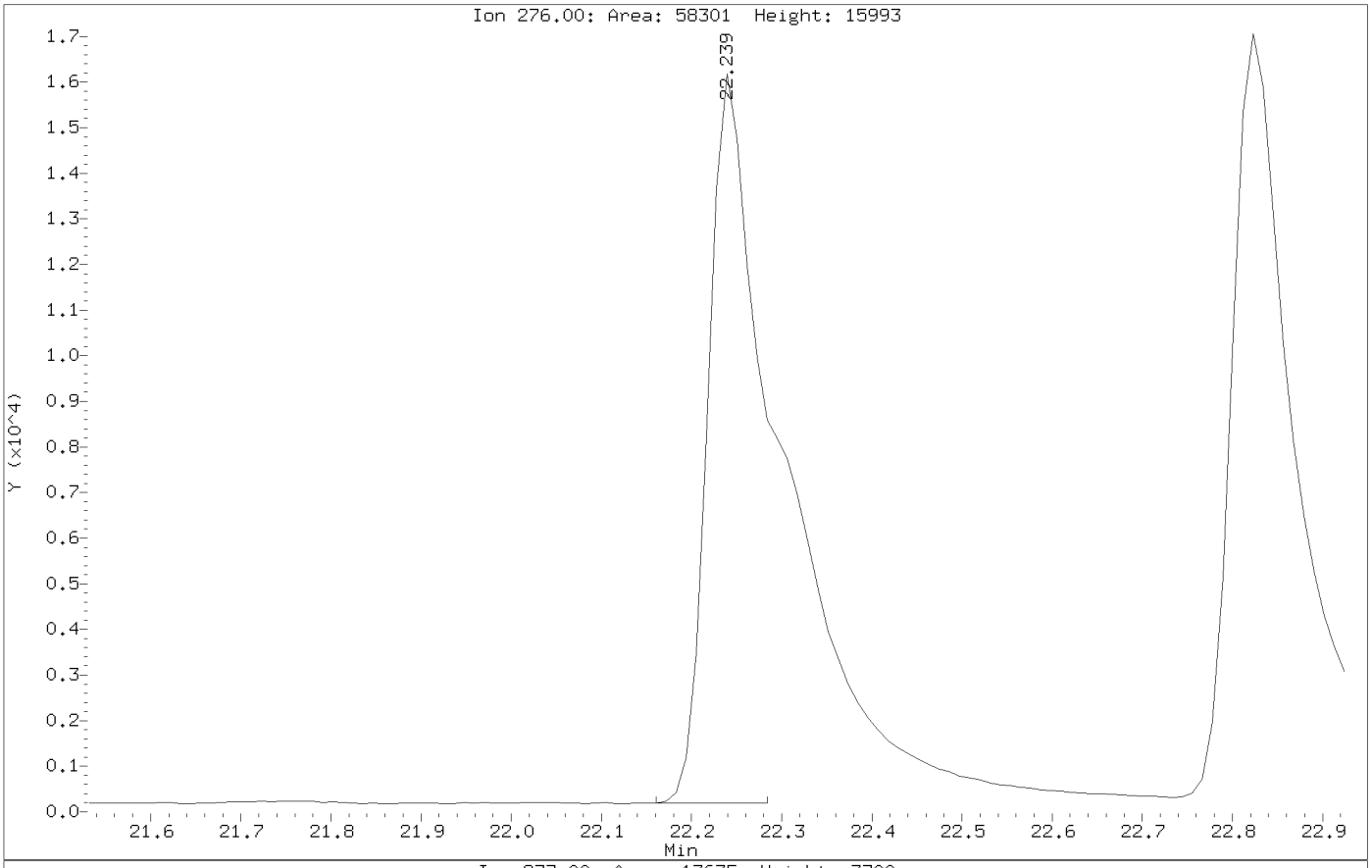
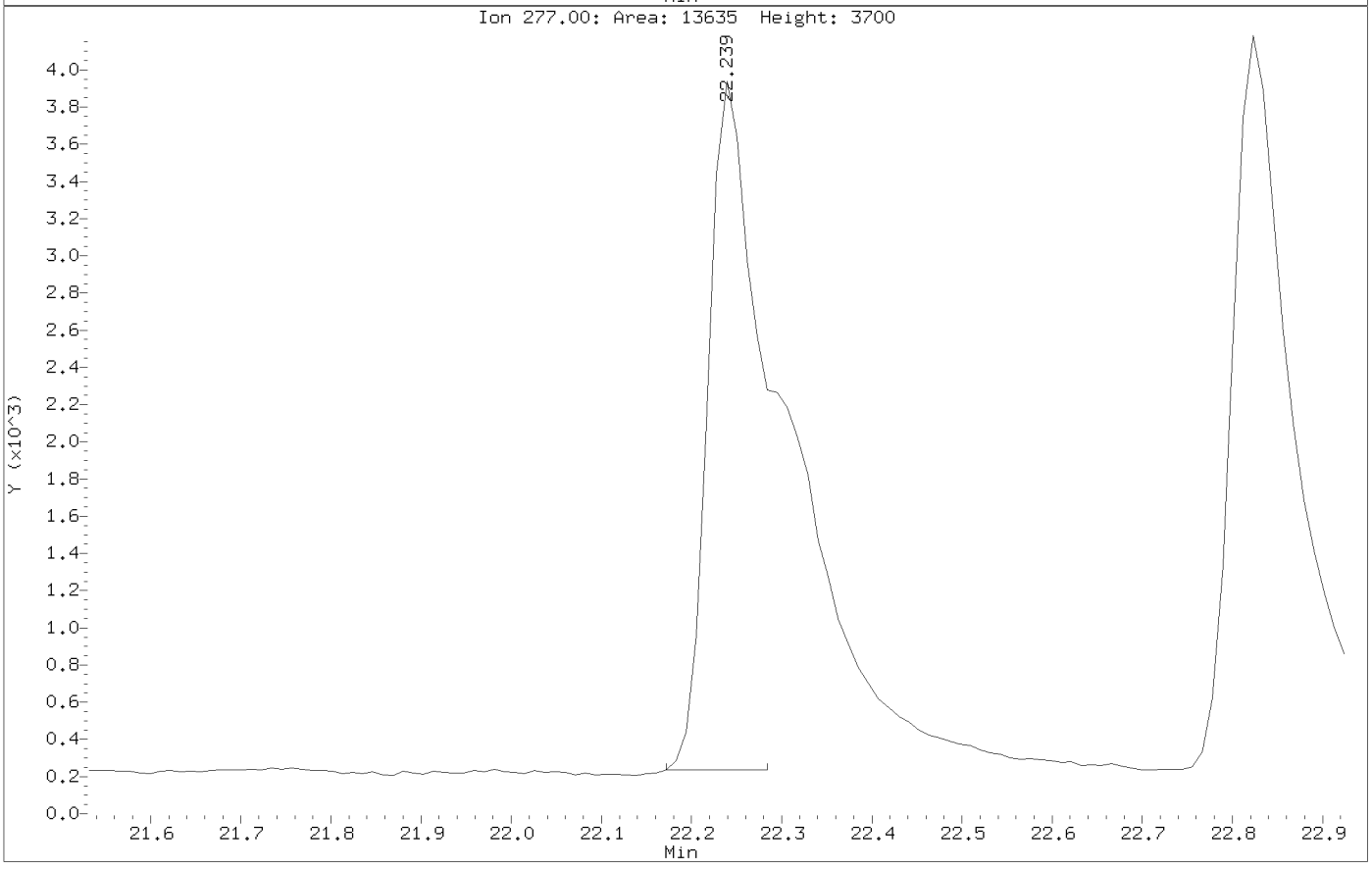
Injection Date: 29-JUL-2021 18:12
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

AFTER MANUAL INTEGRATION





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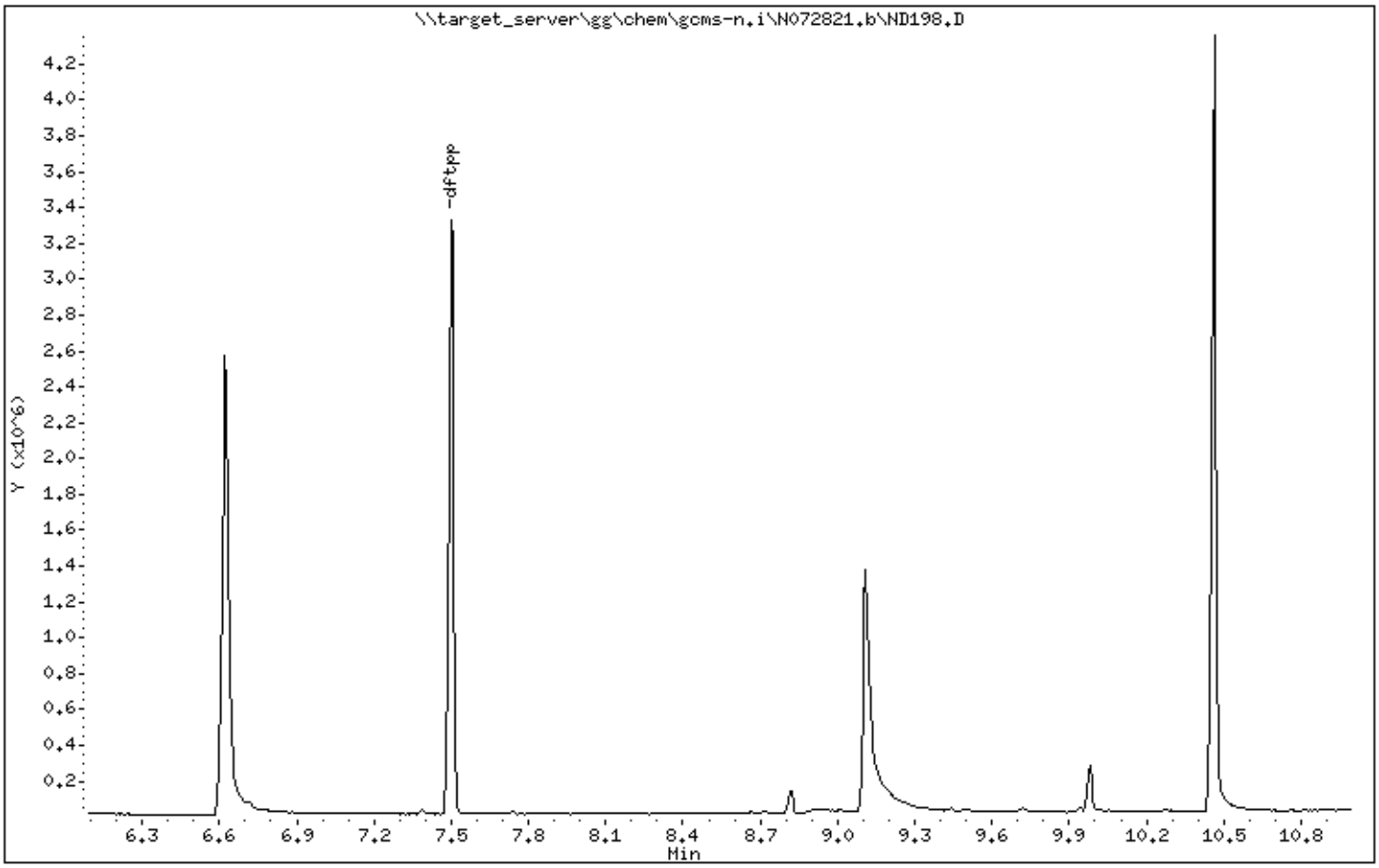
Date : 28-JUL-2021 15:17

Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG303306-1,SO4724

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25



Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\ND198.D

Date : 28-JUL-2021 15:17

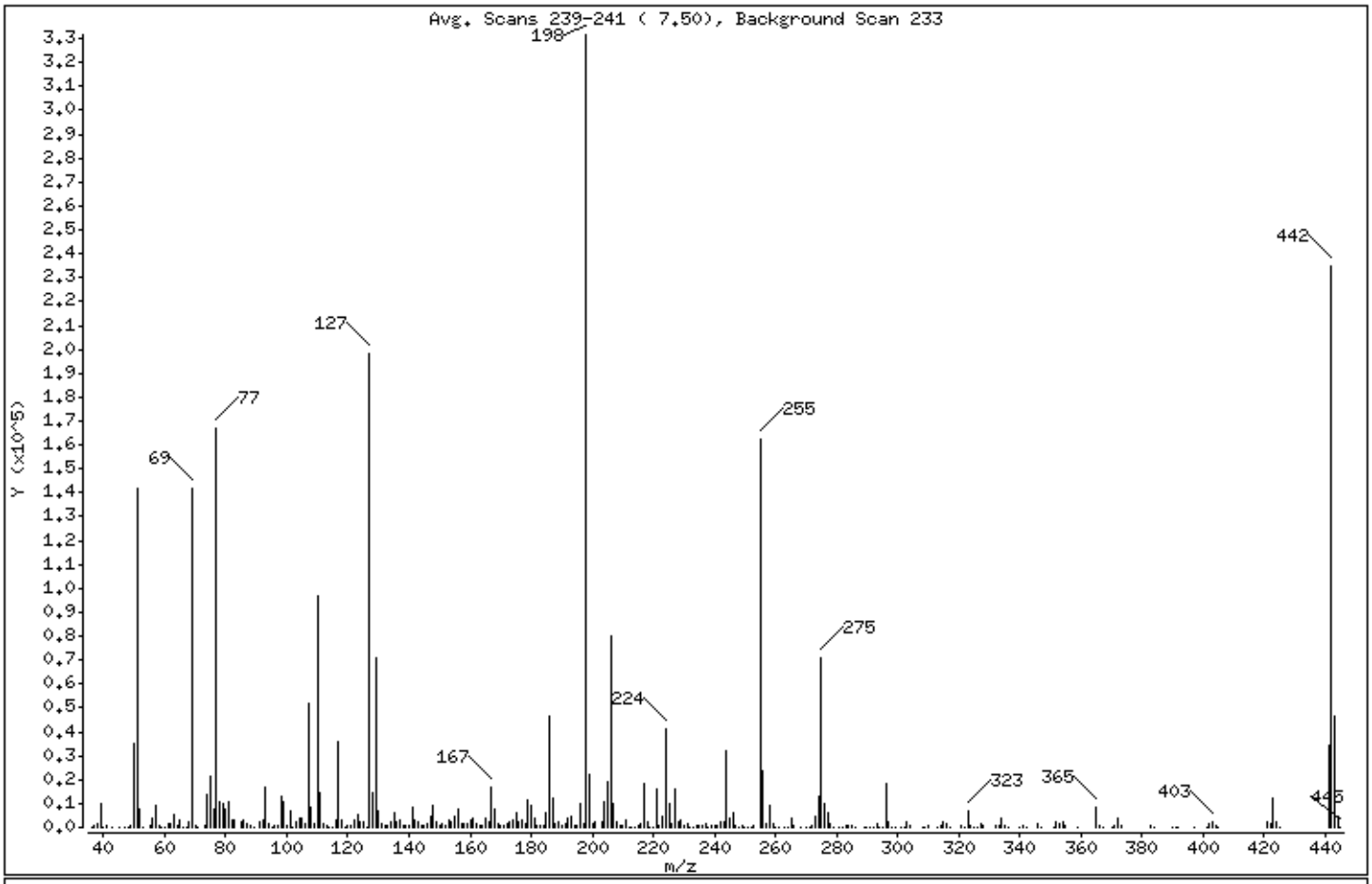
Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG303306-1,SO4724

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	42.71
68	Less than 2.00% of mass 69	0.70 (1.64)
69	Less than 100.00% of mass 198	42.79
70	Less than 2.00% of mass 69	0.27 (0.62)
127	40.00 - 60.00% of mass 198	59.85
197	Less than 1.00% of mass 198	0.42
199	5.00 - 9.00% of mass 198	6.74
275	10.00 - 30.00% of mass 198	21.44
365	1.00 - 100.00% of mass 198	2.59
441	0.01 - 100.00% of mass 443	10.36 (73.64)
442	40.00 - 100.00% of mass 198	70.91
443	17.00 - 23.00% of mass 442	14.08 (19.85)

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\ND198.D

Date : 28-JUL-2021 15:17

Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG303306-1,SO4724

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

Data File: ND198.D
Spectrum: Avg. Scans 239-241 (7.50), Background Scan 233
Location of Maximum: 198.00
Number of points: 313

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	156	122.00	3028	201.00	2111	286.00	179
37.00	522	123.00	5164	203.00	2179	289.00	265
38.00	1652	124.00	2305	204.00	10611	290.00	201
39.00	9812	125.00	2219	205.00	18888	291.00	108
40.00	381	126.00	157	206.00	80040	292.00	305
41.00	383	127.00	198464	207.00	10016	293.00	1550
43.00	178	128.00	14840	208.00	2406	294.00	373
45.00	195	129.00	71208	209.00	797	295.00	303
47.00	134	130.00	6541	210.00	768	296.00	18200
48.00	28	131.00	1184	211.00	2936	297.00	2631
49.00	595	132.00	534	212.00	206	298.00	166
50.00	34704	133.00	647	213.00	301	299.00	53
51.00	141632	134.00	2050	214.00	53	301.00	381
52.00	7455	135.00	6133	215.00	685	302.00	265
53.00	279	136.00	2323	216.00	1681	303.00	2445
55.00	686	137.00	2690	217.00	18528	304.00	589
56.00	4069	138.00	704	218.00	2515	308.00	284
57.00	9263	139.00	395	219.00	296	309.00	176
58.00	436	140.00	798	220.00	209	310.00	396
59.00	202	141.00	8491	221.00	15651	313.00	131
60.00	70	142.00	2767	222.00	806	314.00	991
61.00	1770	143.00	2264	223.00	4738	315.00	2321
62.00	1870	144.00	573	224.00	40800	316.00	1241
63.00	5363	145.00	563	225.00	10278	317.00	209
64.00	749	146.00	1560	226.00	1217	321.00	681
65.00	3180	147.00	4398	227.00	15804	322.00	368
66.00	304	148.00	9308	228.00	2318	323.00	6620
67.00	163	149.00	2144	229.00	3305	324.00	1141
68.00	2329	150.00	584	230.00	504	325.00	111
69.00	141888	151.00	1306	231.00	1545	326.00	189
70.00	885	152.00	484	232.00	270	327.00	1369
71.00	36	153.00	2779	233.00	347	328.00	569
73.00	1060	154.00	2199	234.00	951	332.00	404
74.00	13882	155.00	4782	235.00	1101	333.00	784
75.00	21520	156.00	7556	236.00	769	334.00	3999

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\ND198.D

Date : 28-JUL-2021 15:17

Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG303306-1,SO4724

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

Data File: ND198.D
Spectrum: Avg. Scans 239-241 (7.50), Background Scan 233
Location of Maximum: 198.00
Number of points: 313

m/z	Y	m/z	Y	m/z	Y	m/z	Y
76.00	7807	157.00	1764	237.00	1553	335.00	1029
77.00	166656	158.00	1474	238.00	262	336.00	104
78.00	10940	159.00	1220	239.00	803	340.00	70
79.00	9615	160.00	2709	240.00	451	341.00	808
80.00	7660	161.00	4094	241.00	932	342.00	246
81.00	11052	162.00	1234	242.00	2132	346.00	1243
82.00	2777	163.00	416	243.00	2305	347.00	232
83.00	2851	164.00	505	244.00	31960	351.00	50
85.00	1977	165.00	3594	245.00	4042	352.00	1976
86.00	3042	166.00	2409	246.00	5972	353.00	1598
87.00	1252	167.00	16688	247.00	1114	354.00	2072
88.00	695	168.00	7666	248.00	239	355.00	514
89.00	350	169.00	1490	249.00	1043	359.00	62
91.00	2236	170.00	593	250.00	223	365.00	8582
92.00	3071	171.00	726	251.00	247	366.00	1124
93.00	16912	172.00	1456	252.00	323	367.00	68
94.00	1287	173.00	2144	253.00	745	370.00	205
95.00	289	174.00	3352	255.00	162176	371.00	515
96.00	691	175.00	6159	256.00	23992	372.00	3626
97.00	636	176.00	1977	257.00	1708	373.00	863
98.00	12973	177.00	2951	258.00	8852	383.00	1086
99.00	10698	178.00	1147	259.00	1478	384.00	211
100.00	1055	179.00	11595	260.00	209	390.00	304
101.00	6676	180.00	8768	261.00	157	391.00	330
102.00	358	181.00	4070	263.00	69	392.00	197
103.00	2104	182.00	688	264.00	341	397.00	71
104.00	4172	183.00	440	265.00	3466	401.00	155
105.00	4079	184.00	790	266.00	455	402.00	1442
106.00	1296	185.00	6253	268.00	97	403.00	2164
107.00	51624	186.00	46512	270.00	163	404.00	636
108.00	8254	187.00	12127	271.00	352	405.00	59
109.00	1668	188.00	1315	272.00	504	421.00	2225
110.00	96904	189.00	2483	273.00	4779	422.00	1672
111.00	14502	190.00	543	274.00	13015	423.00	12560
112.00	1581	191.00	1362	275.00	71080	424.00	2609

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\ND198.D

Date : 28-JUL-2021 15:17

Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG303306-1,SO4724

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

Data File: ND198.D
Spectrum: Avg. Scans 239-241 (7.50), Background Scan 233
Location of Maximum: 198.00
Number of points: 313

m/z	Y	m/z	Y	m/z	Y	m/z	Y
113.00	660	192.00	3491	276.00	9827	425.00	188
114.00	129	193.00	4201	277.00	5795	441.00	34368
115.00	78	194.00	832	278.00	1286	442.00	235136
116.00	2738	195.00	685	279.00	193	443.00	46672
117.00	35568	196.00	9640	281.00	58	444.00	4256
118.00	2766	197.00	1395	282.00	208	445.00	226
119.00	353	198.00	331584	283.00	827		
120.00	667	199.00	22336	284.00	496		
121.00	461	200.00	1592	285.00	1125		

Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\ND198.D

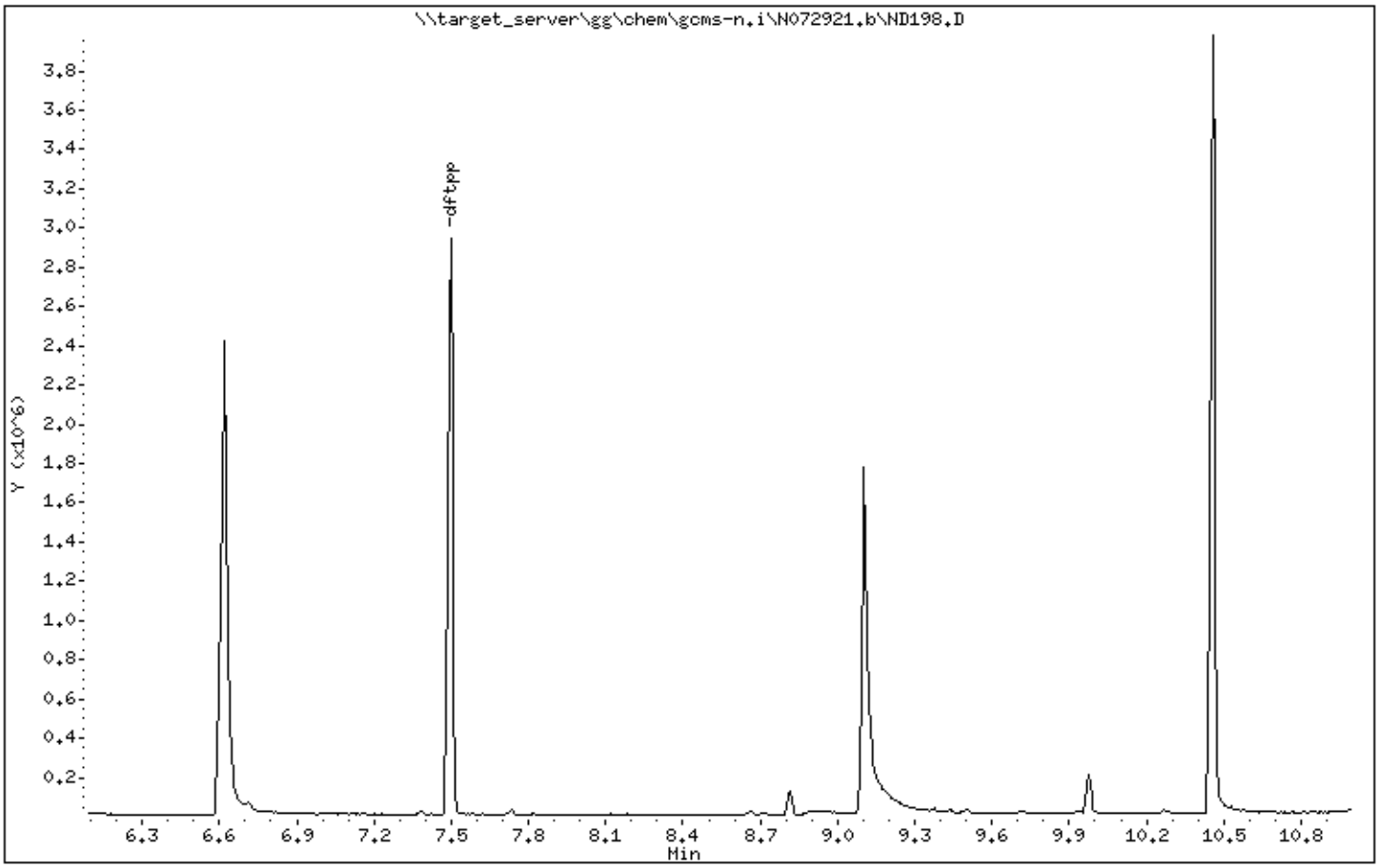
Date : 29-JUL-2021 12:26

Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG303383-1,SO4724

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25



Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\ND198.D

Date : 29-JUL-2021 12:26

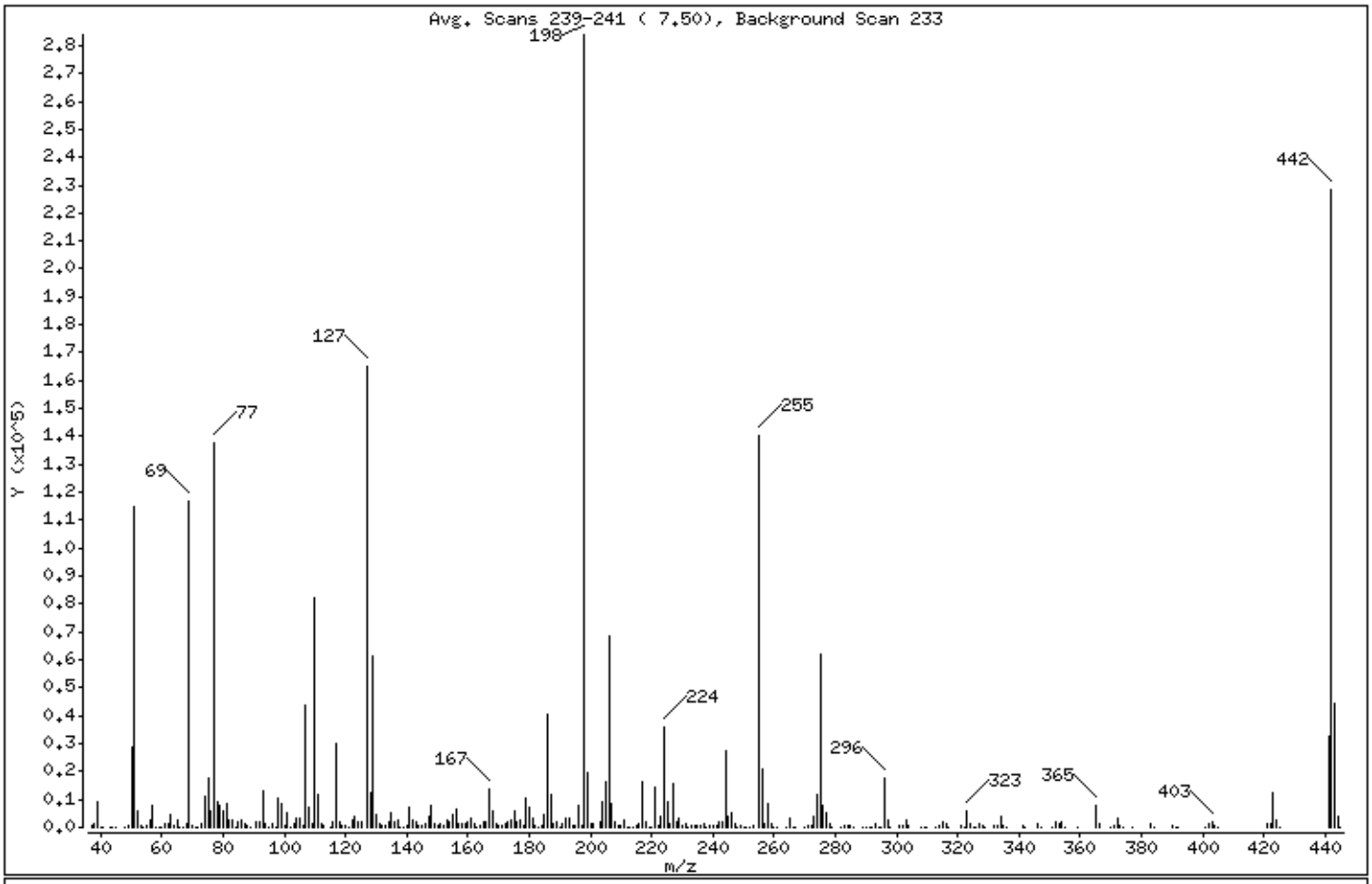
Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG303383-1,SO4724

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	40.54
68	Less than 2.00% of mass 69	0.37 (0.90)
69	Less than 100.00% of mass 198	41.21
70	Less than 2.00% of mass 69	0.20 (0.49)
127	40.00 - 60.00% of mass 198	58.15
197	Less than 1.00% of mass 198	0.16
199	5.00 - 9.00% of mass 198	6.89
275	10.00 - 30.00% of mass 198	21.88
365	1.00 - 100.00% of mass 198	2.87
441	0.01 - 100.00% of mass 443	11.57 (74.53)
442	40.00 - 100.00% of mass 198	80.47
443	17.00 - 23.00% of mass 442	15.52 (19.29)

Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\ND198.D

Date : 29-JUL-2021 12:26

Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG303383-1,SO4724

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

Data File: ND198.D
Spectrum: Avg. Scans 239-241 (7.50), Background Scan 233
Location of Maximum: 198.00
Number of points: 310

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	519	120.00	567	199.00	19544	285.00	787
38.00	1413	121.00	188	200.00	1449	286.00	166
39.00	8878	122.00	2720	201.00	1359	289.00	278
40.00	276	123.00	4086	203.00	1638	290.00	275
41.00	259	124.00	1892	204.00	9147	291.00	58
43.00	106	125.00	2052	205.00	16239	292.00	251
44.00	69	127.00	165056	206.00	68544	293.00	1185
45.00	215	128.00	12452	207.00	8288	294.00	292
48.00	181	129.00	61344	208.00	1968	295.00	152
49.00	476	130.00	4745	209.00	688	296.00	17648
50.00	28568	131.00	1033	210.00	722	297.00	2575
51.00	115064	132.00	577	211.00	2688	298.00	121
52.00	5863	133.00	345	212.00	276	301.00	379
53.00	338	134.00	1714	213.00	255	302.00	358
54.00	51	135.00	5046	214.00	51	303.00	2335
55.00	535	136.00	1939	215.00	700	304.00	636
56.00	2905	137.00	2552	216.00	1410	308.00	205
57.00	7904	138.00	249	217.00	16353	309.00	152
58.00	285	139.00	313	218.00	2040	310.00	181
59.00	146	140.00	771	219.00	201	313.00	118
60.00	109	141.00	7334	220.00	195	314.00	965
61.00	1324	142.00	2573	221.00	14077	315.00	1914
62.00	1537	143.00	1842	222.00	553	316.00	1258
63.00	4827	144.00	503	223.00	3773	317.00	197
64.00	714	145.00	514	224.00	35848	321.00	589
65.00	2528	146.00	1263	225.00	9460	322.00	313
66.00	149	147.00	4079	226.00	983	323.00	6108
67.00	314	148.00	7939	227.00	15453	324.00	1004
68.00	1048	149.00	1519	228.00	1952	325.00	57
69.00	116976	150.00	454	229.00	3014	326.00	206
70.00	569	151.00	1074	230.00	470	327.00	1030
71.00	96	152.00	493	231.00	1199	328.00	481
72.00	50	153.00	2329	232.00	156	329.00	66
73.00	996	154.00	1741	233.00	364	332.00	517
74.00	11305	155.00	4428	234.00	781	333.00	701

Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\ND198.D

Date : 29-JUL-2021 12:26

Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG303383-1,SO4724

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

Data File: ND198.D
Spectrum: Avg. Scans 239-241 (7.50), Background Scan 233
Location of Maximum: 198.00
Number of points: 310

m/z	Y	m/z	Y	m/z	Y	m/z	Y
75.00	17744	156.00	6260	235.00	959	334.00	3605
76.00	6170	157.00	1403	236.00	649	335.00	745
77.00	137792	158.00	1198	237.00	1351	336.00	88
78.00	9316	159.00	1131	238.00	179	341.00	576
79.00	7721	160.00	2247	239.00	705	342.00	159
80.00	6194	161.00	3188	240.00	455	346.00	1421
81.00	8575	162.00	1083	241.00	897	347.00	168
82.00	2414	163.00	269	242.00	1768	351.00	113
83.00	2402	164.00	439	243.00	1718	352.00	1727
84.00	243	165.00	2173	244.00	27696	353.00	1288
85.00	1837	166.00	2138	245.00	3610	354.00	1940
86.00	2471	167.00	14012	246.00	4996	355.00	228
87.00	1207	168.00	5910	247.00	1191	359.00	143
88.00	413	169.00	1333	248.00	204	365.00	8141
89.00	256	170.00	426	249.00	880	366.00	1032
91.00	1914	171.00	619	250.00	74	370.00	206
92.00	2178	172.00	1322	251.00	199	371.00	423
93.00	13256	173.00	1729	252.00	179	372.00	3170
94.00	1163	174.00	2677	253.00	594	373.00	725
95.00	254	175.00	5851	255.00	140544	374.00	60
96.00	998	176.00	1681	256.00	21032	377.00	54
97.00	210	177.00	2523	257.00	1419	383.00	1014
98.00	10426	178.00	973	258.00	8643	384.00	203
99.00	8788	179.00	10453	259.00	1359	390.00	511
100.00	957	180.00	7153	260.00	272	391.00	239
101.00	5394	181.00	3259	261.00	298	392.00	236
102.00	222	182.00	584	264.00	179	401.00	157
103.00	1581	183.00	298	265.00	3233	402.00	1395
104.00	3424	184.00	826	266.00	172	403.00	1803
105.00	3097	185.00	4848	267.00	69	404.00	673
106.00	927	186.00	40704	270.00	222	405.00	116
107.00	43440	187.00	11749	271.00	390	421.00	1594
108.00	6895	188.00	1203	272.00	441	422.00	1251
109.00	1337	189.00	2081	273.00	4075	423.00	12203
110.00	81920	190.00	318	274.00	11928	424.00	2497

Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\ND198.D

Date : 29-JUL-2021 12:26

Client ID: DFTPP02 Instrument: gcms-n.i

Sample Info: WG303383-1,SO4724

Operator: JCG

Column phase: RTX-5SILMS Column diameter: 0.25

Data File: ND198.D
Spectrum: Avg. Scans 239-241 (7.50), Background Scan 233
Location of Maximum: 198.00
Number of points: 310

m/z	Y	m/z	Y	m/z	Y	m/z	Y
111.00	11760	191.00	1221	275.00	62096	425.00	123
112.00	1236	192.00	3143	276.00	7710	441.00	32840
113.00	577	193.00	3438	277.00	5087	442.00	228416
115.00	276	194.00	663	278.00	979	443.00	44064
116.00	2221	195.00	477	279.00	133	444.00	3804
117.00	29784	196.00	8139	282.00	51	445.00	124
118.00	2258	197.00	448	283.00	503		
119.00	437	198.00	283840	284.00	380		

Raw QC Data Section

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Lab ID: WG303222-1
Client ID: Method Blank
SDG: SO4724
Lab File ID: N3626.D

Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222
% Solids: NA

Analysis Date: 28-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
Report Date: 02-AUG-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Naphthalene	U	0.10	ug/L	1	.2	0.20	0.064	0.10
2-Methylnaphthalene	U	0.10	ug/L	1	.2	0.20	0.077	0.10
1-Methylnaphthalene	U	0.10	ug/L	1	.2	0.20	0.068	0.10
Acenaphthylene	U	0.10	ug/L	1	.2	0.20	0.054	0.10
Acenaphthene	U	0.10	ug/L	1	.2	0.20	0.064	0.10
Fluorene	U	0.10	ug/L	1	.2	0.20	0.061	0.10
Phenanthrene	U	0.10	ug/L	1	.2	0.20	0.051	0.10
Anthracene	U	0.10	ug/L	1	.2	0.20	0.044	0.10
Fluoranthene	U	0.10	ug/L	1	.2	0.20	0.073	0.10
Pyrene	U	0.10	ug/L	1	.2	0.20	0.059	0.10
Benzo(a)anthracene	U	0.10	ug/L	1	.2	0.20	0.046	0.10
Chrysene	U	0.10	ug/L	1	.2	0.20	0.036	0.10
Benzo(b)Fluoranthene	U	0.10	ug/L	1	.2	0.20	0.089	0.10
Benzo(k)fluoranthene	U	0.10	ug/L	1	.2	0.20	0.049	0.10
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.20	0.066	0.10
Indeno(1,2,3-cd)pyrene	U	0.10	ug/L	1	.2	0.20	0.052	0.10
Dibenzo(a,h)anthracene	U	0.10	ug/L	1	.2	0.20	0.070	0.10
Benzo(g,h,i)perylene	U	0.10	ug/L	1	.2	0.20	0.065	0.10
2-Methylnaphthalene-D10		70.0	%					
Fluorene-D10		70.8	%					
Pyrene-D10		82.4	%					

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Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3626.D
Report Date: 02-Aug-2021 10:46

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Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3626.D
Lab Smp Id: WG303222-1 Client Smp ID: WG303222-Blank
Inj Date : 28-JUL-2021 20:12
Operator : JCG Inst ID: gcms-n.i
Smp Info : WG303222-1,SO4724
Misc Info : WG303306,WG303222,WG303306-4,SO4724-1
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 09:00 cgomez Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27 Cal File: N3623.D
Als bottle: 10 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: sw8270sim+1mn.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

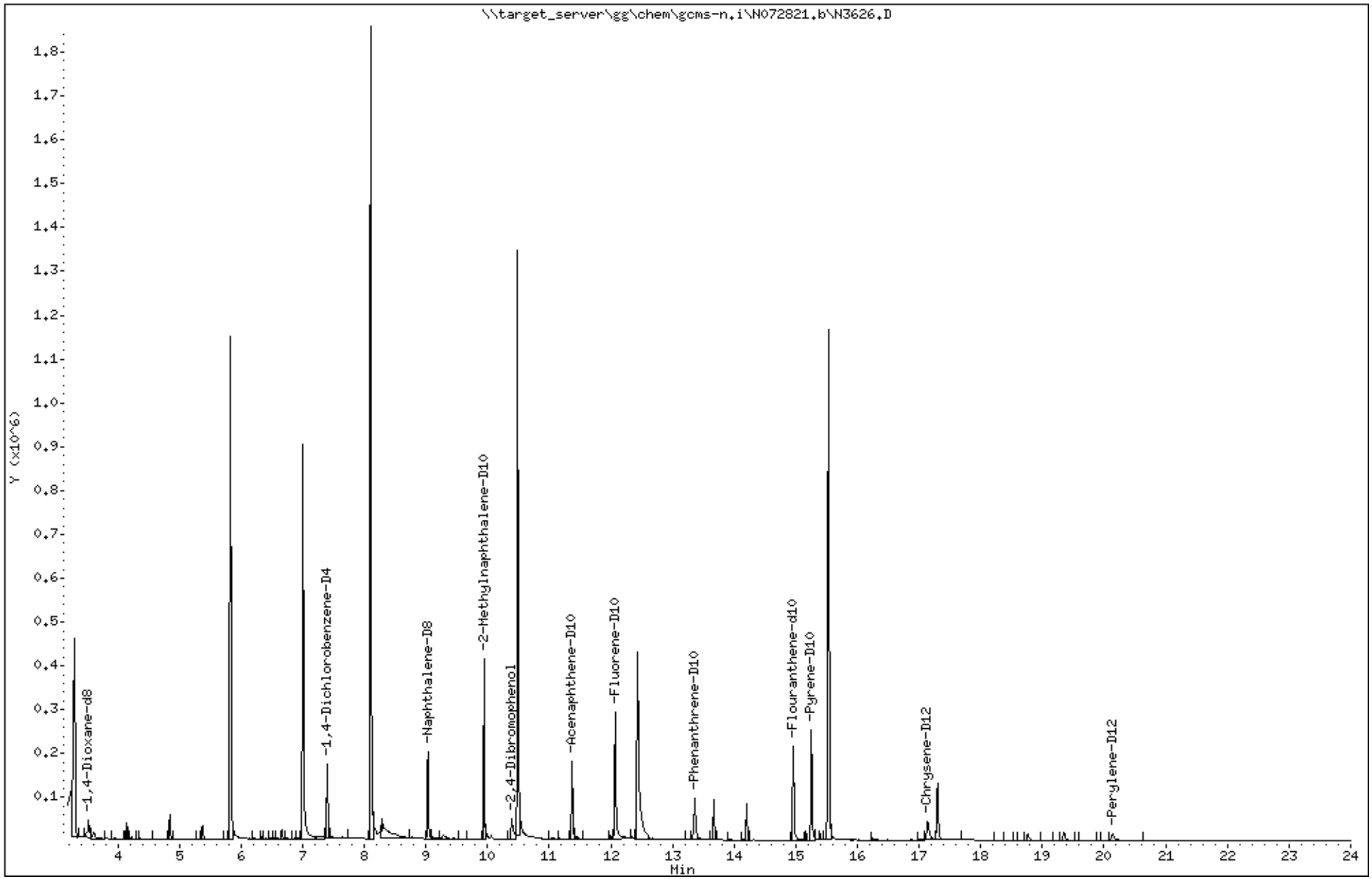
Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	7.400	7.390	(1.000)	59337	0.80000	(aQ)	
*	27 Naphthalene-D8	136	9.033	9.022	(1.000)	221580	0.80000	(a)	
$	33 2-Methylnaphthalene-D10	152	9.938	9.937	(1.100)	206393	1.40003	1.40	
*	48 Acenaphthene-D10	164	11.370	11.369	(1.000)	114900	0.80000	(a)	
$	56 Fluorene-D10	174	12.067	12.067	(1.061)	191312	1.41686	1.42	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	165454	0.80000	(a)	
$	73 Pyrene-D10	212	15.251	15.262	(0.890)	218027	1.64837	1.65	
*	78 Chrysene-D12	240	17.139	17.139	(1.000)	69785	0.80000	(a)	
*	85 Perylene-D12	264	20.139	20.139	(1.000)	42876	0.80000	(a)	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3626.D
Date : 28-JUL-2021 20:12
Client ID: WG303222-Blank
Instrument: gcms-n.i
Sample Info: WG303222-1,S04724
Volume Injected (uL): 1.0
Operator: JCG
Column phase: ZB5-MS
Column diameter: 0.25



Katahdin Analytical Services 2000151

Katahdin
ANALYTICAL SERVICES

LCS Recovery Report

Lab ID: WG303222-2
Client ID: LCS
SDG: SO4724
LCS File ID: N3625.D
Report Date: 02-AUG-21

Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222

Analysis Date: 28-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ

Compound	Recovery (%)	Conc Added	Conc Recovered	Conc Units	Limits
Naphthalene	74.5	2.00	1.49	ug/L	43-114
2-Methylnaphthalene	66.0	2.00	1.32	ug/L	39-114
1-Methylnaphthalene	69.0	2.00	1.38	ug/L	41-115
Acenaphthylene	62.0	2.00	1.24	ug/L	35-121
Acenaphthene	70.0	2.00	1.40	ug/L	48-114
Fluorene	74.0	2.00	1.48	ug/L	50-118
Phenanthrene	80.5	2.00	1.61	ug/L	53-115
Anthracene	73.0	2.00	1.46	ug/L	53-119
Fluoranthene	84.5	2.00	1.69	ug/L	58-120
Pyrene	87.0	2.00	1.74	ug/L	53-121
Benzo(a)anthracene	90.5	2.00	1.81	ug/L	59-120
Chrysene	79.5	2.00	1.59	ug/L	57-120
Benzo(b)Fluoranthene	97.0	2.00	1.94	ug/L	53-126
Benzo(k)fluoranthene	71.0	2.00	1.42	ug/L	54-125
Benzo(a)pyrene	71.0	2.00	1.42	ug/L	53-120
Indeno(1,2,3-cd)pyrene	65.0	2.00	1.30	ug/L	48-130
Dibenzo(a,h)anthracene	74.5	2.00	1.49	ug/L	44-131
Benzo(g,h,i)perylene	74.5	2.00	1.49	ug/L	44-128
2-Methylnaphthalene-D10	83.6				43-92
Fluorene-D10	72.2				29-101
Pyrene-D10	86.5				53-166

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Tel:(207) 874-2400 Fax:(207) 775-4029
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Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3625.D
Report Date: 02-Aug-2021 10:46

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072821.b\N3625.D
Lab Smp Id: WG303222-2 Client Smp ID: WG303222-LCS
Inj Date : 28-JUL-2021 19:37
Operator : JCG Inst ID: gcms-n.i
Smp Info : WG303222-2,SO4724
Misc Info : WG303306,WG303222,WG303306-4,SO4724-1
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N072821.b\NSPSIM94.m
Meth Date : 29-Jul-2021 09:00 cgomez Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27 Cal File: N3623.D
Als bottle: 9 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: sw8270sim+1mn.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.000	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	7.390	7.390	(1.000)	60059	0.80000	(aQ)	
*	27 Naphthalene-D8	136	9.022	9.022	(1.000)	207662	0.80000	(a)	
	28 Naphthalene	128	9.054	9.054	(1.004)	400768	1.48832	1.49	
$	33 2-Methylnaphthalene-D10	152	9.938	9.937	(1.101)	231096	1.67266	1.67	
	34 2-Methylnaphthalene	142	9.977	9.977	(1.106)	260395	1.32548	1.32	
	35 1-Methylnaphthalene	142	10.105	10.105	(1.120)	242851	1.37522	1.38	
	46 Acenaphthylene	152	11.173	11.173	(0.984)	364978	1.24352	1.24	
*	48 Acenaphthene-D10	164	11.359	11.369	(1.000)	113688	0.80000	(a)	
	49 Acenaphthene	153	11.402	11.413	(1.004)	251924	1.40309	1.40	
$	56 Fluorene-D10	174	12.067	12.067	(1.062)	192970	1.44438	1.44	
	57 Fluorene	166	12.100	12.110	(1.065)	282318	1.48406	1.48	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	169228	0.80000	(a)	
	67 Phenanthrene	178	13.385	13.385	(1.003)	376814	1.61394	1.61	
	68 Anthracene	178	13.454	13.454	(1.008)	401853	1.45819	1.46	
	72 Fluoranthene	202	14.985	14.985	(1.122)	379766	1.68931	1.69	
$	73 Pyrene-D10	212	15.251	15.262	(0.890)	237758	1.73009	1.73	
	74 Pyrene	202	15.274	15.285	(0.891)	380715	1.74416	1.74	
	77 Benzo(a)anthracene	228	17.117	17.117	(0.999)	207452	1.80975	1.81	
*	78 Chrysene-D12	240	17.139	17.139	(1.000)	72506	0.80000	(a)	
	79 Chrysene	228	17.183	17.183	(1.003)	228114	1.58689	1.59	

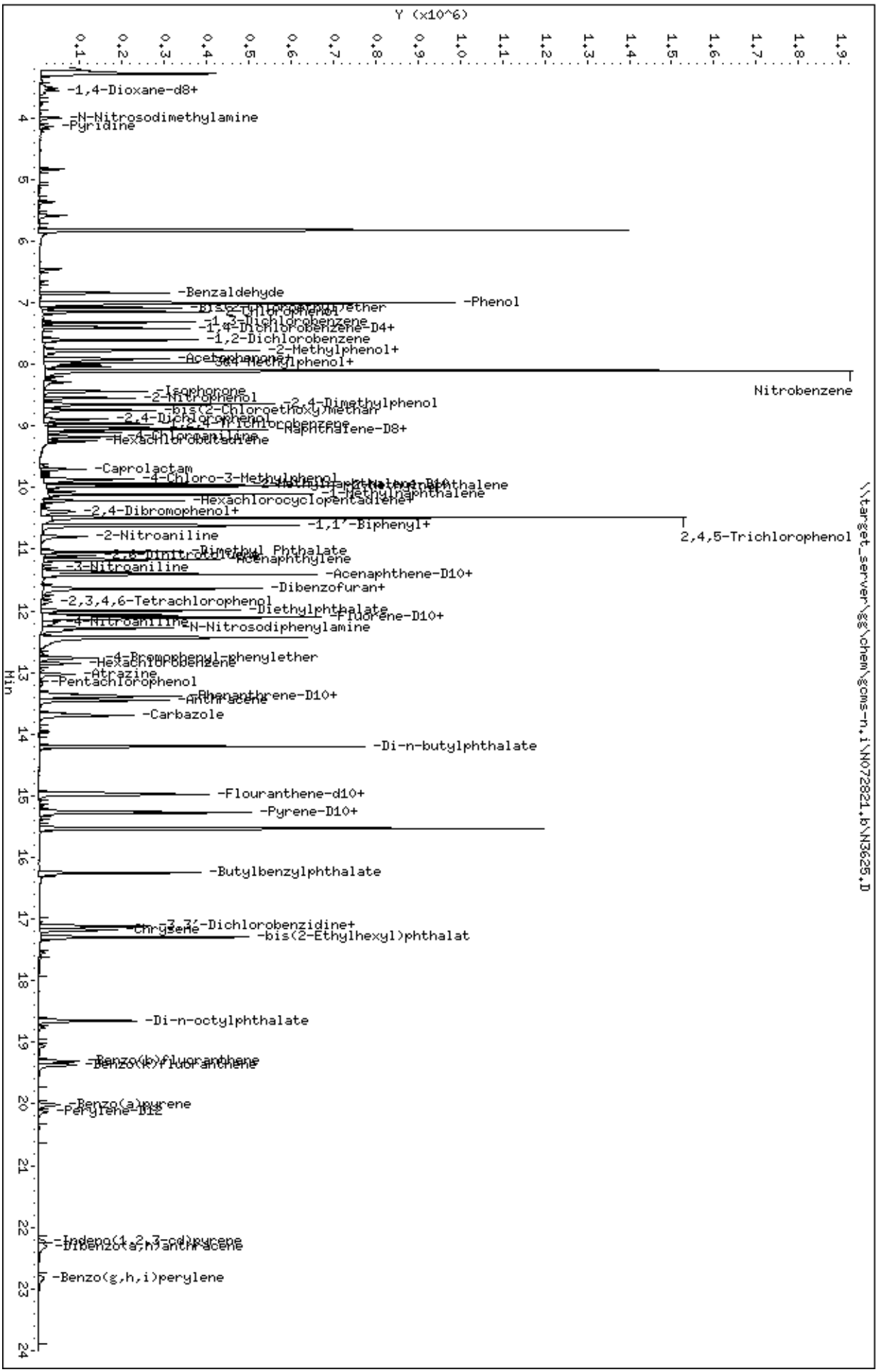
Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3625.D
Report Date: 02-Aug-2021 10:46

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
82	Benzo(b)fluoranthene	252	19.308	19.320	(0.959)	133240	1.94428	1.94	
83	Benzo(k)fluoranthene	252	19.365	19.376	(0.962)	158188	1.42524	1.42(H)	
84	Benzo(a)pyrene	252	20.016	20.016	(0.994)	97531	1.42228	1.42	
* 85	Perylene-D12	264	20.128	20.139	(1.000)	45910	0.80000	(a)	
86	Indeno(1,2,3-cd)pyrene	276	22.239	22.227	(1.298)	37161	1.30414	1.30(M)	M3
87	Dibenzo(a,h)anthracene	278	22.306	22.306	(1.108)	54621	1.49006	1.49	
88	Benzo(g,h,i)perylene	276	22.823	22.811	(1.134)	69277	1.48753	1.49	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

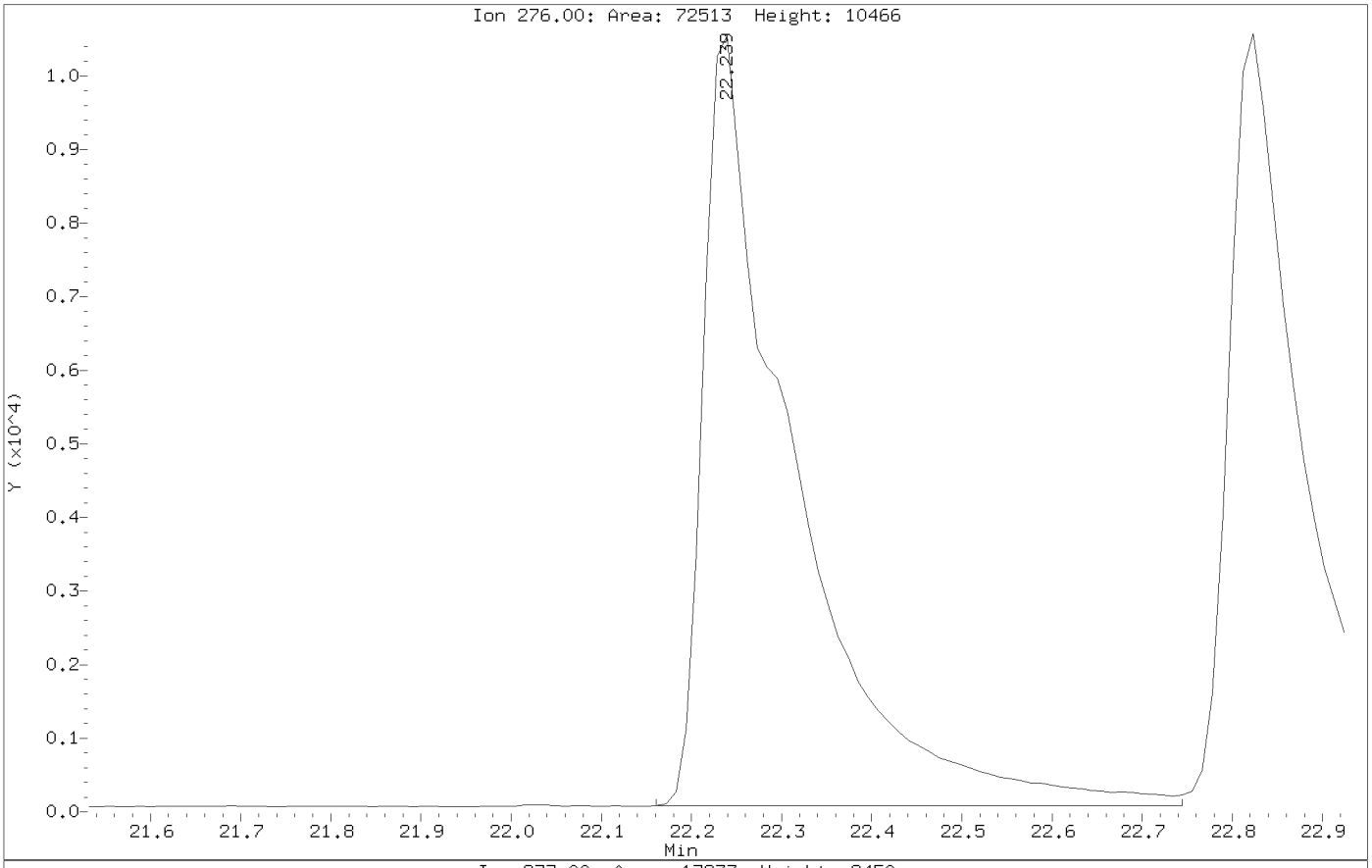
11:03 am, Aug 02, 2021

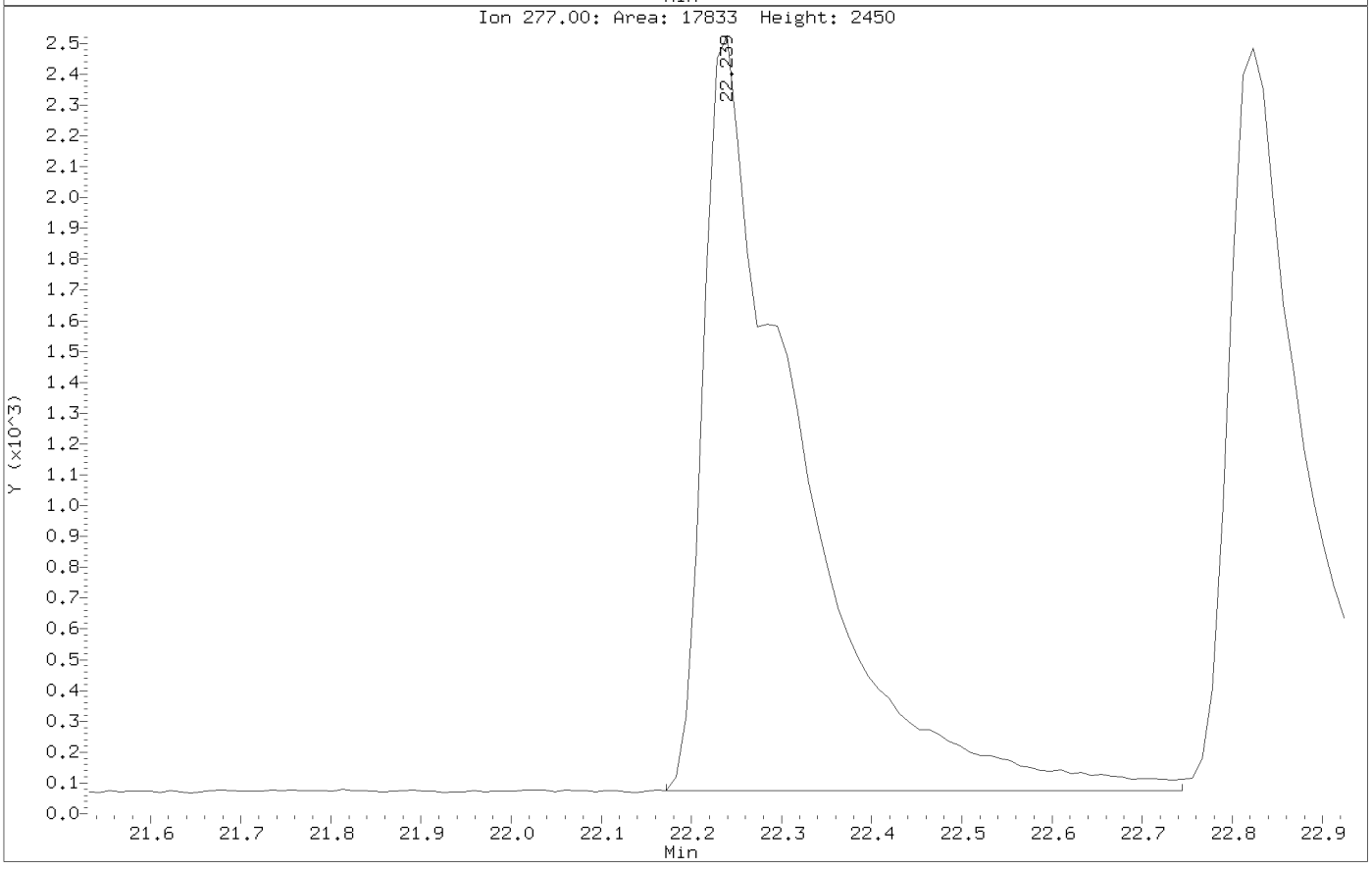

Data File: \\target_server\gg\chem\gcms-n,i\N072821,b\N3625,D
Date : 28-JUL-2021 19:37
Client ID: WG303222-LCS
Sample Info: WG303222-2,SD4724
Volume Injected (uL): 1.0
Column phase: ZB5-MS
Instrument: gcms-n,i
Operator: JCG
Column diameter: 0.25
\\target_server\gg\chem\gcms-n,i\N072821,b\N3625,D
Y (x10^6)
Min
-1,4-Dioxane-d8+
-N-Nitrosodimethylamine
-Pyridine
-Benzaldehyde
-Phenol
-1,4-Dichlorobenzene-D4+
-1,2-Dichlorobenzene
-2-Methylphenol+
-Acetophenone
-3&4-Methylphenol+
Nitrobenzene
-Isophorone
-2-Nitrophenol
-2,4-Dimethylphenol
-bis(2-Chloroethoxy)methan
-2,4-Dichlorophenol
-1,2,4-Trichlorobenzene
Naphthalene-D8+
-4-Chloroaniline
-Hexachlorobutadiene
-Caprolactam
-4-Chloro-3-Methylphenol
-1-Methylnaphthalene
-Hexachlorocyclopentadiene+
-2,4-Dibromophenol+
-1,1'-Biphenyl+
2,4,5-Trichlorophenol
-2-Nitroaniline
-Dimethyl Phthalate
-Acenaphthylene
-3-Nitroaniline
-Acenaphthene-D10+
-Dibenzofuran+
-2,3,4,6-Tetrachlorophenol
-Diethylphthalate
-Fluorene-D10+
-4-Nitroaniline
-N-Nitrosodiphenylamine
-4-Bromophenyl-phenylether
-Hexachlorobenzene
-Atrazine
-Pentachlorophenol
-Phenanthrene-D10+
-Anthracene
-Carbazole
-Di-n-butylphthalate
-Flouranthene-d10+
-Pyrene-D10+
-Butylbenzylphthalate
-3,3'-Dichlorobenzidine+
-Chrysene
-bis(2-Ethylhexyl)phthalat
-Di-n-octylphthalate
-Benzo(b)fluoranthene
-Benzo(k)Fluoranthene
-Benzo(a)pyrene
-Perylene-D12
-Indeno(1,2,3-cd)pyrene
-Dibenz(a,h)anthracene
-Benzo(g,h,i)perylene

BEFORE MANUAL INTEGRATION

Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3625.D
Injection Date: 28-JUL-2021 19:37
Instrument: gcms-n.i
Client Sample ID: WG303222-LCS

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

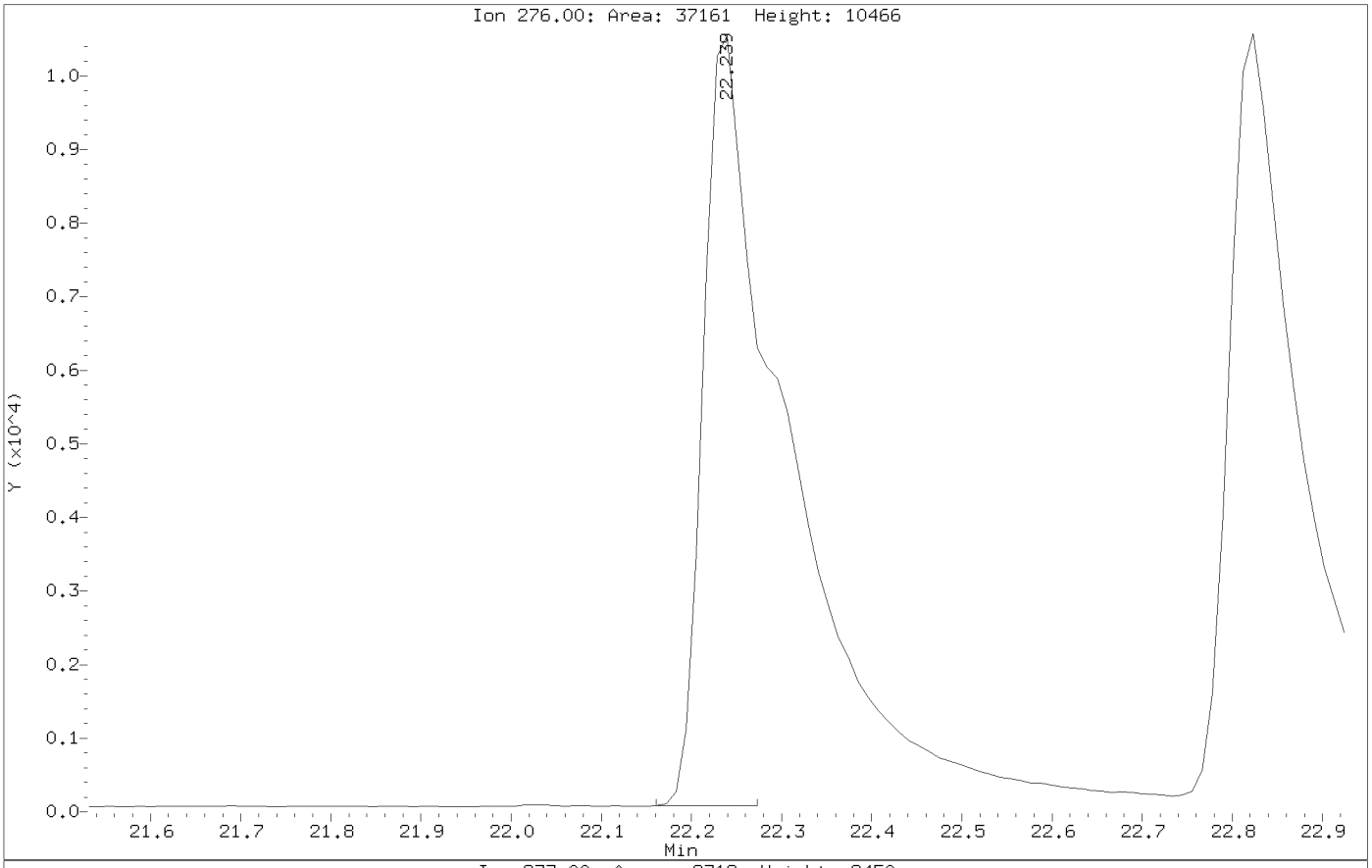


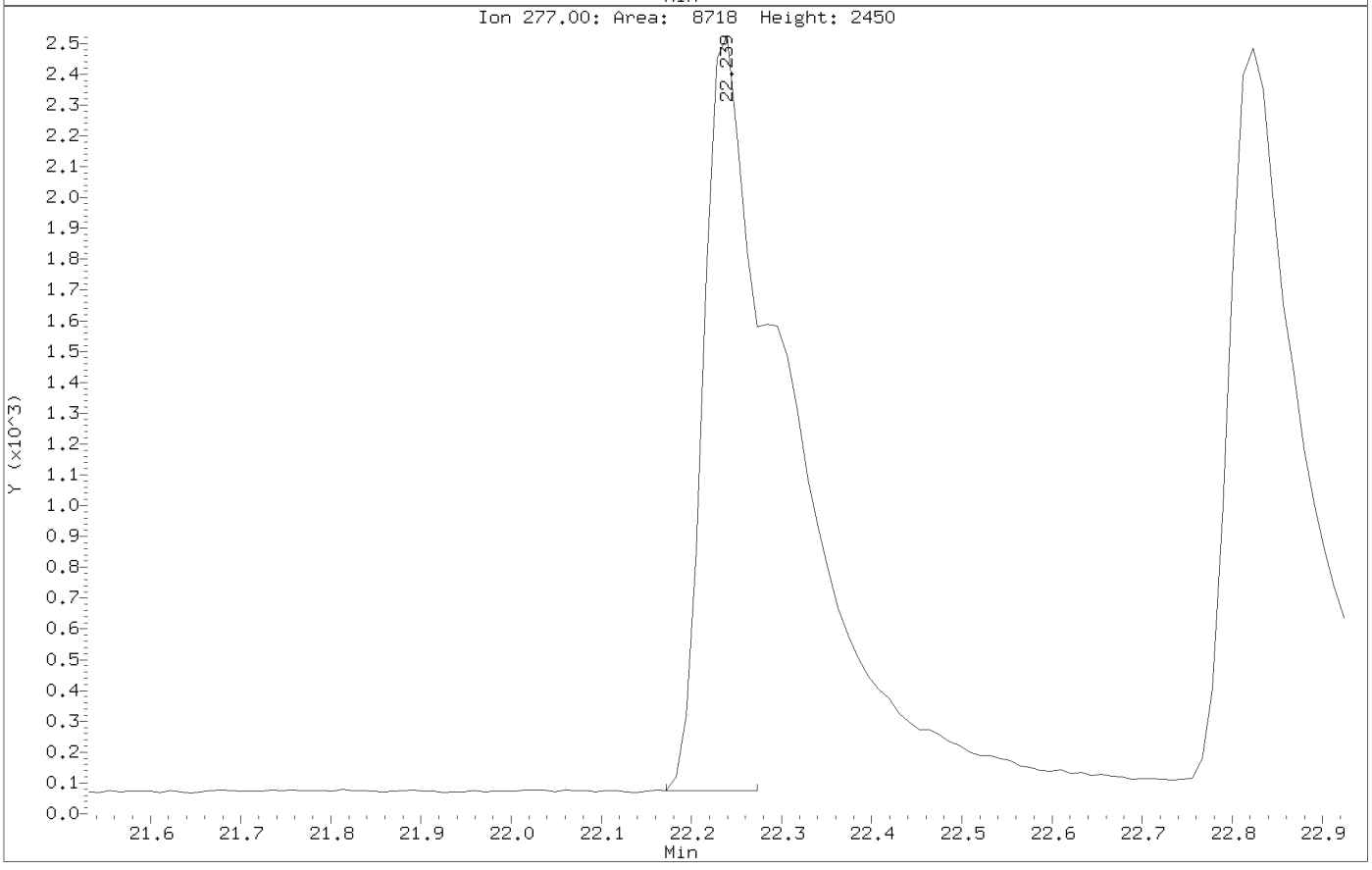


Data File: \\target_server\gg\chem\gcms-n.i\N072821.b\N3625.D
Injection Date: 28-JUL-2021 19:37
Instrument: gcms-n.i
Client Sample ID: WG303222-LCS

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

AFTER MANUAL INTEGRATION





Katahdin
ANALYTICAL SERVICES

MS/MSD Recovery Report

MS ID: WG303222-5
MSD ID: WG303222-6
Sample ID: SO4724-2
Client ID: DW-01-INF-SUMMER2021
SDG: SO4724
MS File ID: N3644.D

Extract Date: 27-JUL-21
Extracted By: SM/GN
Extraction Method: SW846 3510C
Lab Prep Batch: WG303222
Report Date: 02-AUG-21
MSD File ID: N3645.D

Analysis Date: 29-JUL-21
Analyst: JCG
Analysis Method: SW846 8270D SIM
Matrix: AQ
% Solids: NA

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
Naphthalene	1.87	1.90	ug/L	U0.093	1.2	1.2	63.7	63.5	2	20	43-114
2-Methylnaphthalene	1.87	1.90	ug/L	U0.093	1.1	1.1	56.7	55.6	0	20	39-114
1-Methylnaphthalene	1.87	1.90	ug/L	U0.093	1.1	1.1	57.8	57.2	1	20	41-115
Acenaphthylene	1.87	1.90	ug/L	U0.093	1.0	0.99	53.5	52.0	1	20	35-121
Acenaphthene	1.87	1.90	ug/L	U0.093	1.2	1.1	62.1	59.8	2	20	48-114
Fluorene	1.87	1.90	ug/L	U0.093	1.2	1.2	64.7	60.9	4	20	50-118
Phenanthrene	1.87	1.90	ug/L	U0.093	1.4	1.3	73.8	69.8	4	20	53-115
Anthracene	1.87	1.90	ug/L	U0.093	1.2	1.2	64.2	62.0	2	20	53-119
Fluoranthene	1.87	1.90	ug/L	U0.093	1.4	1.4	76.5	71.4	5	20	58-120
Pyrene	1.87	1.90	ug/L	U0.093	1.3	1.3	67.4	70.4	6	20	53-121
Benzo(a)anthracene	1.87	1.90	ug/L	U0.093	1.4	1.4	76.5	72.4	4	20	59-120
Chrysene	1.87	1.90	ug/L	U0.093	1.2	1.4	66.9	74.0	12	20	57-120
Benzo(b)Fluoranthene	1.87	1.90	ug/L	U0.093	1.4	1.4	74.9	71.9	2	20	53-126
Benzo(k)fluoranthene	1.87	1.90	ug/L	U0.093	1.0	1.0	55.6	54.1	1	20	54-125
Benzo(a)pyrene	1.87	1.90	ug/L	U0.093	1.0	1.0	55.6	54.1	1	20	53-120
Indeno(1,2,3-cd)pyrene	1.87	1.90	ug/L	U0.093	0.96	1.0	51.4	53.6	6	20	48-130
Dibenzo(a,h)anthracene	1.87	1.90	ug/L	U0.093	0.91	0.92	48.7	48.4	1	20	44-131
Benzo(g,h,i)perylene	1.87	1.90	ug/L	U0.093	0.97	0.99	52.1	52.1	2	20	44-128
2-Methylnaphthalene-D10							71.4	65.1			43-92
Fluorene-D10							62.5	61.2			29-101
Pyrene-D10							69.3	70.4			53-166

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029
http://www.katahdinlab.com

Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\N3644.D
Report Date: 02-Aug-2021 10:51

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072921.b\N3644.D
Lab Smp Id: WG303222-5 Client Smp ID: W-01-INF-SUMMER2021
Inj Date : 29-JUL-2021 13:49
Operator : JCG Inst ID: gcms-n.i
Smp Info : WG303222-5,SO4724
Misc Info : WG303383,WG303222,WG303306-4,SO4724-2
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N072921.b\NSPSIM94.m
Meth Date : 30-Jul-2021 08:11 gcms-n.i Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27 Cal File: N3623.D
Als bottle: 4 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: sw8270sim+1mn.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.070	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	7.400	7.390	(1.000)	59979	0.80000	(a)	
*	27 Naphthalene-D8	136	9.033	9.022	(1.000)	207764	0.80000	(a)	
	28 Naphthalene	128	9.055	9.054	(1.002)	342392	1.27090	1.19	
$	33 2-Methylnaphthalene-D10	152	9.938	9.937	(1.100)	197484	1.42868	1.34	
	34 2-Methylnaphthalene	142	9.977	9.977	(1.104)	224152	1.14044	1.06	
	35 1-Methylnaphthalene	142	10.105	10.105	(1.119)	203886	1.15400	1.08	
	46 Acenaphthylene	152	11.174	11.173	(0.983)	306376	1.07594	1.00	
*	48 Acenaphthene-D10	164	11.370	11.369	(1.000)	110298	0.80000	(a)	
	49 Acenaphthene	153	11.402	11.413	(1.003)	215445	1.23680	1.16	
$	56 Fluorene-D10	174	12.067	12.067	(1.061)	162088	1.25052	1.17	
	57 Fluorene	166	12.100	12.110	(1.064)	239508	1.29771	1.21	
*	66 Phenanthrene-D10	188	13.350	13.350	(1.000)	171308	0.80000	(a)	
	67 Phenanthrene	178	13.385	13.385	(1.003)	348602	1.47497	1.38	
	68 Anthracene	178	13.454	13.454	(1.008)	356890	1.27931	1.20	
	72 Fluoranthene	202	14.985	14.985	(1.122)	348829	1.53286	1.43	
$	73 Pyrene-D10	212	15.251	15.262	(0.890)	225769	1.38652	1.30	
	74 Pyrene	202	15.274	15.285	(0.891)	349153	1.35000	1.26	
	77 Benzo(a)anthracene	228	17.117	17.117	(0.999)	208056	1.53183	1.43	
*	78 Chrysene-D12	240	17.139	17.139	(1.000)	85910	0.80000	(a)	
	79 Chrysene	228	17.183	17.183	(1.003)	228330	1.34057	1.25	

Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\N3644.D
Report Date: 02-Aug-2021 10:51

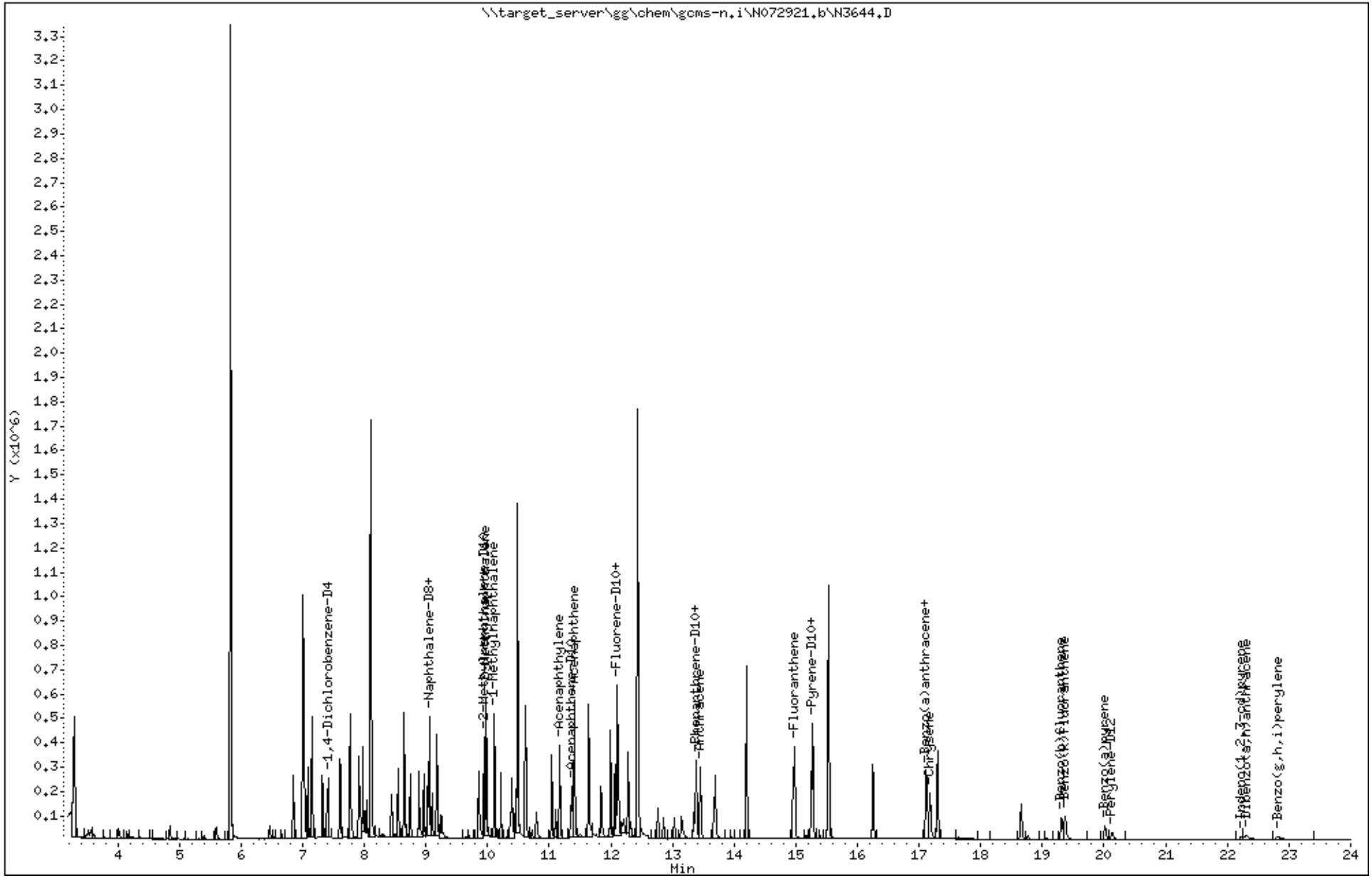
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
82	Benzo(b)fluoranthene	252	19.309	19.320	(0.959)	130565	1.49705	1.40	
83	Benzo(k)fluoranthene	252	19.376	19.376	(0.962)	157096	1.11216	1.04(H)	
84	Benzo(a)pyrene	252	20.016	20.016	(0.994)	97298	1.11489	1.04	
* 85	Perylene-D12	264	20.139	20.139	(1.000)	58428	0.80000	(a)	
86	Indeno(1,2,3-cd)pyrene	276	22.239	22.227	(1.298)	34693	1.02756	0.960(M)	M3
87	Dibenzo(a,h)anthracene	278	22.306	22.306	(1.108)	45494	0.97518	0.911	
88	Benzo(g,h,i)perylene	276	22.823	22.811	(1.133)	61798	1.04265	0.974	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

11:03 am, Aug 02, 2021

Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\N3644.D
Date : 29-JUL-2021 13:49
Client ID: W-01-INF-SUMMER2021
Instrument: gcms-n.i
Sample Info: WG303222-5,S04724
Volume Injected (uL): 1.0
Operator: JCG
Column phase: ZB5-MS
Column diameter: 0.25

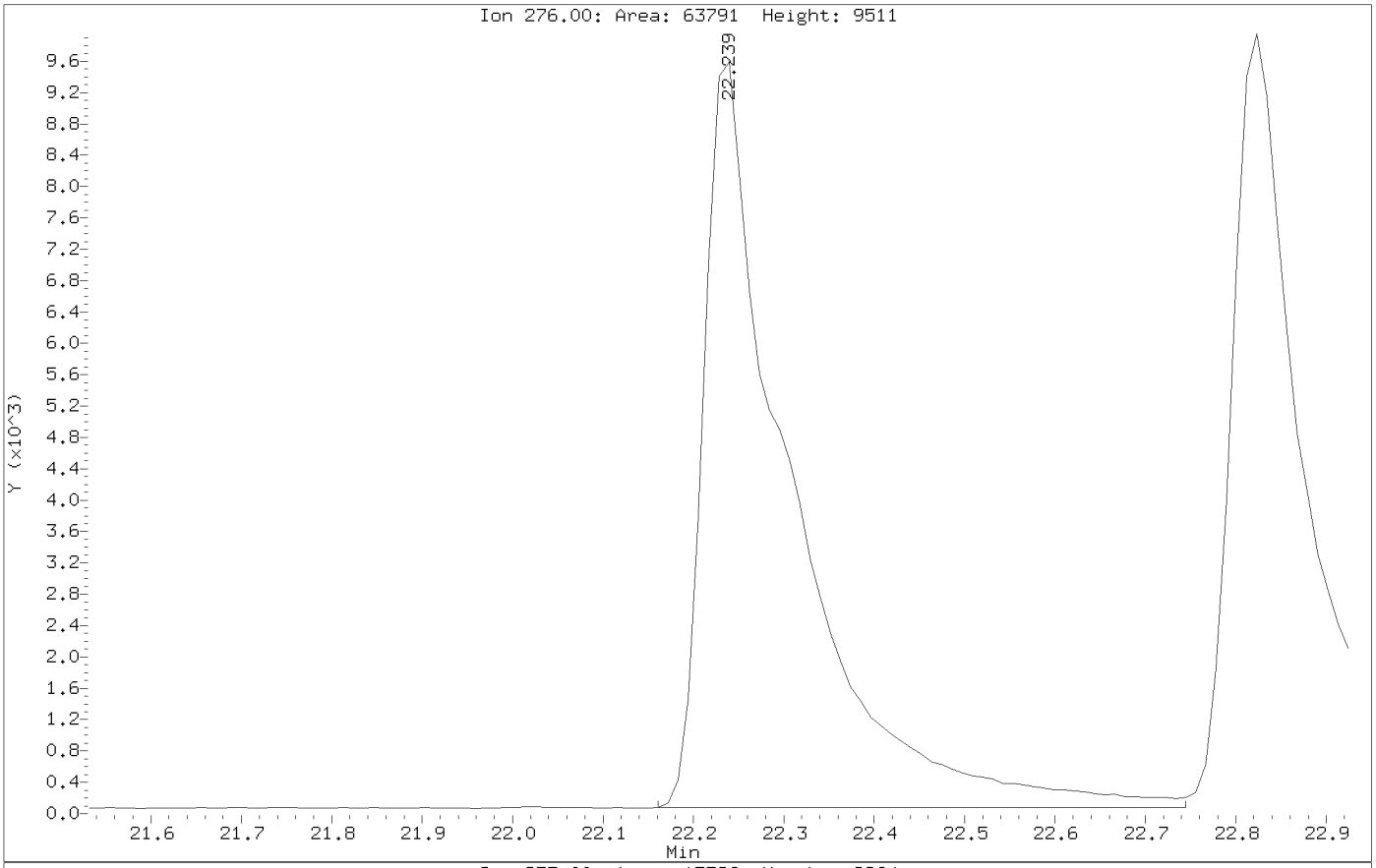


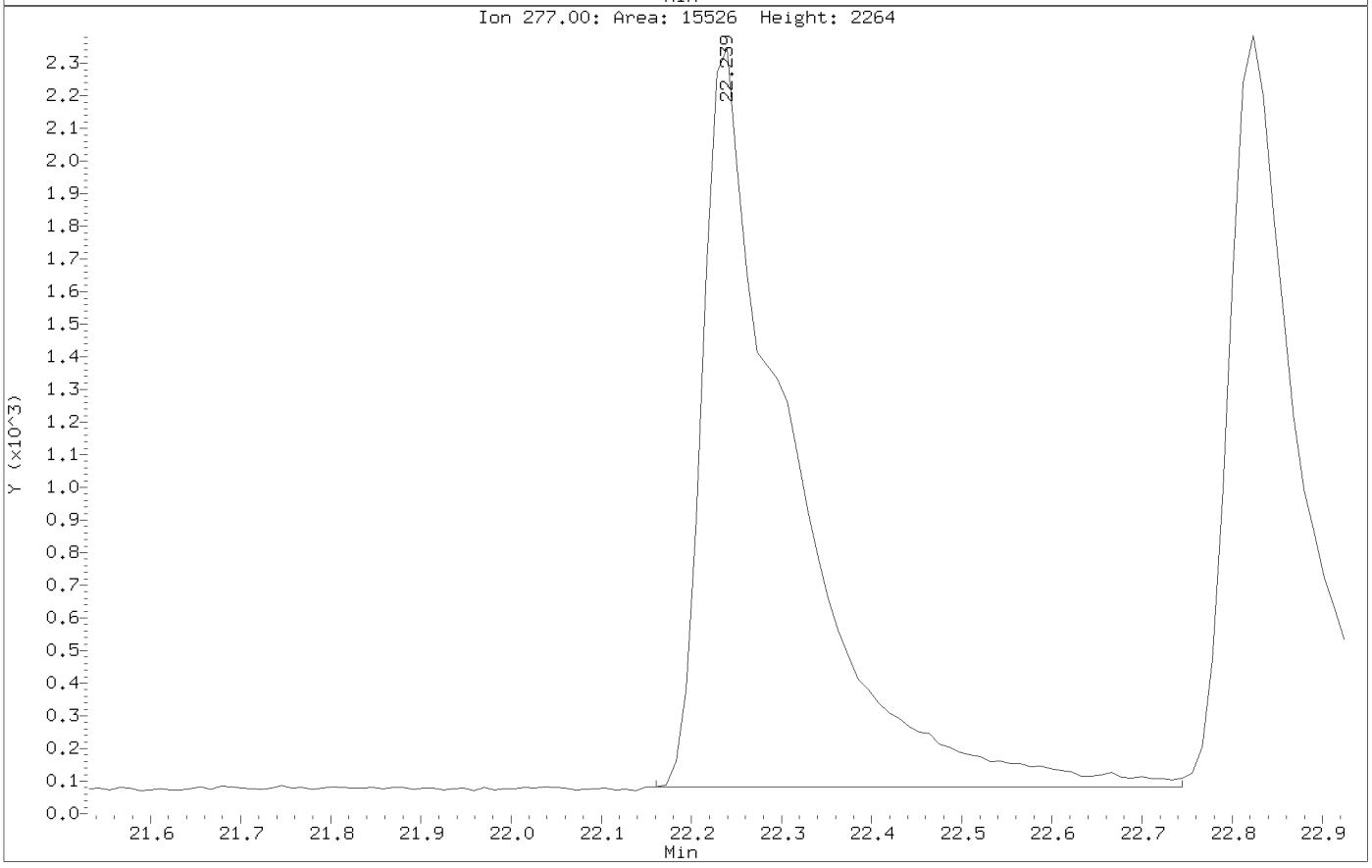
Katahdin Analytical Services 2000161

BEFORE MANUAL INTEGRATION

Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\N3644.D
Injection Date: 29-JUL-2021 13:49
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

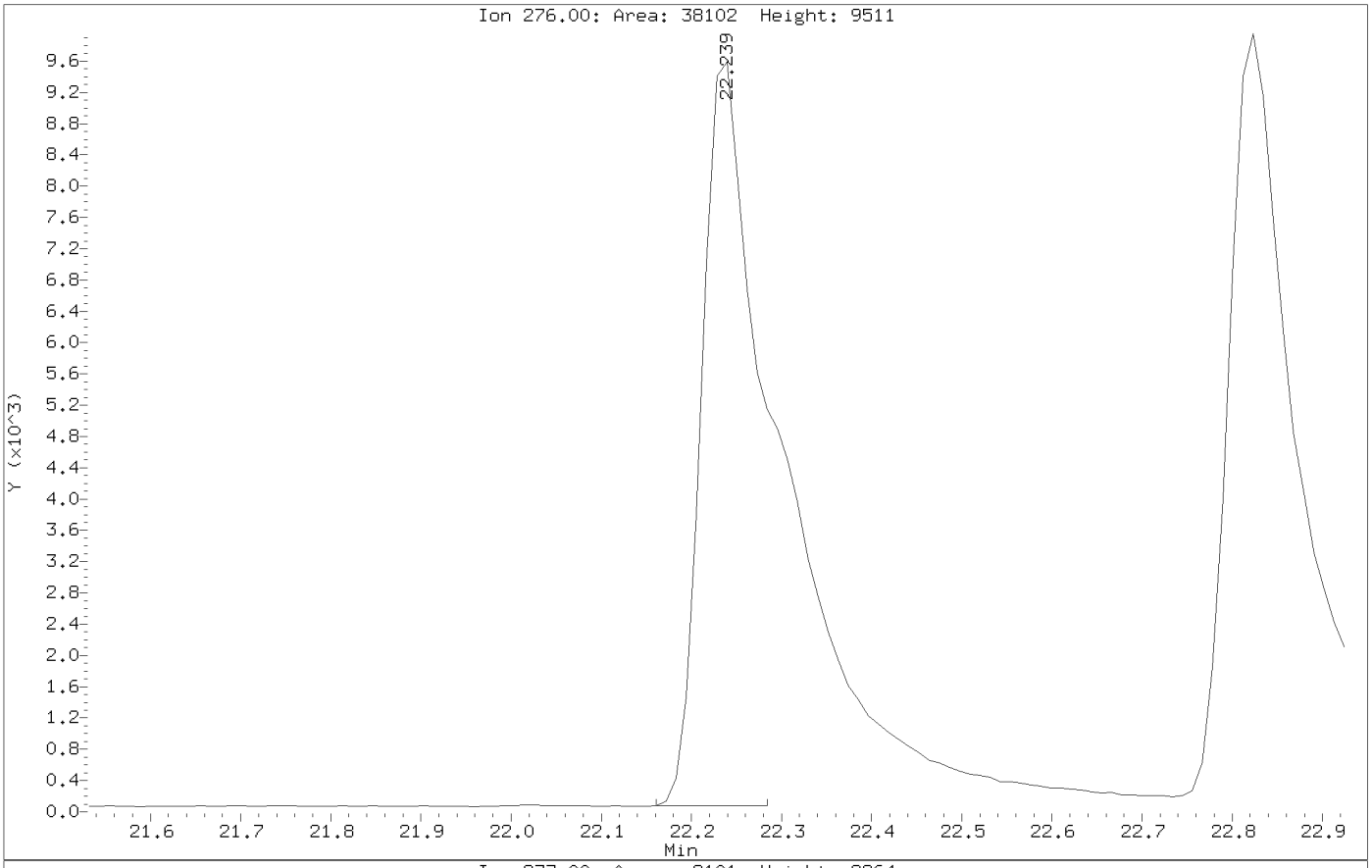


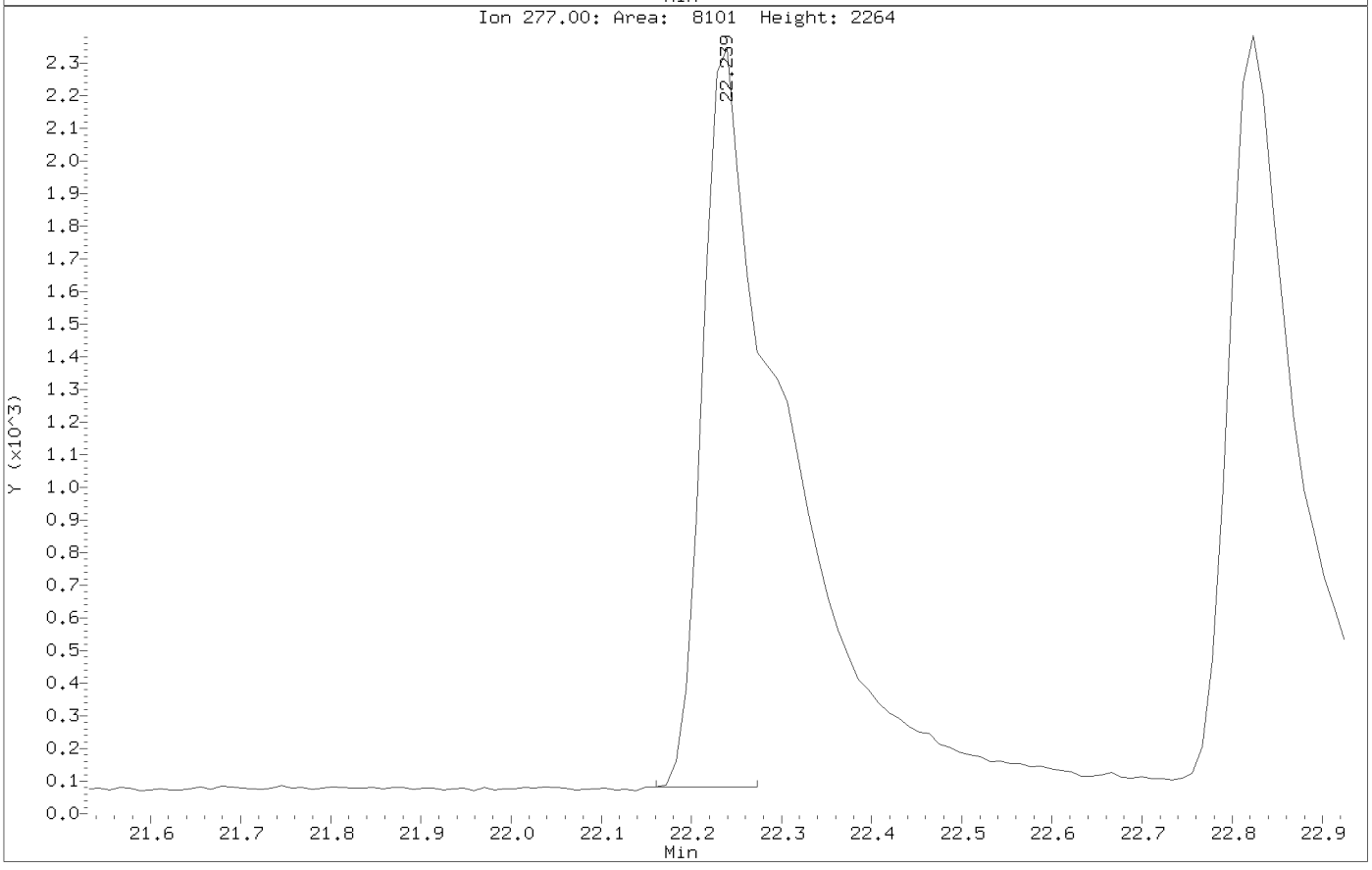


Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\N3644.D
Injection Date: 29-JUL-2021 13:49
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

AFTER MANUAL INTEGRATION





Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\N3645.D
Report Date: 02-Aug-2021 10:51

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gcms-n.i\N072921.b\N3645.D
Lab Smp Id: WG303222-6 Client Smp ID: W-01-INF-SUMMER2021
Inj Date : 29-JUL-2021 14:21
Operator : JCG Inst ID: gcms-n.i
Smp Info : WG303222-6,SO4724
Misc Info : WG303383,WG303222,WG303306-4,SO4724-2
Comment :
Method : \\target_server\gg\chem\gcms-n.i\N072921.b\NSPSIM94.m
Meth Date : 30-Jul-2021 08:11 gcms-n.i Quant Type: ISTD
Cal Date : 28-JUL-2021 18:27 Cal File: N3623.D
Als bottle: 5 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: sw8270sim+1mn.sub
Target Version: 4.12
Processing Host: V200T4

Concentration Formula: Amt * DF * Uf*(Vt/Vo*Vi)*1000 * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Uf	1.000	Correction Factor
Vt	0.00100	Final Volume (L)
Vo	1.050	Sample Volume (L)
Vi	1.000	Volume injected (uL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)	REVIEW CODE
*	10 1,4-Dichlorobenzene-D4	152	7.390	7.390	(1.000)	55559	0.80000	(a)	
*	27 Naphthalene-D8	136	9.033	9.022	(1.000)	191726	0.80000	(a)	
	28 Naphthalene	128	9.054	9.054	(1.002)	315624	1.26955	1.21	
$	33 2-Methylnaphthalene-D10	152	9.937	9.937	(1.100)	166008	1.30143	1.24	
	34 2-Methylnaphthalene	142	9.976	9.977	(1.104)	202924	1.11880	1.06	
	35 1-Methylnaphthalene	142	10.104	10.105	(1.119)	187032	1.14716	1.09	
	46 Acenaphthylene	152	11.173	11.173	(0.983)	271997	1.03916	0.990	
*	48 Acenaphthene-D10	164	11.369	11.369	(1.000)	101387	0.80000	(a)	
	49 Acenaphthene	153	11.401	11.413	(1.003)	191520	1.19609	1.14	
$	56 Fluorene-D10	174	12.066	12.067	(1.061)	145788	1.22362	1.16	
	57 Fluorene	166	12.099	12.110	(1.064)	206100	1.21485	1.16	
*	66 Phenanthrene-D10	188	13.349	13.350	(1.000)	146181	0.80000	(a)	
	67 Phenanthrene	178	13.384	13.385	(1.003)	281027	1.39344	1.33	
	68 Anthracene	178	13.453	13.454	(1.008)	295134	1.23979	1.18	
	72 Fluoranthene	202	14.984	14.985	(1.122)	277667	1.42988	1.36	
$	73 Pyrene-D10	212	15.251	15.262	(0.890)	175597	1.40807	1.34	
	74 Pyrene	202	15.273	15.285	(0.891)	278484	1.40592	1.34	
	77 Benzo(a)anthracene	228	17.116	17.117	(0.999)	150444	1.44627	1.38	
*	78 Chrysene-D12	240	17.138	17.139	(1.000)	65796	0.80000	(a)	
	79 Chrysene	228	17.183	17.183	(1.003)	192862	1.47849	1.41	

Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\N3645.D
Report Date: 02-Aug-2021 10:51

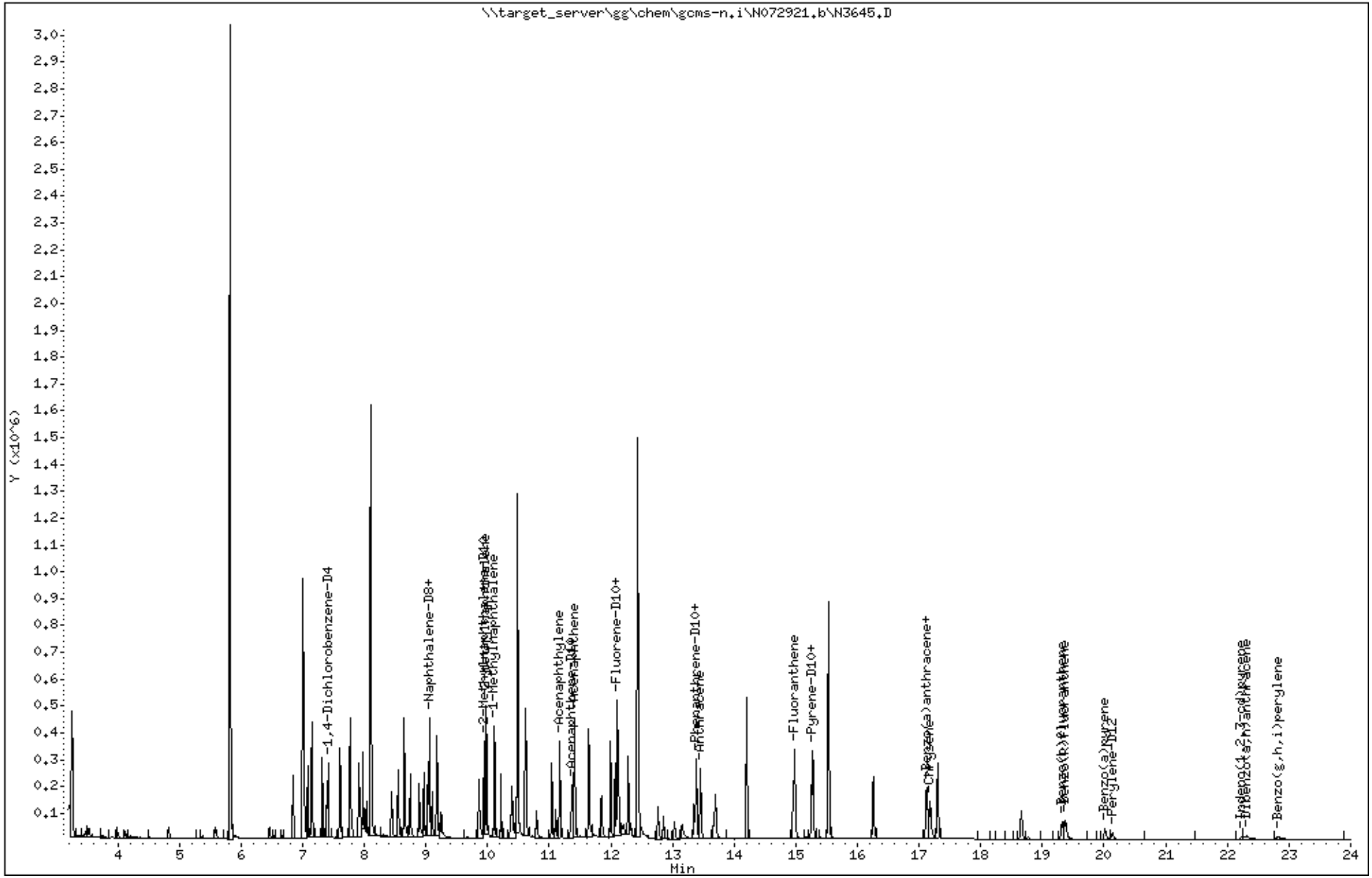
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
82	Benzo(b)fluoranthene	252	19.319	19.320	(0.959)	100055	1.43604	1.37	
83	Benzo(k)fluoranthene	252	19.375	19.376	(0.962)	122153	1.08249	1.03(H)	
84	Benzo(a)pyrene	252	20.015	20.016	(0.994)	75736	1.08630	1.03	
* 85	Perylene-D12	264	20.138	20.139	(1.000)	46677	0.80000	(a)	
86	Indeno(1,2,3-cd)pyrene	276	22.238	22.227	(1.298)	27643	1.06904	1.02(M)	M3
87	Dibenzo(a,h)anthracene	278	22.317	22.306	(1.108)	36135	0.96956	0.923	
88	Benzo(g,h,i)perylene	276	22.822	22.811	(1.133)	49366	1.04258	0.993	

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

11:03 am, Aug 02, 2021

Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\N3645.D
Date : 29-JUL-2021 14:21
Client ID: W-01-INF-SUMMER2021
Instrument: gcms-n.i
Sample Info: WG303222-6,S04724
Volume Injected (uL): 1.0
Operator: JCG
Column phase: ZB5-MS
Column diameter: 0.25

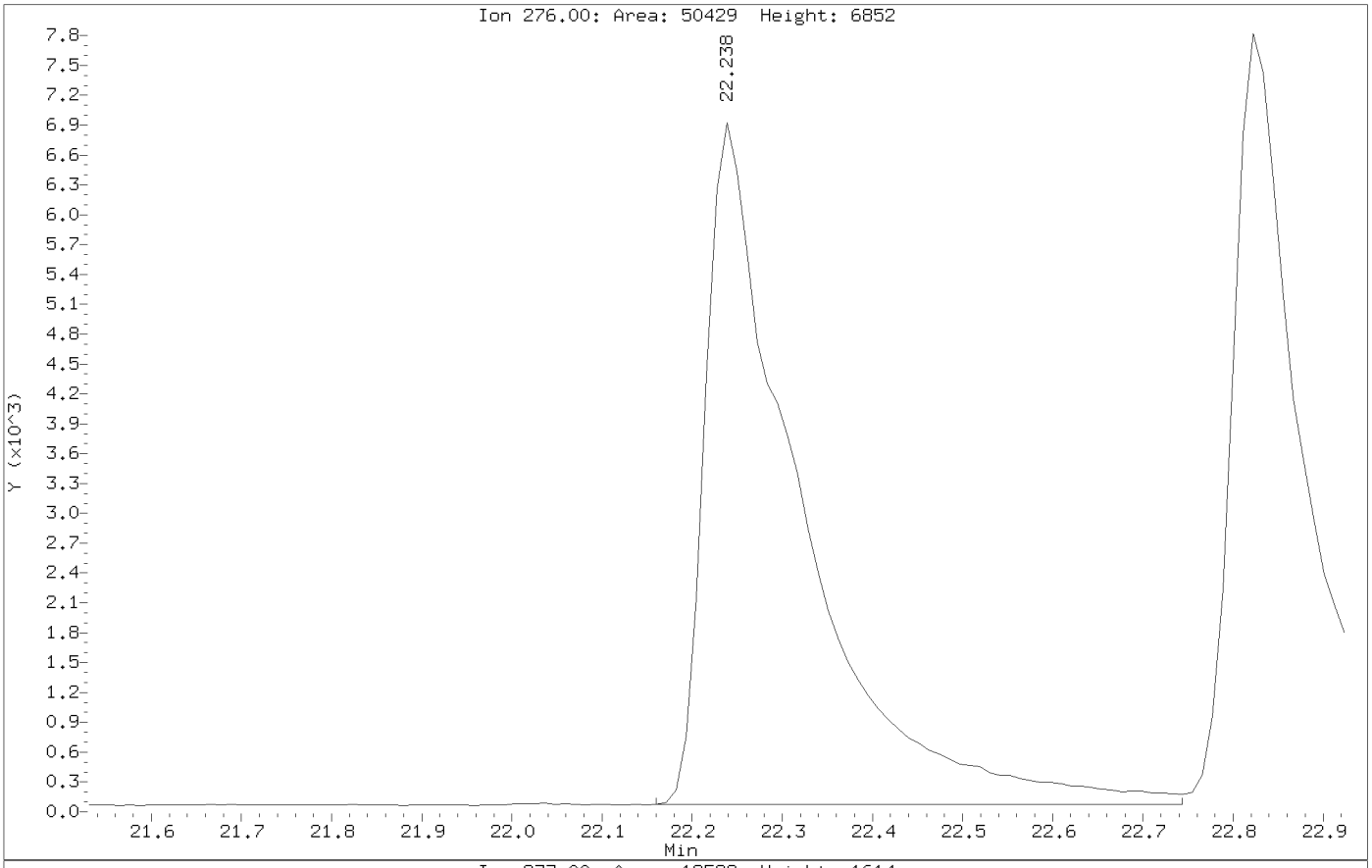


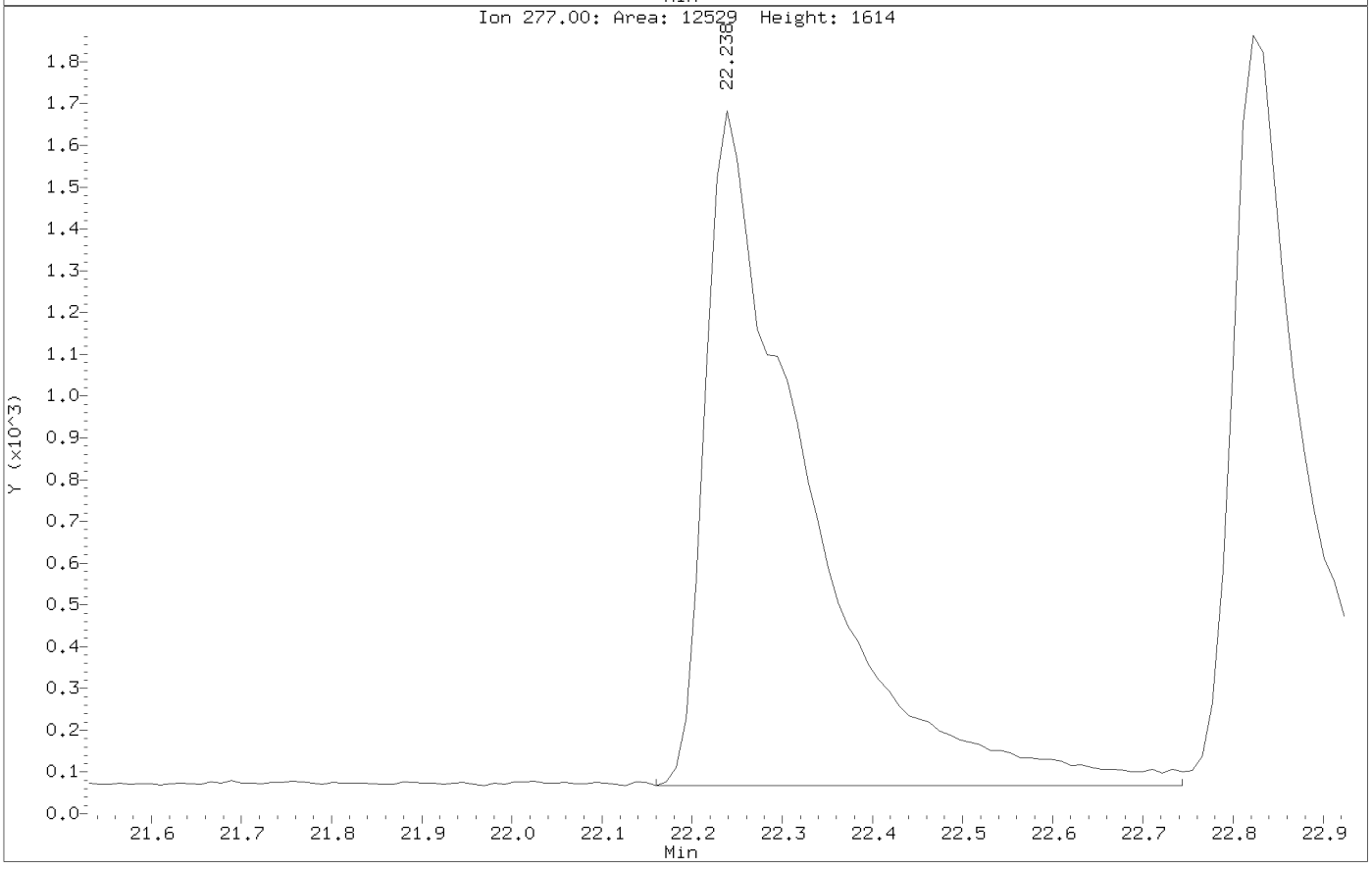
Katahdin Analytical Services 2000166

Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\N3645.D
Injection Date: 29-JUL-2021 14:21
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

BEFORE MANUAL INTEGRATION

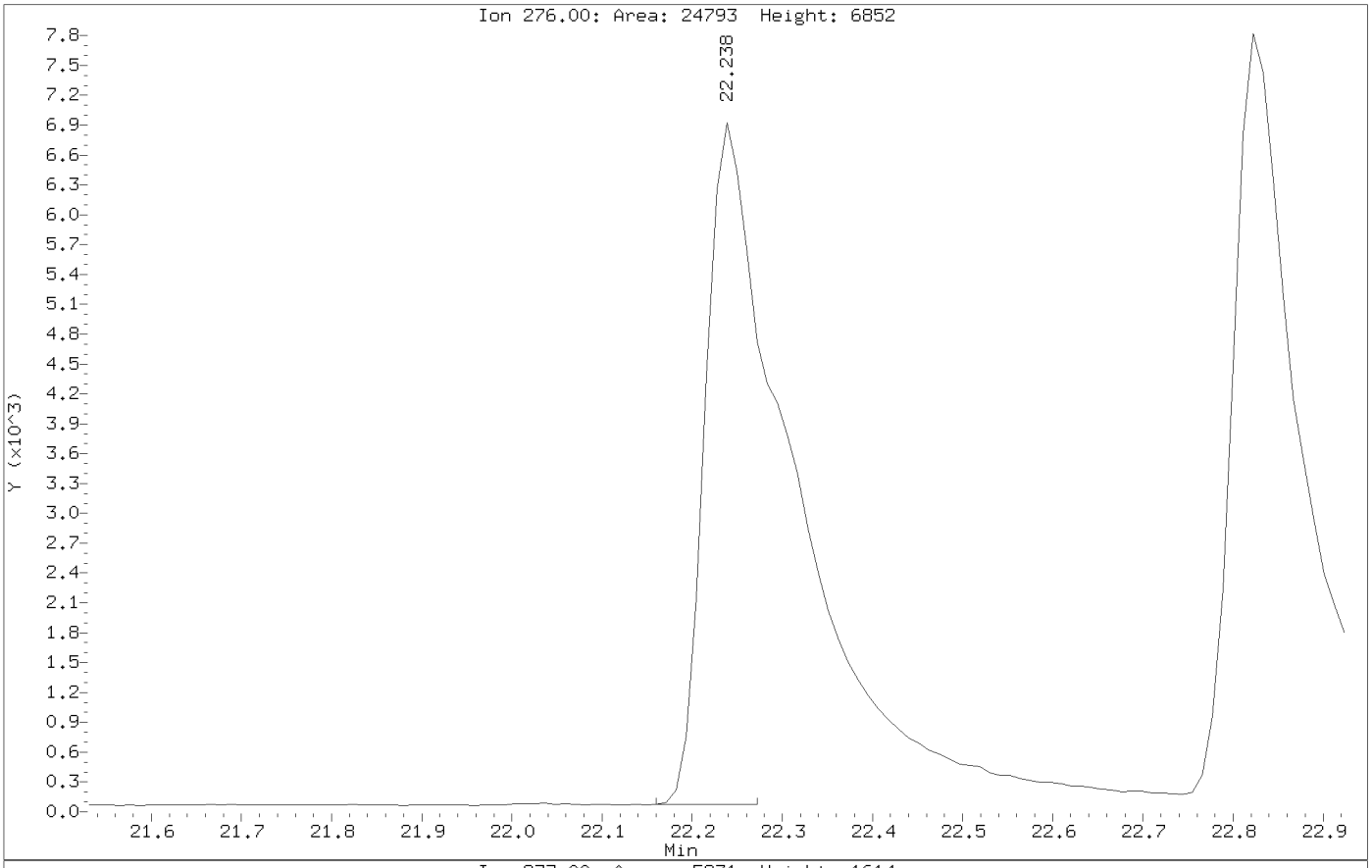


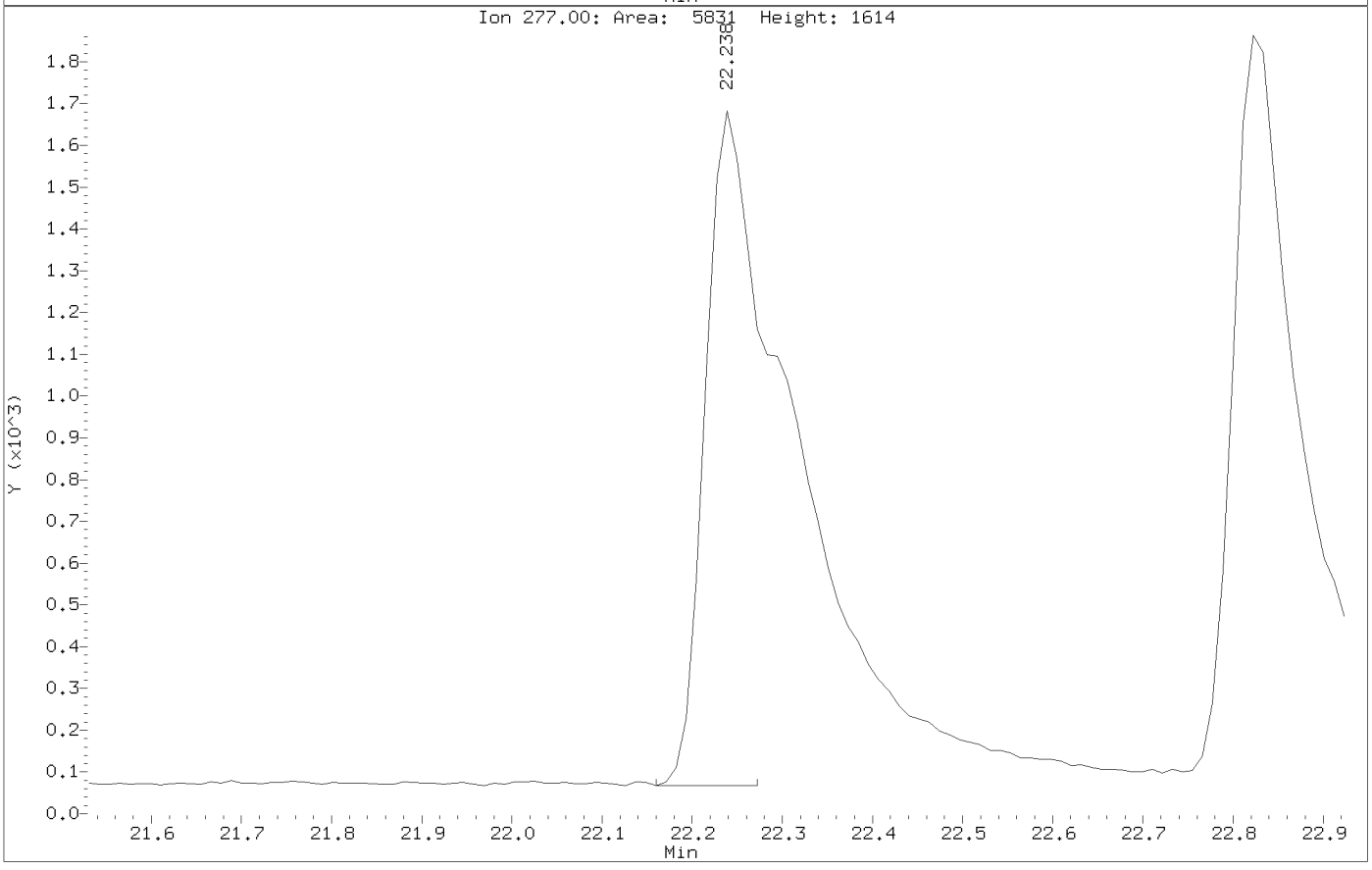


Data File: \\target_server\gg\chem\gcms-n.i\N072921.b\N3645.D
Injection Date: 29-JUL-2021 14:21
Instrument: gcms-n.i
Client Sample ID:

Compound: Indeno(1,2,3-cd)pyrene
CAS Number: 193-39-5

AFTER MANUAL INTEGRATION





Logbooks and Supporting Documents

* SM 72721

S/S SEP

KATAHDIN ANALYTICAL SERVICES, LLC.
ORGANIC EXTRACTIONS LOG - AQUEOUS SEMI-VOLATILES

Extraction Method: (check one)	SW846 3510 (SEP) ✓	SW846 3520 (CLLE)		
Analytical Method:(check one)	SW846 8270 ✓	SW846 8270 SIM ✓	Other:	
Surrogate ID: SV3035	Surrogate ID:	Spike ID: SV3022	Spike ID: SV3027	
Methylene Chloride Lot #: EB6682-05	pH Paper Lot # 6003003	KI Starch Paper ID:	If positive, note in comments and contact the PM, the client may need to resample.	
pH (1st Extraction) ≤2	H_2SO_4 Lot # RE0730	pH (2nd Extraction) ≥11	NaOH Lot # ~~203~~ 206344	
$NaSO_4$ Lot # 27961001	Filter Paper Lot #: 17227520	Boiling Stones ID: 52421	Vial Lot #: 229921048A52N	
Nitrogen Bath Temperature: 36°C			Client ID vs KAS ID Verified:	
Prep Start Time: 7:30	Prep End Time:	CLLE Start Time: —	CLLE End Date & Time: —	

SS720

Date Extracted	Ext. Init.	Sample ID	Initial Vol. mL	Surr. Vol.	Spike Vol.	Fraction SV	Fraction SIM	Final Vol. mL	Date Conc.	Tray Location	Initials	Comments
7 27 21	SMGN	W6303 222-1 223-1	1000	1.00	NR	✓	✓	1mL	72821	D-4	SMGN	RS72942 (-222) RS72943 (-223)
"	"	W6303222-2	✓	"	1.00		✓	"	"	-5	"	
"	"	-3	960	"	"		✓	"	"	-6	"	S04723-1
"	"	-4	900	"	"		✓	"	"	-7	"	↓
"	"	-5	1070	"	"		✓	"	"	-8	"	S04724-1
"	"	-6	1050	"	"		✓	"	"	-9	"	↓
"	"	W6303223-2	1000	"	"	✓		"	"	-10	"	
"	"	-3	~~200~~ 180	"	NR	✓		"	"	E-1	"	TCLP Blank RE PBT17024

EX-007 – Revision 7– 09/22/2020

QAEX451 - 000316

0000126

SV720/721

Date Extracted	Ext. Init.	Sample ID	Initial Vol. mL	Surr. Vol.	Spike Vol.	Fraction SV	Fraction SIM	Final Vol. mL	Date Conc.	Tray Location	Initials	Comments
7 27 21	SMGN	S04723-1	930	1.00	NR		✓	1mL	72821	E-2	SMGN	
"	"	-2	950	"	"		"	"	"	-3	"	
"	"	-3	930	"	"		"	"	"	-4	"	
"	"	-4	1070	"	"		"	"	"	-5	"	
"	"	-5	1070	"	"		"	"	"	-6	"	
"	"	-6	1000	"	"		"	"	"	-7	"	
"	"	-8	975	"	"		"	"	"	-8	"	
"	"	S04724-1	1070	"	"		"	"	"	-9	"	
"	"	-2	1070	"	"		"	"	"	-10	"	
"	"	-3	1070	"	"		"	"	"	A-1	"	SV721
"	"	-4	1040	"	"		"	"	"	-2	"	
"	"	-5	1050	"	"		"	"	"	-3	"	
"	"	-6	1050	"	"		✓	"	"	-4	"	
"	"	S04562-1	200	"	"	✓		"	"	-5	"	RE may double TCLP Dil Reboot w/ DI SURR
"	"	-2	150	"	"	✓		"	"	-6	"	
"	"	S04680 80 -4	1070	"	"			"	"	-7	"	Emulsion dioscp/centrifuge
"	"	-5		"	"			"	"	-8	"	
"	"	-6		"	"			"	"	-9	"	
"	"	S04698-1		"	"			"	"	-10	"	
"	"	S04699-1	1050	"	"			"	"	B-1	"	

Reviewed By_____ Date_____

EX-007 – Revision 7– 09/22/2020

QAEX451 - 000316

0000127

KATAHDIN ANALYTICAL SERVICES
GC/MS SVOA INJ LOG INSTRUMENT: 5975B - N

DATE OF DFTPP INJECTION: 197821

JOB	SAMPLE	DATAFILE	DF	VIAL #	METHOD	UL INJ	CHEMIST	COMMENTS
WG303306-1	50 ng DFTPP	ND1978	1	1	DFTPPSIM	2.0	JLH	OK
-4	SSTD 2.0 NO728	N3618 JLH		2	NSPSIM94			✓
-3	0.5	19		3				✓
-2	0.2	20		4				✓
-5	7.0	21		5				✓
-6	10	22		6				✓
-7	15	23		7				✓
-8	IND	24		8				
	WG303222-2	25		9				OK
	↓ -1	26		10				OK
	504723-1	27		11				OK
	WG303222-3	28		12				OK
	↓ -4	29		13				OK
	504723-2	30		14				OK
	-3	31		15				OK
	-4	32		16				OK
	-5	33		17				OK
	-6	34		18				OK
	-8	35		19				OK
	504724-1	36		20				OK
	↓ -3	37		21				OK
-9	SSTD 2.0 NO728	38		22				OK
-10	↓	39		↓				—
-11	↓	40		↓				—
	SPARGE TUBE	↓ 41	↓	23	↓	↓	↓	OK BENP TEST

STANDARD	CODE
DFTPP	53613
CAL. STD.-	53619 53614
ICV. STD.	53600
IS MIX	53615

REVIEWED AND APPROVED BY: _____
DATE: _____

Katahdin Analytical Services 2000171

KATAHDIN ANALYTICAL SERVICES
GC/MS SVOA INJ LOG INSTRUMENT: 5975B - N

DATE OF DFTPP INJECTION: 072821

JOB	SAMPLE	DATAFILE	DF	VIAL #	METHOD	UL INJ	CHEMIST	COMMENTS
WG303383-1	50 ng DFTPP	ND199	1	1	DFTPP5LM	2.0	JLF	OK
-2	SSTD 2.0 ND729	N3642		2	N5P5LM94			OK
	504724-2	43		3				OK
	WG303222-5	44		4				OK
	1 -6	45		5				OK
	504724-4	46		6				OK
	-5	47		7				OK
	-6	48		8				OK
	WG303300-2	49		9				OK LOW PAH's
	1 -1	50		10				OK
	504730-1	51		11				OK
-3	SSTD 2.0 ND729	52		12				OK
-4		53						-
-5		54						-

STANDARD	CODE
DFTPP	53613
CAL. STD.	53619 53614
ICV. STD.	-
IS MIX	53615

REVIEWED AND APPROVED BY: _____
DATE: _____

Katahdin Analytical Services 2000172

VOLATILE PETROLEUM HYDROCARBON DATA

QC Summary Section

Form 2
System Monitoring Compound Recovery

Lab Name: Katahdin Analytical Services **Project:** LO-58 Nike Missile Battery Launch Site **Matrix:** AQ
Lab Code: KAS **SDG:** SO4724

Client Sample ID	Lab Sample ID	Col. ID	DBT-FID #	DBT-PID #
DW-01-EFF-SUMMER202	SO4724-1	B	94.3	84.7
DW-01-INF-SUMMER202	SO4724-2	B	93.0	82.8
DW-01-MID-SUMMER202	SO4724-3	B	100.	88.5
DW-02R-EFF-SUMMER20	SO4724-4	B	104.	92.1
DW-02R-INF-SUMMER20	SO4724-5	B	98.7	87.2
DW-FD-SUMMER2021	SO4724-6	B	96.8	86.6
DW-TB-SUMMER2021	SO4724-7	B	92.5	83.8
Method Blank	WG303232-1	B	90.5	81.3
Laboratory Control S	WG303232-2	B	107.	96.0
Laboratory Control S	WG303232-3	B	106.	96.0
Matrix Spike	WG303232-6	B	100.	91.2
Matrix Spike Duplica	WG303232-7	B	92.1	83.6

		QC Limits
DBT-FID	2,5-DIBROMOTOLUENE (FID)	70-130
DBT-PID	2,5-DIBROMOTOLUENE (PID)	70-130

= Column to be used to flag recovery limits.
* = Values outside of contract required QC limits.
D= System Monitoring Compound diluted out.

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ANALYTICAL SERVICES

Form 4
Method Blank Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Launch Site
Lab File ID : 2OG10063.D
Instrument ID : GC02

SDG : SO4724
Lab Sample ID : WG303232-1
Date Analyzed : 27-JUL-21
Time Analyzed : 09:26
Date Extracted : 27-JUL-21

This Method Blank applies to the following samples, LCS, MS and MSD:

Client Sample ID	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
Laboratory Control S	WG303232-2	2OG10064.	07/27/21	10:07
Laboratory Control S	WG303232-3	2OG10065.	07/27/21	10:48
DW-TB-SUMMER2021	SO4724-7	2OG10066.	07/27/21	12:16
DW-01-EFF-SUMMER2021	SO4724-1	2OG10075.	07/27/21	18:25
DW-01-INF-SUMMER2021	SO4724-2	2OG10076.	07/27/21	19:07
DW-01-MID-SUMMER2021	SO4724-3	2OG10077.	07/27/21	19:48
DW-02R-EFF-SUMMER2021	SO4724-4	2OG10078.	07/27/21	20:30
DW-02R-INF-SUMMER2021	SO4724-5	2OG10079.	07/27/21	21:12
DW-FD-SUMMER2021	SO4724-6	2OG10080.	07/27/21	21:54
Matrix Spike	WG303232-6	2OG10083.	07/28/21	00:01
Matrix Spike Duplica	WG303232-7	2OG10084.	07/28/21	00:43

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Form 8
GC Analytical Sequence

Lab Name : Katahdin Analytical Services **SDG :** SO4724
Project : LO-58 Nike Missile Battery Launch Site
Instrument ID : GC02

Client Sample ID	Lab Sample ID	Date Analyzed	Time Analyzed	DBT (FID)	DBT (PID)
Initial Calibration	WG301241-4	06/22/21	14:24		31.078
Initial Calibration	WG301241-4	06/22/21	14:24	31.068	
Initial Calibration	WG301241-1	06/22/21	15:05		31.078
Initial Calibration	WG301241-1	06/22/21	15:05	31.066	
Initial Calibration	WG301241-2	06/22/21	15:45		31.072
Initial Calibration	WG301241-2	06/22/21	15:45	31.066	
Initial Calibration	WG301241-3	06/22/21	16:26		31.077
Initial Calibration	WG301241-3	06/22/21	16:26	31.067	
Initial Calibration	WG301241-5	06/22/21	17:07		31.083
Initial Calibration	WG301241-5	06/22/21	17:07	31.07	
Initial Calibration	WG301241-6	06/22/21	17:48		31.088
Initial Calibration	WG301241-6	06/22/21	17:48	31.076	
Independent Source	WG301241-7	06/22/21	18:30	31.074	31.084
Continuing Calibrati	WG303232-8	07/27/21	07:40	31.075	31.085
Method Blank	WG303232-1	07/27/21	09:26	31.076	31.086
Laboratory Control S	WG303232-2	07/27/21	10:07	31.074	31.084
Laboratory Control S	WG303232-3	07/27/21	10:48	31.073	31.084
DW-TB-SUMMER2021	SO4724-7	07/27/21	12:16	31.075	31.085
DW-01-EFF-SUMMER2021	SO4724-1	07/27/21	18:25	31.081	31.091
DW-01-INF-SUMMER2021	SO4724-2	07/27/21	19:07	31.078	31.088
DW-01-MID-SUMMER2021	SO4724-3	07/27/21	19:48	31.076	31.087
DW-02R-EFF-SUMMER202	SO4724-4	07/27/21	20:30	31.078	31.088
DW-02R-INF-SUMMER202	SO4724-5	07/27/21	21:12	31.079	31.089
DW-FD-SUMMER2021	SO4724-6	07/27/21	21:54	31.08	31.09
Matrix Spike	WG303232-6	07/28/21	00:01	31.078	31.088
Matrix Spike Duplica	WG303232-7	07/28/21	00:43	31.079	31.089
Continuing Calibrati	WG303232-9	07/28/21	01:25	31.079	31.089

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Sample Data Section

KATAHDIN ANALYTICAL SERVICES - ORGANIC DATA QUALIFIERS

The sampled date indicated on the attached Report(s) of Analysis (ROA) is the date for which a grab sample was collected or the date for which a composite sample was completed. Beginning and start times for composite samples can be found on the Chain-of-Custody.

U Indicates the compound was analyzed for but not detected above the specified level. This level may be the Limit of Quantitation (LOQ)(previously called Practical Quantitation Level (PQL)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client.

Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL/LOQ or "U" LOD, where the rate of false negatives is <1%.

* Compound recovery or percent RPD (relative percent difference) was outside of quality control limits.

D Indicates the result was obtained from analysis of a diluted sample. Surrogate recoveries may not be calculable.

E Estimated value. This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis.

J Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Limit of Quantitation (LOQ)(previously called Practical Quantitation Limit (PQL)), but above the Method Detection Limit (MDL).

or

J Used for Pesticides, PCBs, Herbicides, Formaldehyde, Explosives and Method 504.1 analytes when there is a greater than 40% difference for detected concentrations between the two GC columns.

B Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.

C Indicates that the flagged compound did not meet DoD criteria in the corresponding daily calibration verification (CV).

L Indicates that the flagged compound did not meet DoD criteria in the corresponding Laboratory Control Sample (LCS) and/or Laboratory Control Sample Duplicate (LCSD) prepared and/or analyzed concurrently with the sample.

M Indicates that the flagged compound did not meet DoD criteria in the Matrix Spike and/or Matrix Spike Duplicate prepared and/or analyzed concurrently with the native sample.

N Presumptive evidence of a compound based on a mass spectral library search.

A Indicates that a tentatively identified compound is a suspected aldol-condensation product.

P Used for Pesticide/Aroclor analyte when there is a greater than 25% difference for detected concentrations between the two GC columns. (for CLP methods only).

Katahdin Analytical Services, Inc.

Manual Integration Codes For GC/MS, GC, HPLC and/or IC

M1	Peak splitting.
M2	Well defined peaks on the shoulders of the other peaks.
M3	There is additional area due to a coeluting interferant.
M4	There are negative spikes in the baseline.
M5	There are rising or falling baselines.
M6	The software has failed to detect a peak or misidentified a peak.
M7	Excessive peak tailing.
M8	Analysis such as GRO, DRO and TPH require a baseline hold.
M9	Peak was not completely integrated as in GC/MS.
M10	Primary ion was correctly integrated, but secondary or tertiary ion needed manual integration as in GC/MS.
M11	For GC analysis, when a sample is diluted by 1:10 or more, the surrogate is set to undetected and then the area under the surrogate is manually integrated.
M12	Manual integration saved in method due to TurboChrom floating point error.

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-1
Client ID: DW-01-EFF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: 2OG10075.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		94.3	%					
2,5-Dibromotoluene (PID)		84.7	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10075.D
Report Date: 30-Jul-2021 10:25

Katahdin Analytical Services

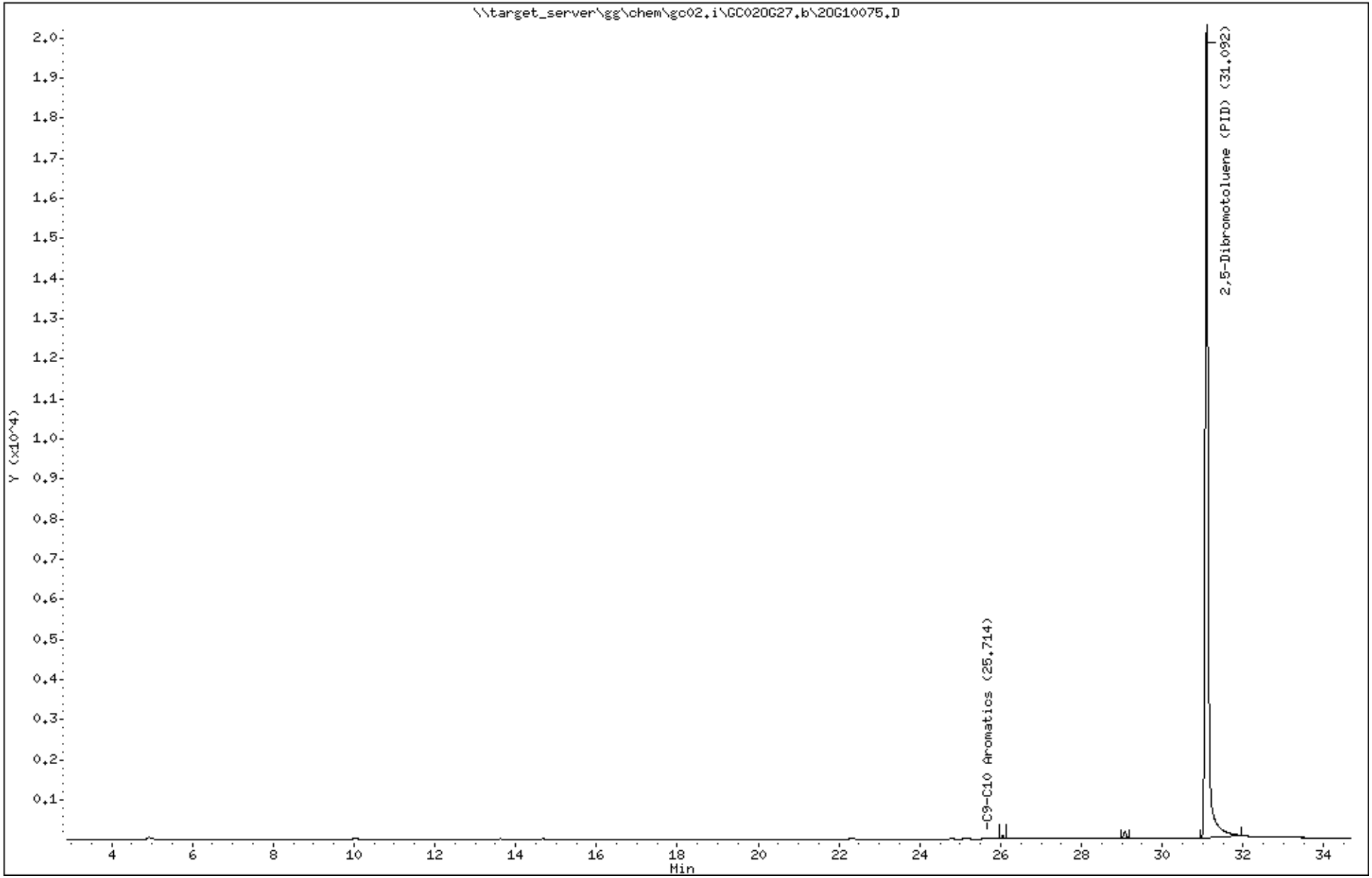
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10075.D
Lab Smp Id: SO4724-1 Client Smp ID: W-01-EFF-SUMMER2021
Inj Date : 27-JUL-2021 18:25
Operator : DL Inst ID: gc02.i
Smp Info : SO4724-1
Misc Info : WG303232,WG301241-4
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07 Cal File: 2OF10009.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	31.091	31.083	0.008	211492	84.6921	84.7	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10075.D
Date : 27-JUL-2021 18:25
Client ID: W-01-EFF-SUMMER2021
Instrument: gc02.i
Sample Info: S04724-1
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000011

Data File: 2OG10075.D
Report Date: 30-Jul-2021 10:26

Katahdin Analytical Services

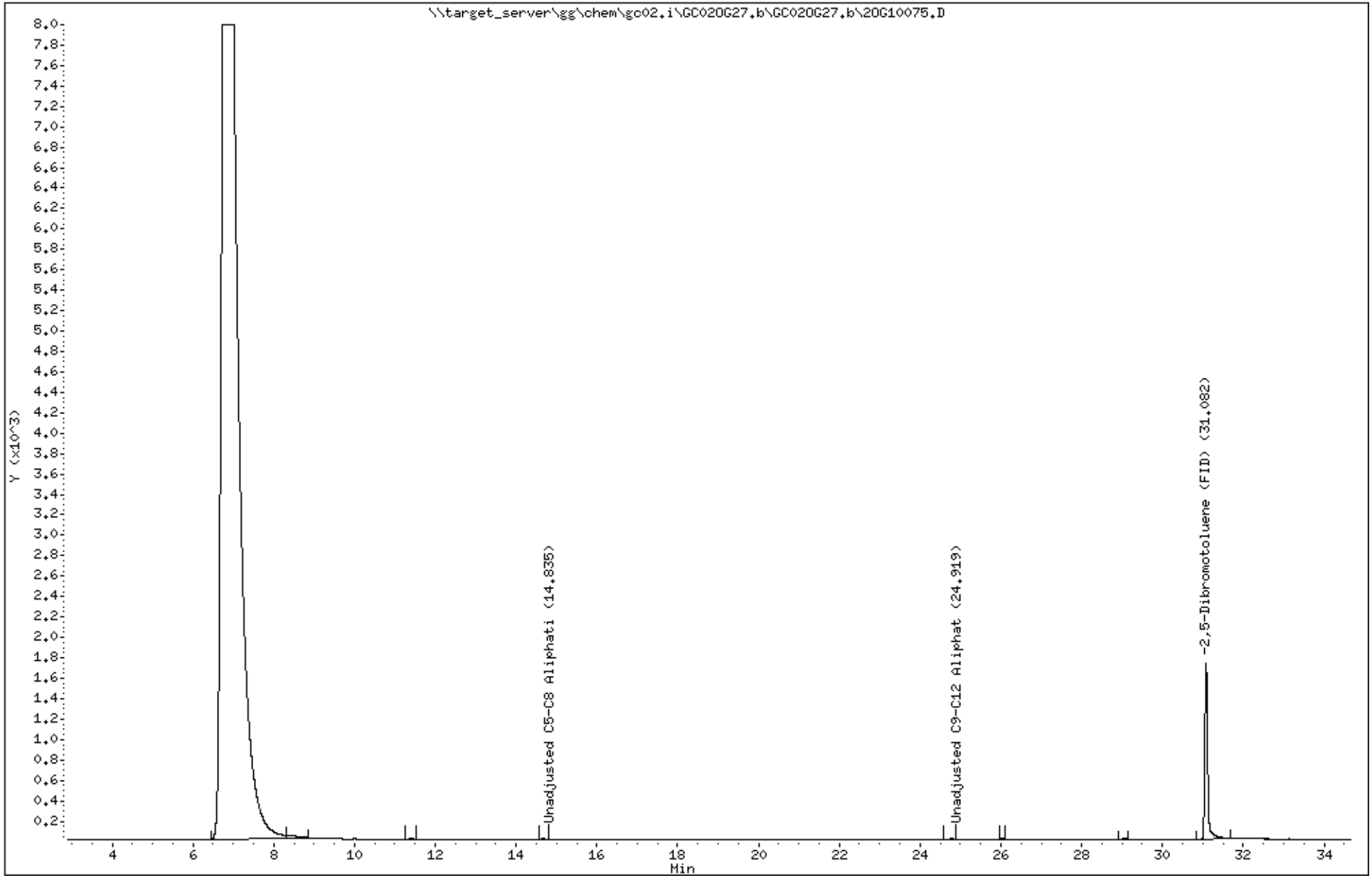
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10075.D
Lab Smp Id: SO4724-1 Client Smp ID: W-01-EFF-SUMMER2021
Inj Date : 27-JUL-2021 18:25
Operator : DL Inst ID: gc02.i
Smp Info : SO4724-1
Misc Info : WG303232,WG301241-4
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	31.081	31.076	0.005	170329	94.2957	94.3	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20G10075.D
Date : 27-JUL-2021 18:25
Client ID: W-01-EFF-SUMMER2021
Instrument: gc02.i
Sample Info: S04724-1
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000013

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-2
Client ID: DW-01-INF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: 2OG10076.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		93.0	%					
2,5-Dibromotoluene (PID)		82.8	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10076.D
Report Date: 30-Jul-2021 10:25

Katahdin Analytical Services

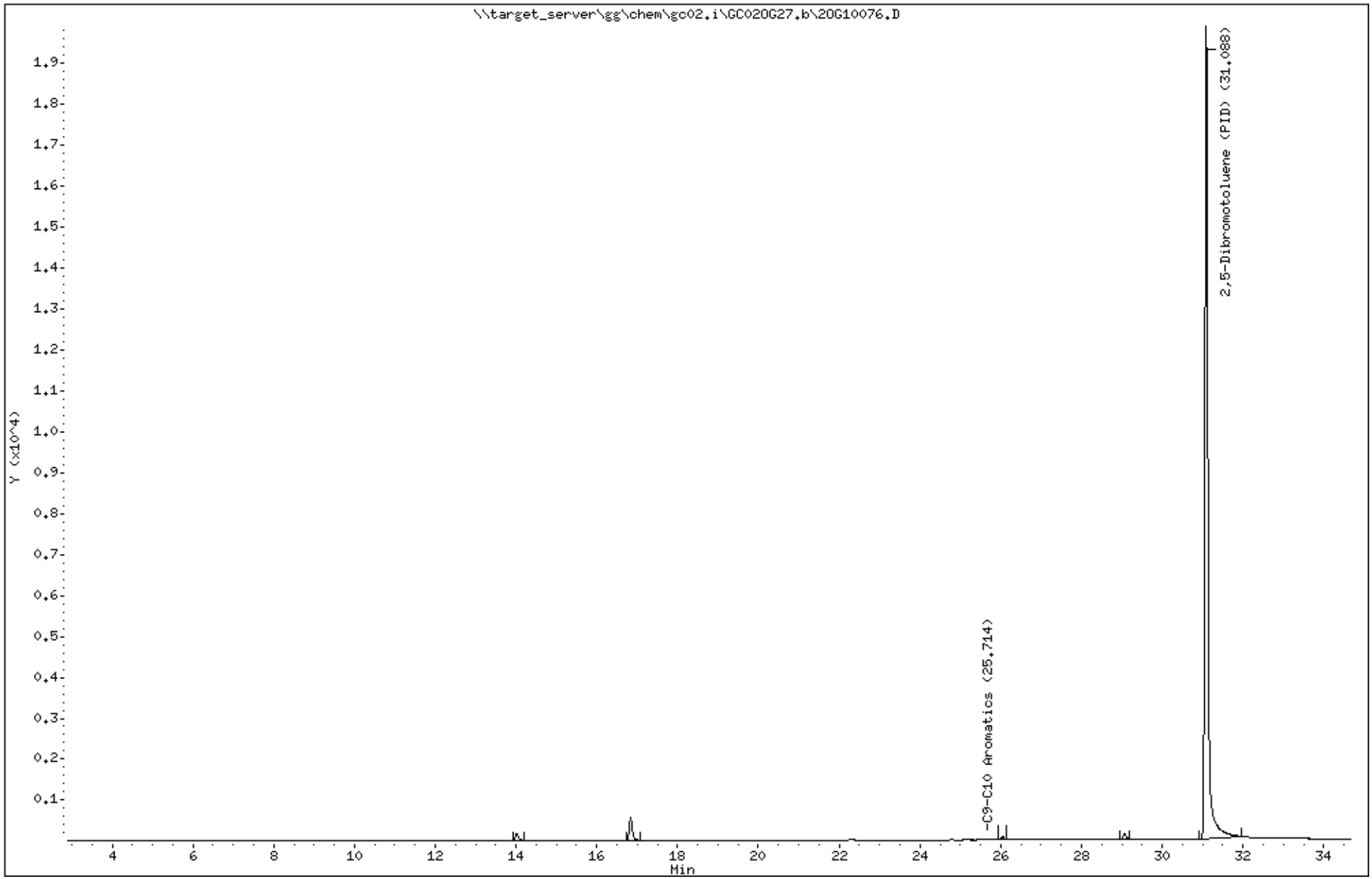
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10076.D
Lab Smp Id: SO4724-2 Client Smp ID: W-01-INF-SUMMER2021
Inj Date : 27-JUL-2021 19:07
Operator : DL Inst ID: gc02.i
Smp Info : SO4724-2
Misc Info : WG303232,WG301241-4
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07 Cal File: 2OF10009.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	31.088	31.083	0.005	206885	82.8472	82.8	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10076.D
Date : 27-JUL-2021 19:07
Client ID: W-01-INF-SUMMER2021
Instrument: gc02.i
Sample Info: S04724-2
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000016

Data File: 2OG10076.D
Report Date: 30-Jul-2021 10:26

Katahdin Analytical Services

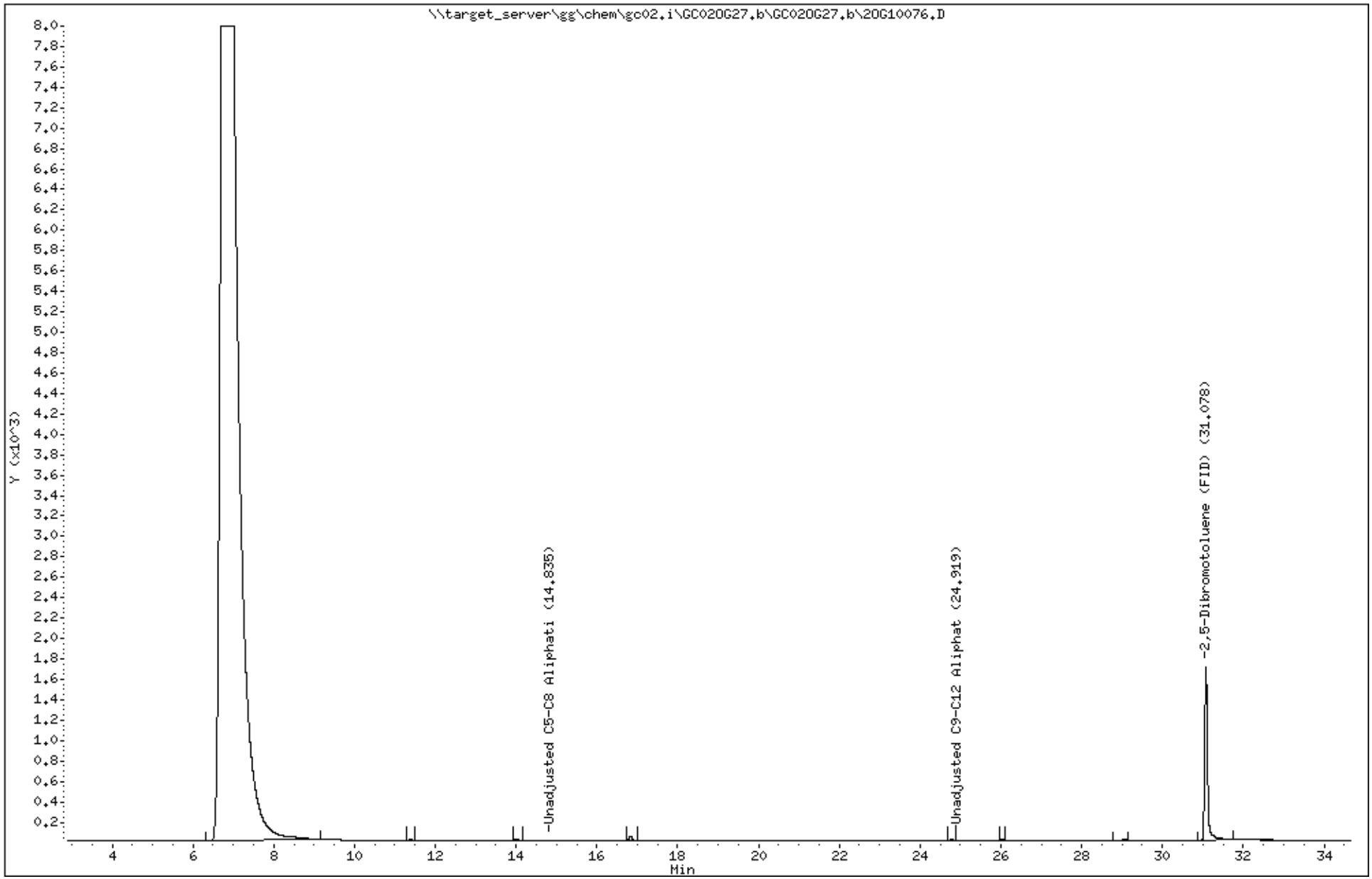
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10076.D
Lab Smp Id: SO4724-2 Client Smp ID: W-01-INF-SUMMER2021
Inj Date : 27-JUL-2021 19:07
Operator : DL Inst ID: gc02.i
Smp Info : SO4724-2
Misc Info : WG303232,WG301241-4
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	31.078	31.076	0.002	167970	92.9897	93.0	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20G10076.D
Date : 27-JUL-2021 19:07
Client ID: W-01-INF-SUMMER2021
Instrument: gc02.i
Sample Info: S04724-2
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000018

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-3
Client ID: DW-01-MID-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: 2OG10077.D

Sample Date: 20-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		100.	%					
2,5-Dibromotoluene (PID)		88.5	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10077.D
Report Date: 30-Jul-2021 10:25

Katahdin Analytical Services

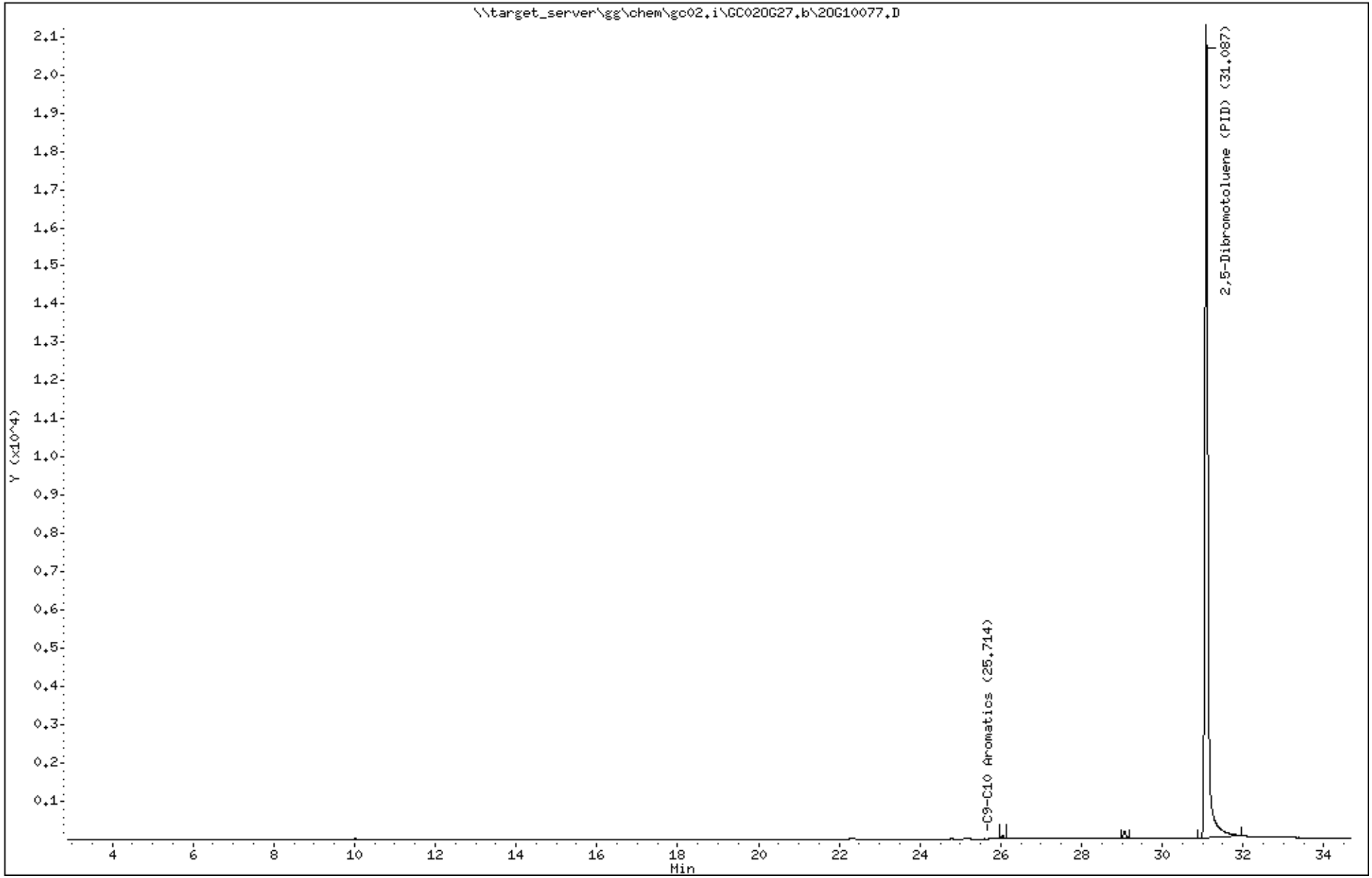
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10077.D
Lab Smp Id: SO4724-3 Client Smp ID: W-01-MID-SUMMER2021
Inj Date : 27-JUL-2021 19:48
Operator : DL Inst ID: gc02.i
Smp Info : SO4724-3
Misc Info : WG303232,WG301241-4
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07 Cal File: 2OF10009.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	31.087	31.083	0.004	221004	88.5012	88.5	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10077.D
Date : 27-JUL-2021 19:48
Client ID: W-01-MID-SUMMER2021
Instrument: gc02.i
Sample Info: S04724-3
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000021

Data File: 2OG10077.D
Report Date: 30-Jul-2021 10:26

Katahdin Analytical Services

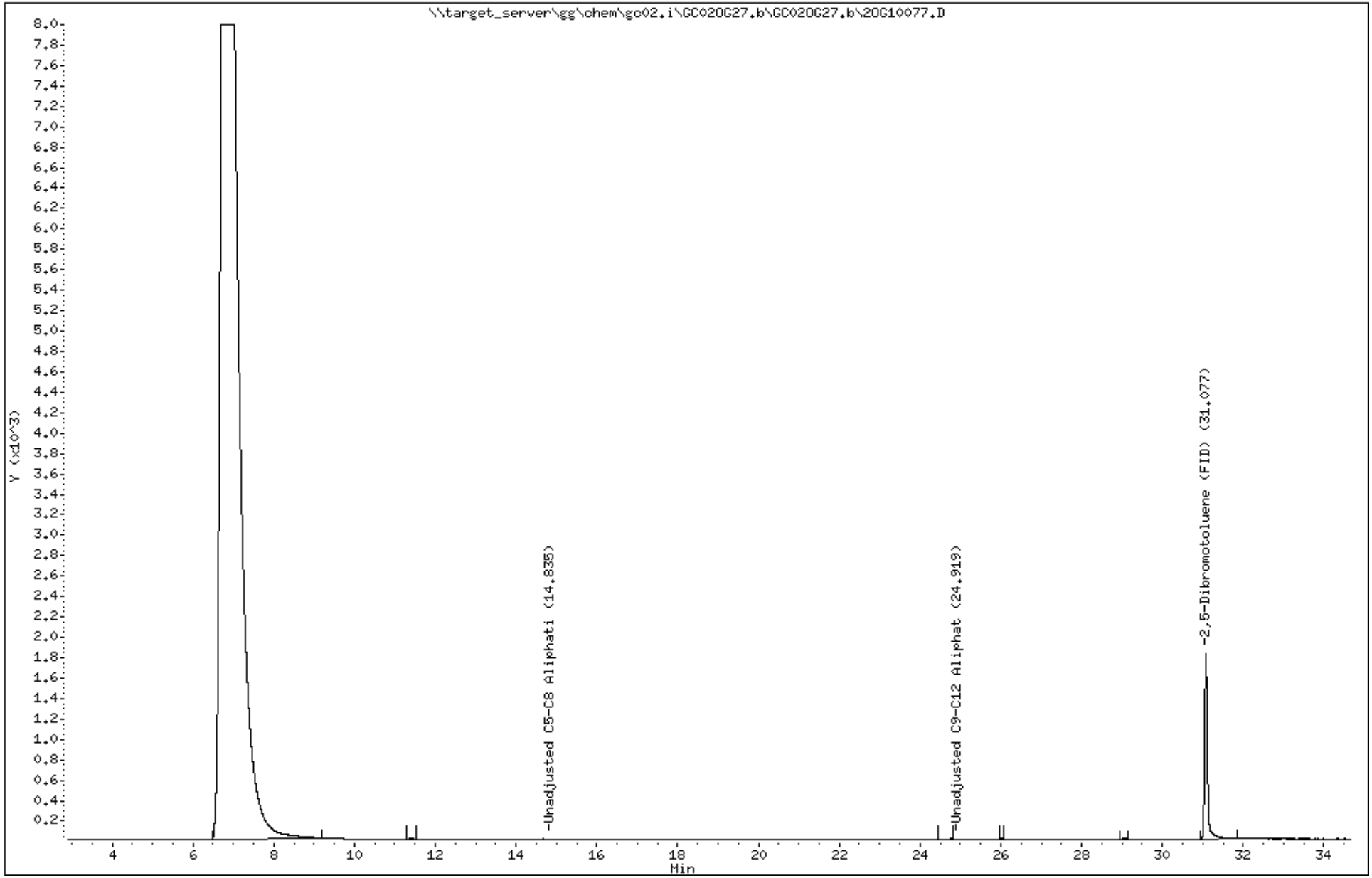
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10077.D
Lab Smp Id: SO4724-3 Client Smp ID: W-01-MID-SUMMER2021
Inj Date : 27-JUL-2021 19:48
Operator : DL Inst ID: gc02.i
Smp Info : SO4724-3
Misc Info : WG303232,WG301241-4
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	31.076	31.076	0.000	180823	100.105	100	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20G10077.D
Date : 27-JUL-2021 19:48
Client ID: W-01-MID-SUMMER2021
Instrument: gc02.i
Sample Info: S04724-3
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000023

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-4
Client ID: DW-02R-EFF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: 2OG10078.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		104.	%					
2,5-Dibromotoluene (PID)		92.1	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10078.D
Report Date: 30-Jul-2021 10:25

Katahdin Analytical Services

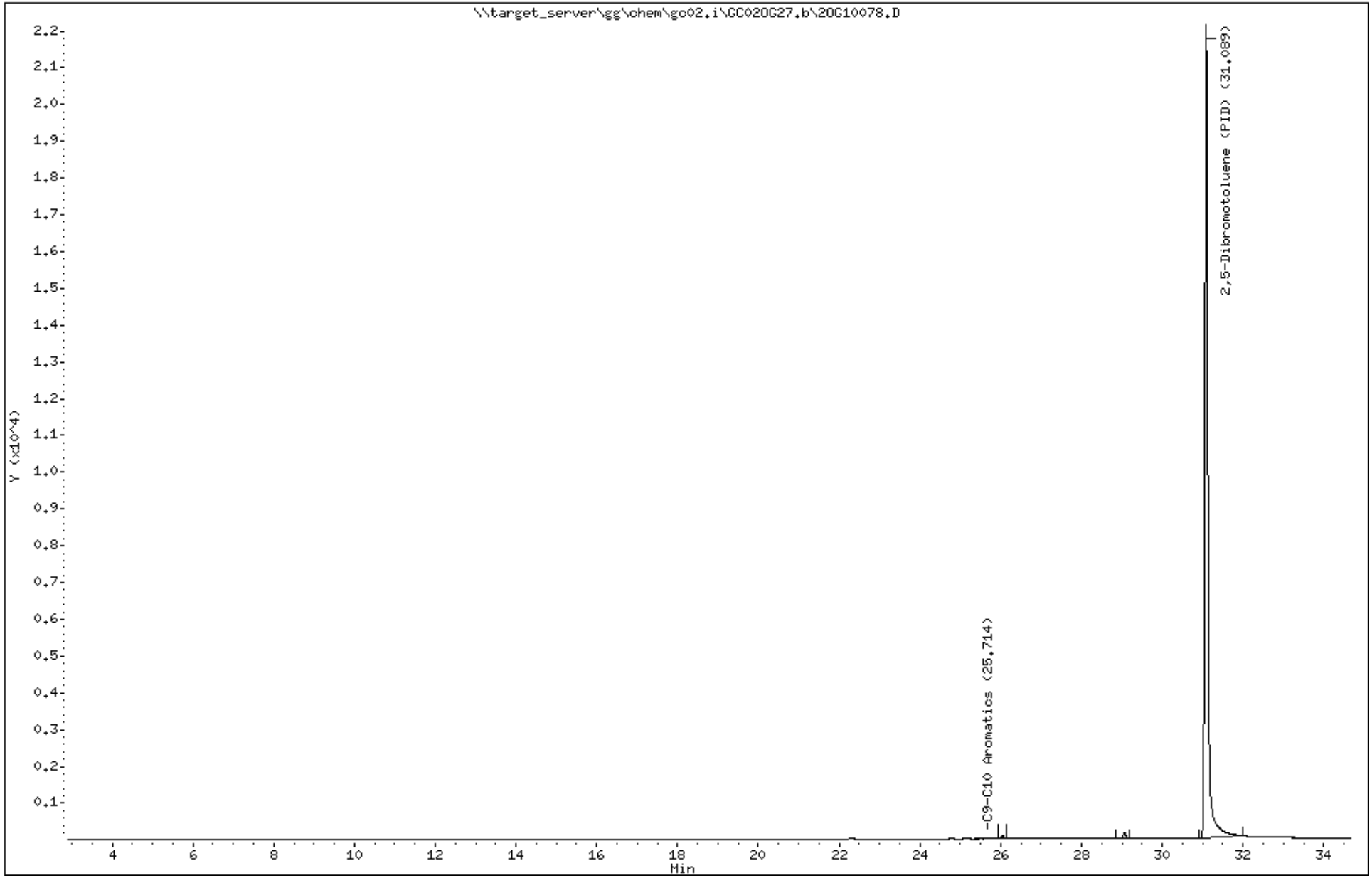
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10078.D
Lab Smp Id: SO4724-4 Client Smp ID: W-02R-EFF-SUMMER202
Inj Date : 27-JUL-2021 20:30
Operator : DL Inst ID: gc02.i
Smp Info : SO4724-4
Misc Info : WG303232,WG301241-4
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07 Cal File: 2OF10009.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	31.088	31.083	0.005	230086	92.1381	92.1	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10078.D
Date : 27-JUL-2021 20:30
Client ID: W-02R-EFF-SUMMER202
Instrument: gc02.i
Sample Info: S04724-4
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000026

Data File: 2OG10078.D
Report Date: 30-Jul-2021 10:26

Katahdin Analytical Services

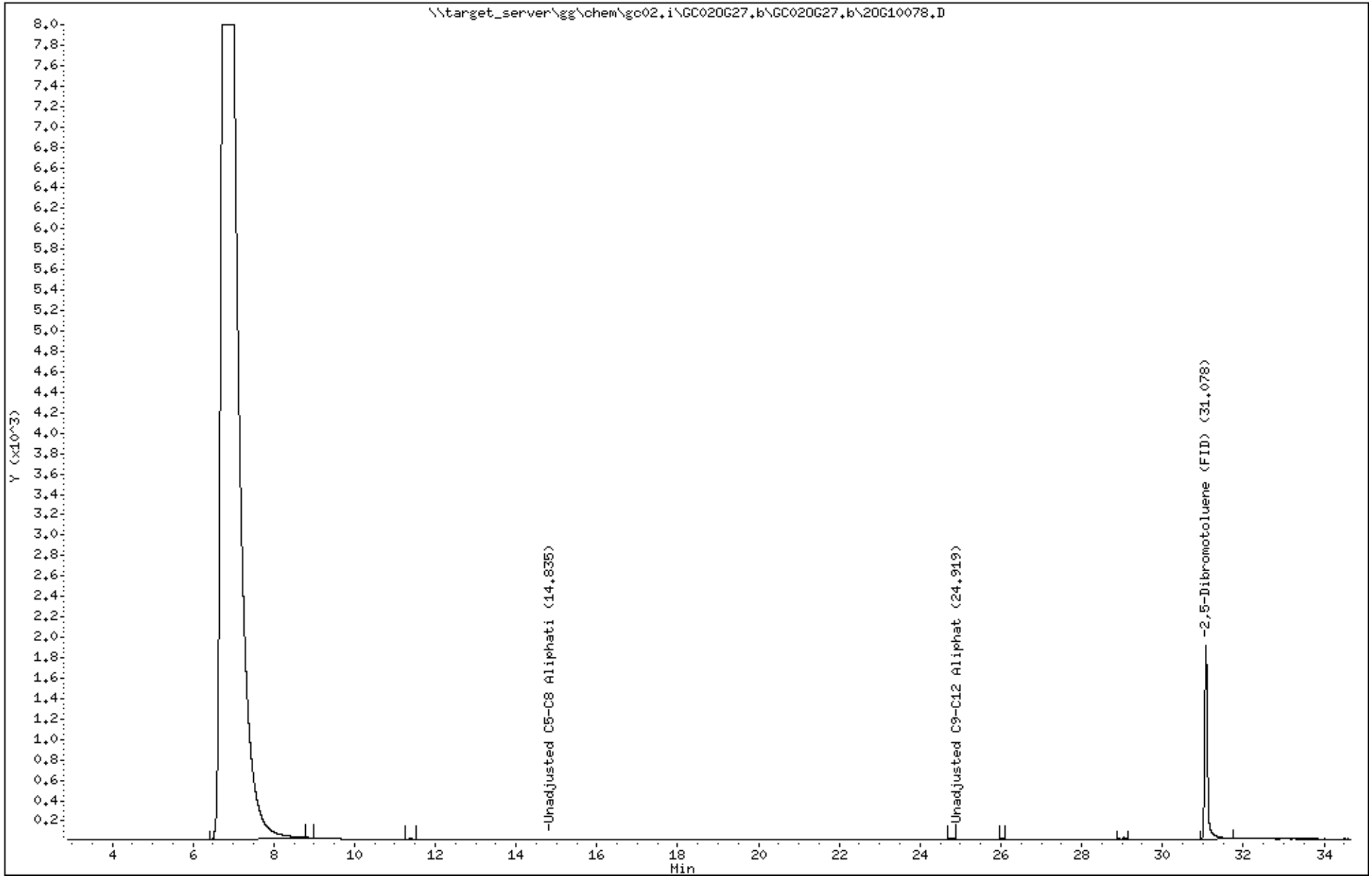
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10078.D
Lab Smp Id: SO4724-4 Client Smp ID: W-02R-EFF-SUMMER202
Inj Date : 27-JUL-2021 20:30
Operator : DL Inst ID: gc02.i
Smp Info : SO4724-4
Misc Info : WG303232,WG301241-4
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	31.078	31.076	0.002	187558	103.834	104	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20G10078.D
Date : 27-JUL-2021 20:30
Client ID: W-02R-EFF-SUMMER202 Instrument: gc02.i
Sample Info: S04724-4
Purge Volume: 0.0 Operator: DL
Column phase: RTX-502.2 Column diameter: 0.53



Katahdin Analytical Services 3000028

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-5
Client ID: DW-02R-INF-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: 2OG10079.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		98.7	%					
2,5-Dibromotoluene (PID)		87.2	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10079.D
Report Date: 30-Jul-2021 10:25

Katahdin Analytical Services

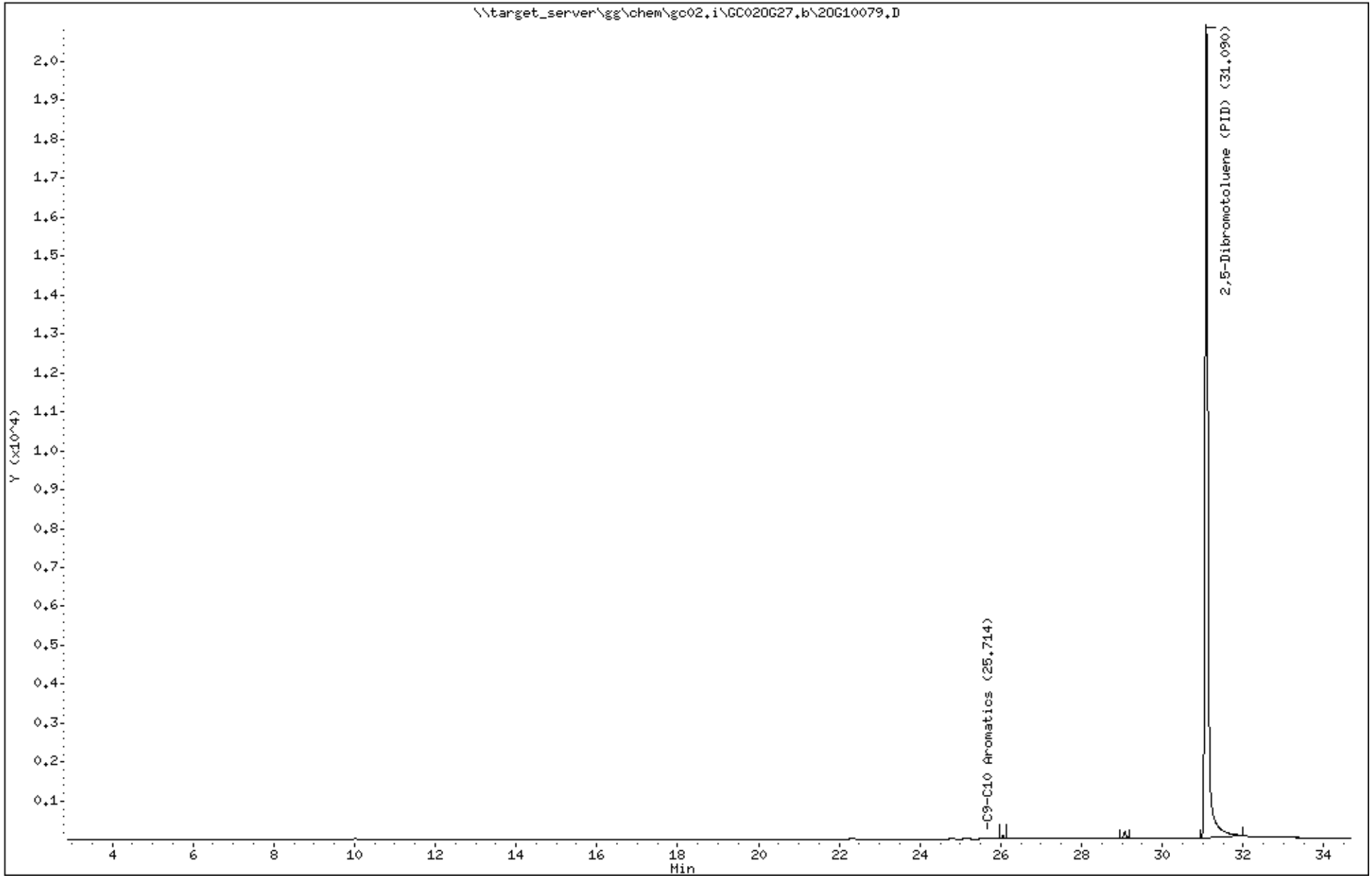
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10079.D
Lab Smp Id: SO4724-5 Client Smp ID: W-02R-INF-SUMMER202
Inj Date : 27-JUL-2021 21:12
Operator : DL Inst ID: gc02.i
Smp Info : SO4724-5
Misc Info : WG303232,WG301241-4
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07 Cal File: 2OF10009.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	31.089	31.083	0.006	217874	87.2478	87.2	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10079.D
Date : 27-JUL-2021 21:12
Client ID: W-02R-INF-SUMMER202
Instrument: gc02.i
Sample Info: S04724-5
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000031

Data File: 2OG10079.D
Report Date: 30-Jul-2021 10:26

Katahdin Analytical Services

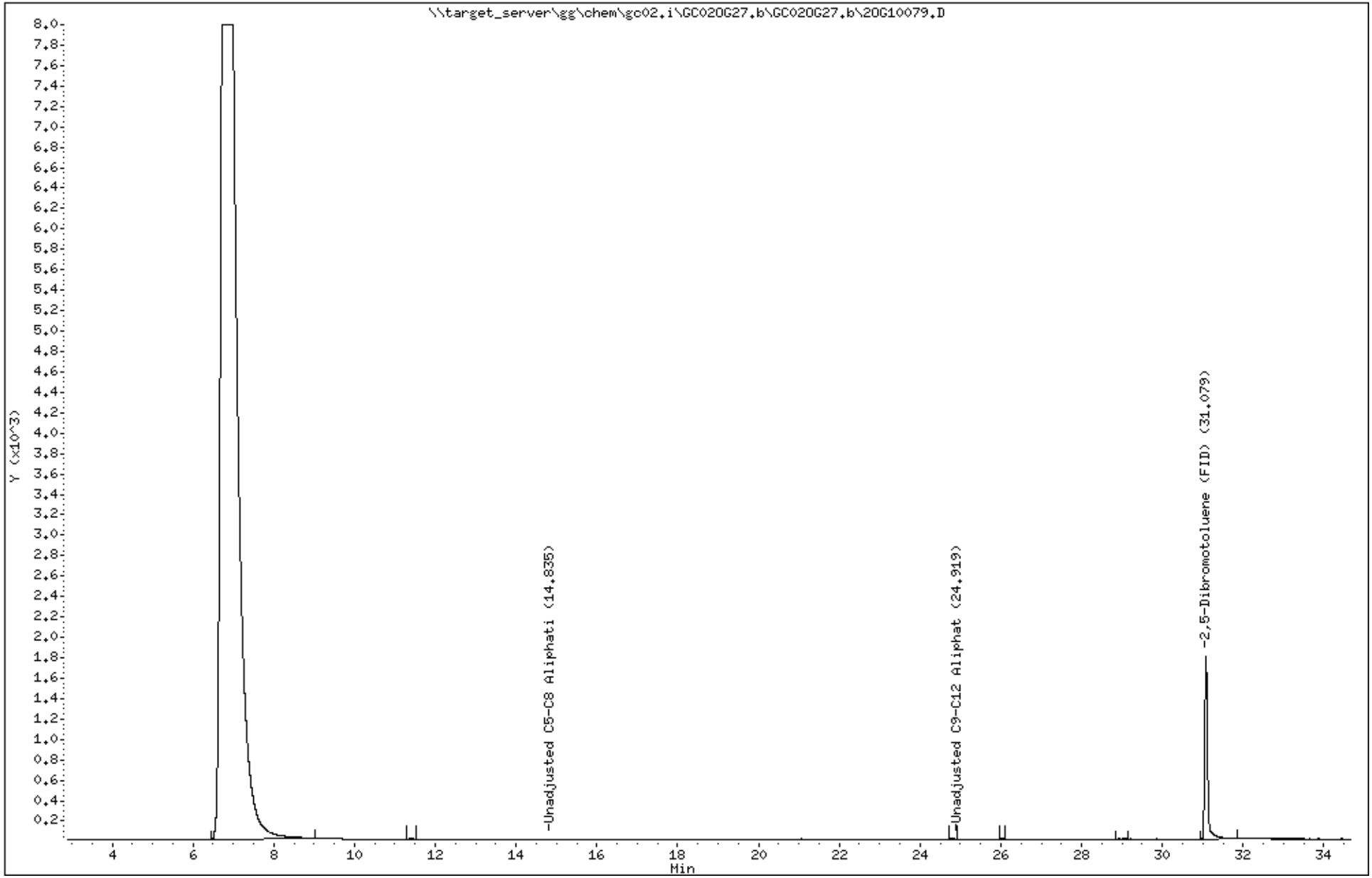
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10079.D
Lab Smp Id: SO4724-5 Client Smp ID: W-02R-INF-SUMMER202
Inj Date : 27-JUL-2021 21:12
Operator : DL Inst ID: gc02.i
Smp Info : SO4724-5
Misc Info : WG303232,WG301241-4
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	31.079	31.076	0.003	178238	98.6742	98.7	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20G10079.D
Date : 27-JUL-2021 21:12
Client ID: W-02R-INF-SUMMER202
Instrument: gc02.i
Sample Info: S04724-5
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000033

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-6
Client ID: DW-FD-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: 2OG10080.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		96.8	%					
2,5-Dibromotoluene (PID)		86.6	%					

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http://www.katahdinlab.com

Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10080.D
Report Date: 30-Jul-2021 10:25

Katahdin Analytical Services

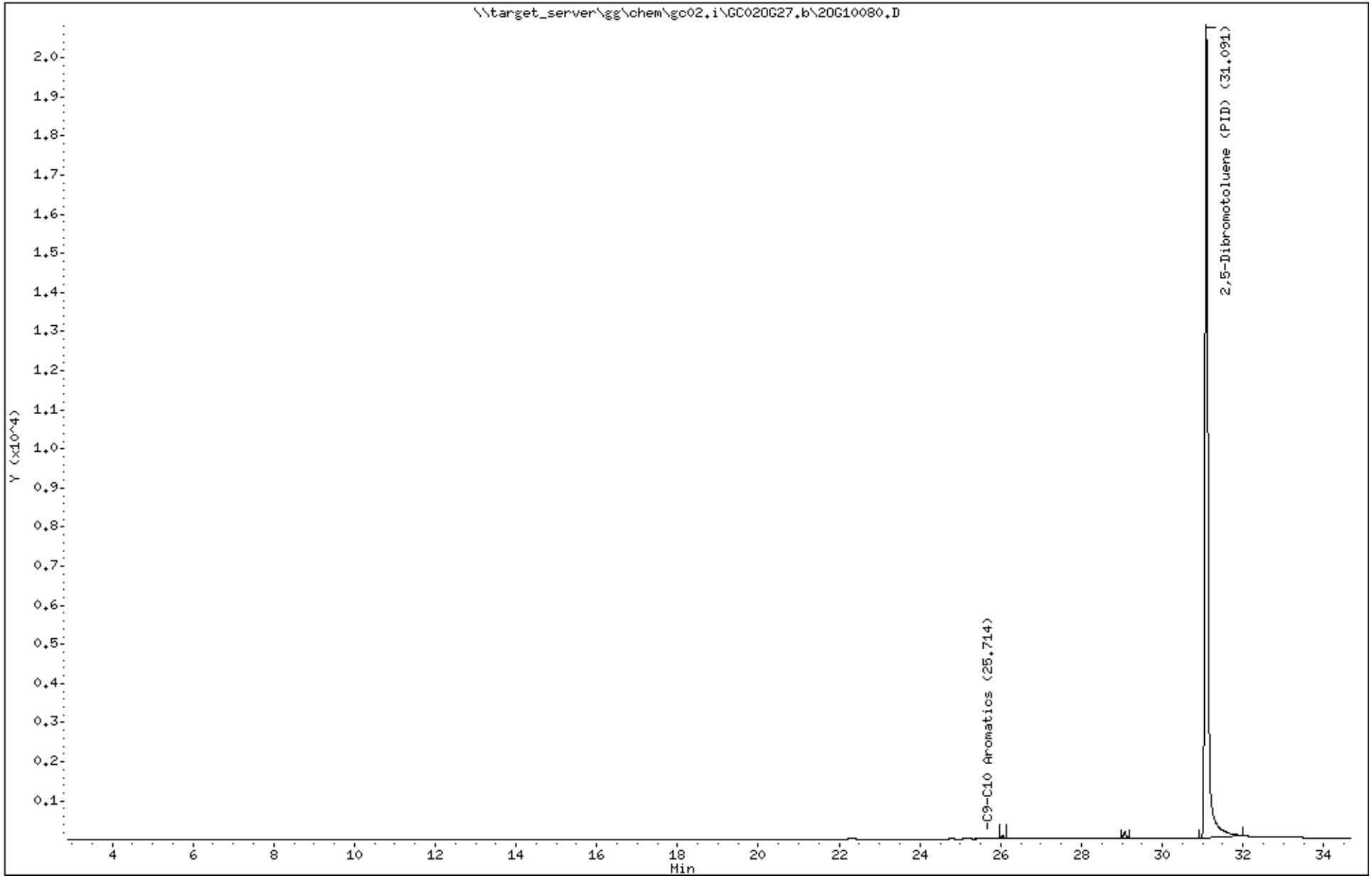
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10080.D
Lab Smp Id: SO4724-6 Client Smp ID: DW-FD-SUMMER2021
Inj Date : 27-JUL-2021 21:54
Operator : DL Inst ID: gc02.i
Smp Info : SO4724-6
Misc Info : WG303232,WG301241-4
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07 Cal File: 2OF10009.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	31.090	31.083	0.007	216383	86.6507	86.6	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10080.D
Date : 27-JUL-2021 21:54
Client ID: DW-FD-SUMMER2021
Instrument: gc02.i
Sample Info: S04724-6
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000036

Data File: 2OG10080.D
Report Date: 30-Jul-2021 10:26

Katahdin Analytical Services

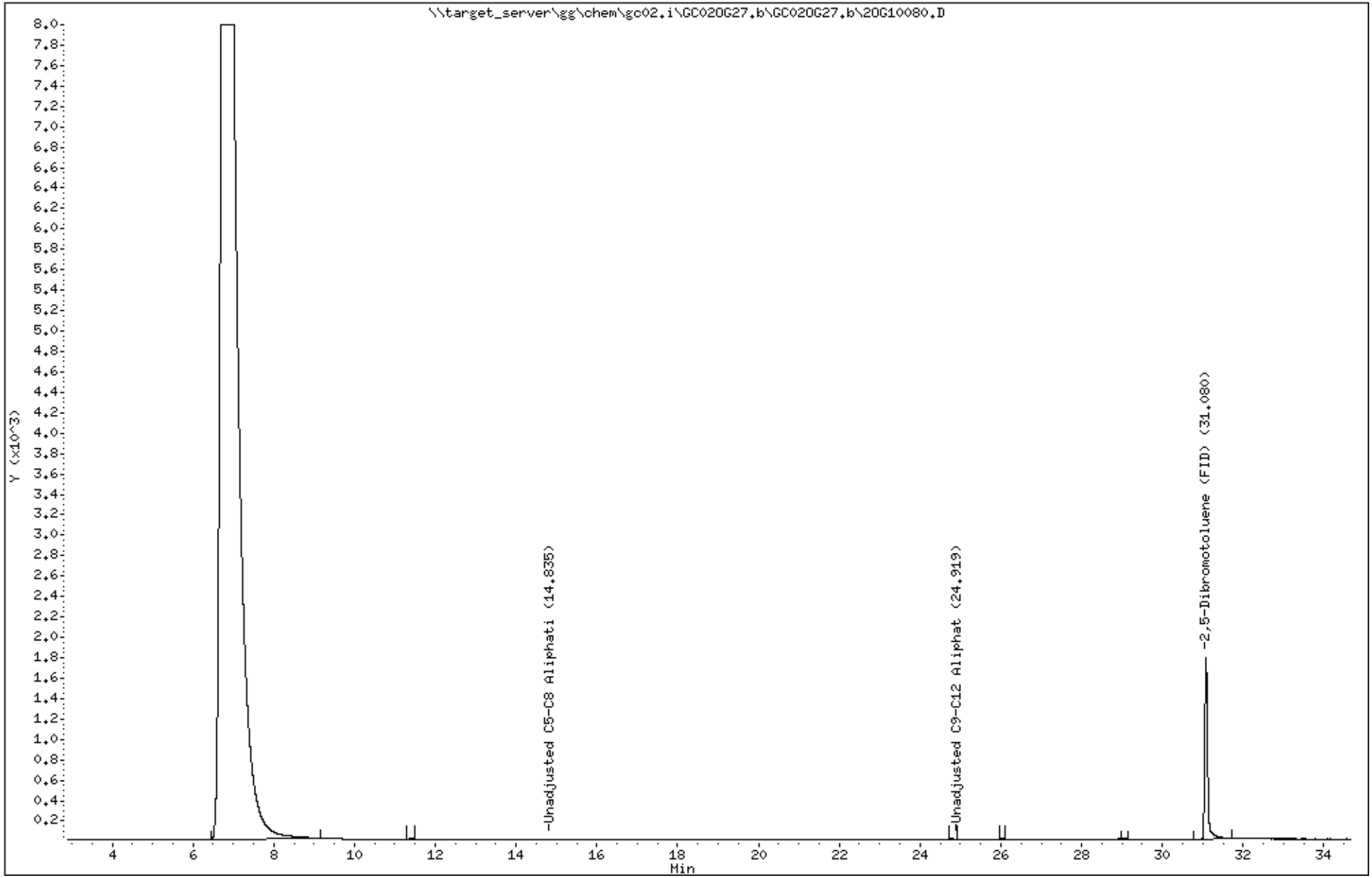
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10080.D
Lab Smp Id: SO4724-6 Client Smp ID: DW-FD-SUMMER2021
Inj Date : 27-JUL-2021 21:54
Operator : DL Inst ID: gc02.i
Smp Info : SO4724-6
Misc Info : WG303232,WG301241-4
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	31.080	31.076	0.004	174840	96.7930	96.8	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20G10080.D
Date : 27-JUL-2021 21:54
Client ID: DW-FD-SUMMER2021
Instrument: gc02.i
Sample Info: S04724-6
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000038

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Client: Verina Consulting Group, LLC
Lab ID: SO4724-7
Client ID: DW-TB-SUMMER2021
Project: LO-58 Nike Missile Battery Launch Site
SDG: SO4724
Lab File ID: 2OG10066.D

Sample Date: 21-JUL-21
Received Date: 22-JUL-21
Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		92.5	%					
2,5-Dibromotoluene (PID)		83.8	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10066.D
Report Date: 30-Jul-2021 10:25

Katahdin Analytical Services

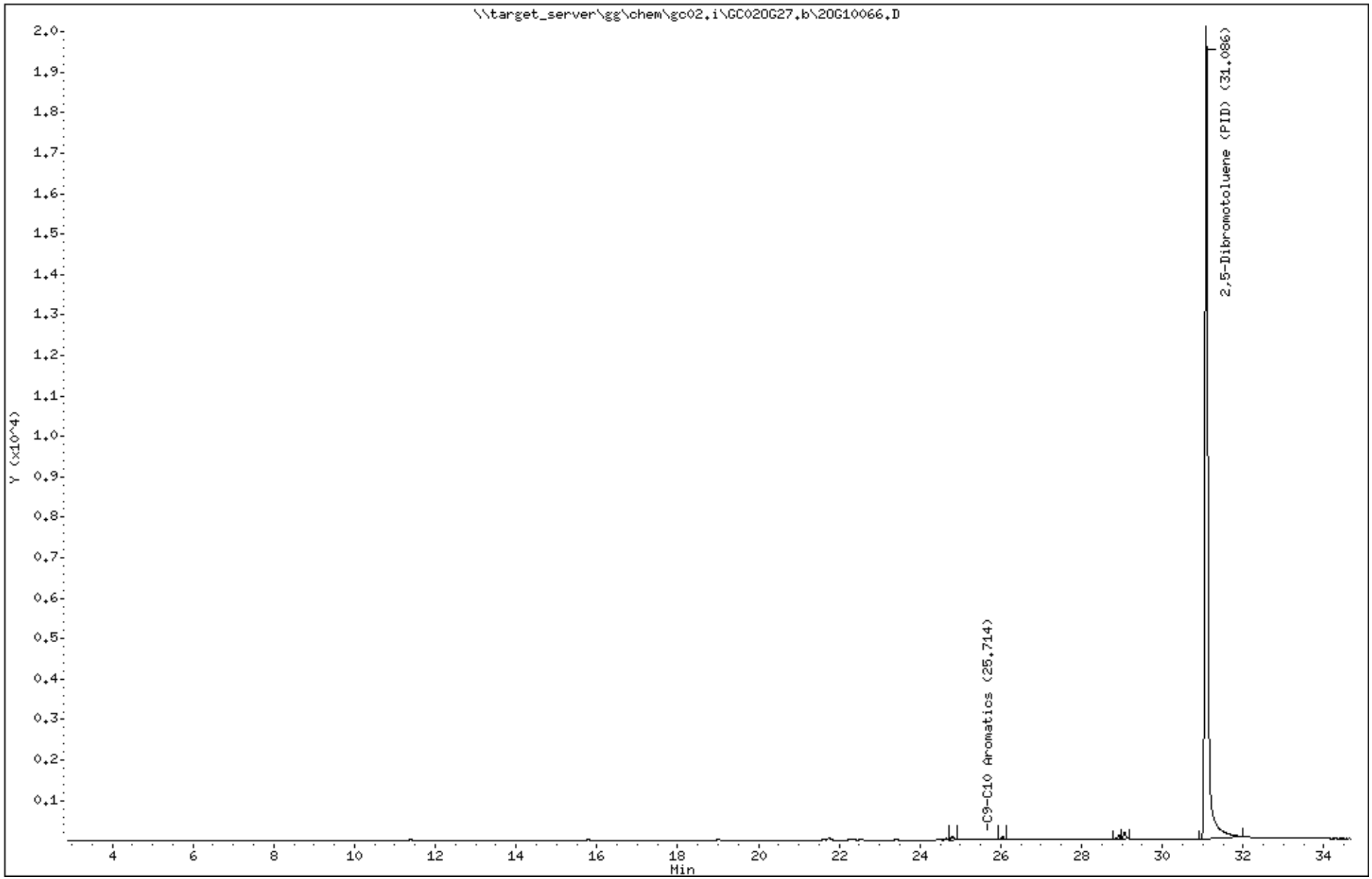
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10066.D
Lab Smp Id: SO4724-7 Client Smp ID: DW-TB-SUMMER2021
Inj Date : 27-JUL-2021 12:16
Operator : DL Inst ID: gc02.i
Smp Info : SO4724-7
Misc Info : WG303232,WG301241-4
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07 Cal File: 2OF10009.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	31.085	31.083	0.002	209405	83.8564	83.8	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10066.D
Date : 27-JUL-2021 12:16
Client ID: DW-TB-SUMMER2021
Instrument: gc02.i
Sample Info: S04724-7
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000041

Data File: 2OG10066.D
Report Date: 30-Jul-2021 10:26

Katahdin Analytical Services

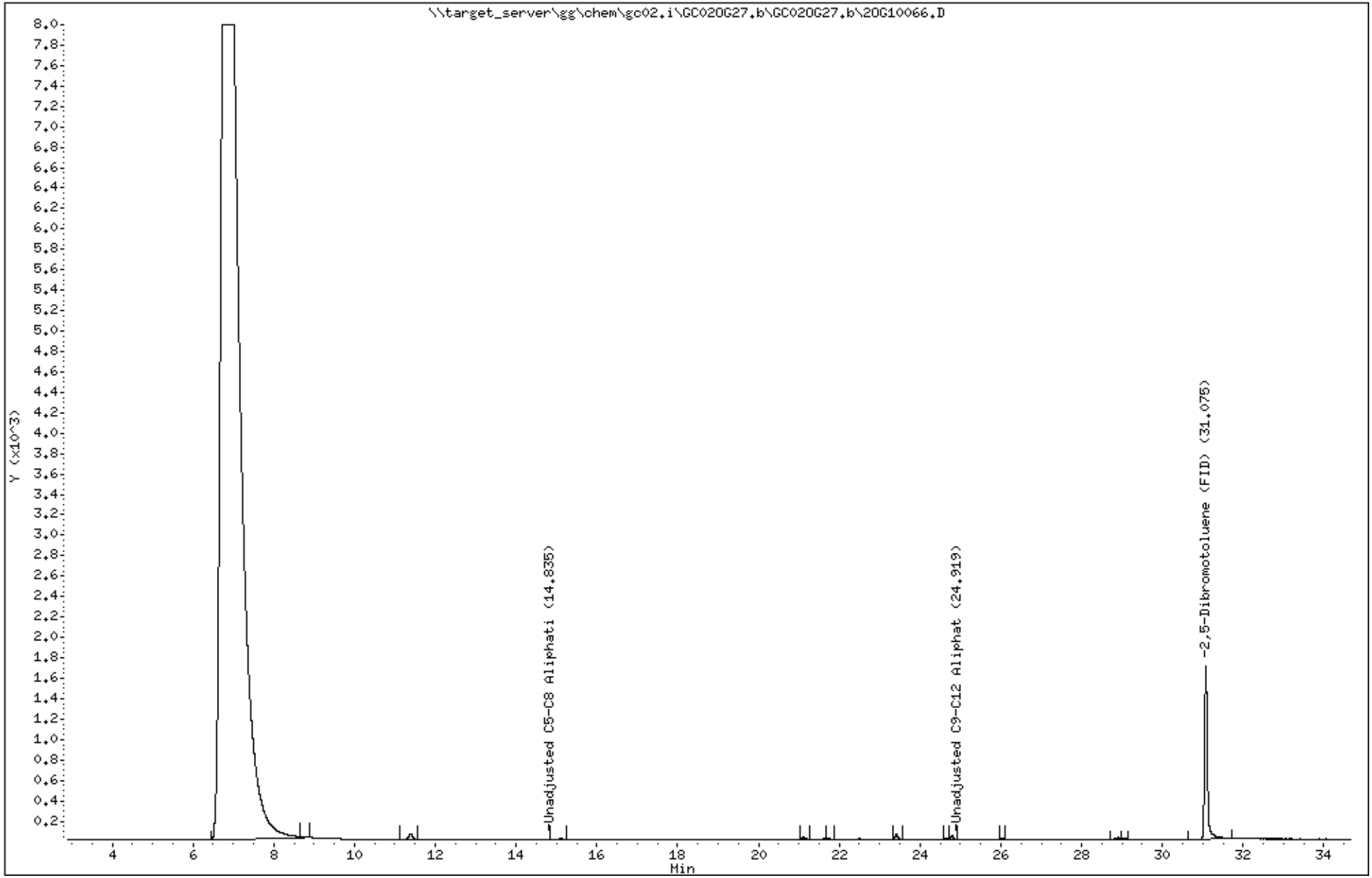
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10066.D
Lab Smp Id: SO4724-7 Client Smp ID: DW-TB-SUMMER2021
Inj Date : 27-JUL-2021 12:16
Operator : DL Inst ID: gc02.i
Smp Info : SO4724-7
Misc Info : WG303232,WG301241-4
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	31.075	31.076	-0.001	167130	92.5247	92.5	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20G10066.D
Date : 27-JUL-2021 12:16
Client ID: DW-TB-SUMMER2021
Instrument: gc02.i
Sample Info: S04724-7
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000043

Standards Data Section

Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services
SDG: SO4724
Project : LO-58 Nike Missile Battery Launch Site
Instrument ID: GC02
Lab File IDs : 2OF10006.D 2OF10007.D 2OF10008.D 2OF10005.D 2OF10009.D 2OF10010.D
Calibration Date(s): 22-JUN-21 14:24 22-JUN-21 17:48

	Level 1 1.0000	Level 2 5.0000	Level 3 10.0000	Level 4 50.0000	Level 5 100.0000	Level 6 300.0000	Crv New	b	m1	m2	%RSD	Max %RSD	
C9-C10 Aromatic	3415	3617	3747	3839	3810	3456	AVG		3648		4.97750	25.00000	M C
Methyl tert-butylether	2108	2227	2246	2164	2197	2062	AVG		2167		3.28805	25.00000	O
Benzene	4697	4504	4514	4362	4371	4110	AVG		4426		4.45210	25.00000	O
Toluene	4123	4071	4117	3966	3989	3710	AVG		3996		3.86285	25.00000	O
Ethylbenzene	3367	3460	3560	3496	3527	3254	AVG		3444		3.31480	25.00000	O
m+p-Xylene	4292	4218	4264	4110	4038	3233	AVG		4026		9.93798	25.00000	O
o-Xylene	3533	3612	3659	3578	3549	3217	AVG		3525		4.46638	25.00000	O
1,2,4-trimethylbenzene	3415	3617	3747	3839	3810	3456	AVG		3648		4.97750	25.00000	O
Naphthalene	2820	3183	3320	3717	3642	3383	AVG		3344		9.74221	25.00000	O
2,5-Dibromotoluene (PID)	2258	2206	2418	3031	2911	2160	AVG		2497		15.1712(	25.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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Data File: \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10011.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: SDGa01556
Sample Matrix: LIQUID Fraction: VPH
Lab Smp Id: WG301241-7
Level: LOW Operator: DL
Data Type: GC DATA SampleType: INDSOURCE
SpikeList File: ind.spk Quant Type: ESTD
Sublist File: IND.sub
Method File: \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m
Misc Info: WG301241,WG301241-4

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
2 Methyl tert-butyle	100	95.1	95.08	80-120
3 Benzene	100	98.3	98.30	80-120
4 Toluene	100	99.3	99.31	80-120
5 Ethylbenzene	100	102	102.48	80-120
6 m+p-Xylene	200	200	100.03	80-120
7 o-Xylene	100	100	100.49	80-120
8 1,2,4-trimethylben	100	102	101.59	80-120
10 Naphthalene	100	115	114.95	80-120

SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 11 2,5-Dibromotoluene	100	112	112.21	70-130

Katahdin
ANALYTICAL SERVICES

Form 6
Initial Calibration Summary

Lab Name : Katahdin Analytical Services **SDG:** SO4724
Project : LO-58 Nike Missile Battery Launch Site **Instrument ID:** GC02
Lab File IDs : 2OF10006.D 2OF10007.D 2OF10008.D 2OF10005.D 2OF10009.D 2OF10010.D **Calibration Date(s):** 22-JUN-21 14:24 22-JUN-21 17:48

	1.0000 Level 1	5.0000 Level 2	10.0000 Level 3	50.0000 Level 4	100.0000 Level 5	300.0000 Level 6	New Crv	b	m1	m2	%RSD	Max %RSD	
C5-C8 Aliphatic	6390	5650	5743	5945	5553	5503	AVG		5797		5.68657	25.00000	M C
C9-C12 Aliphatic	5976	4876	5034	5280	5583	6172	AVG		5487		9.43003	25.00000	M C
n-Pentane	5797	4931	5245	5534	5151	5110	AVG		5295		5.96612	25.00000	O
2-Methylpentane	6596	5897	5864	6010	5630	5544	AVG		5924		6.28767	25.00000	O
Methyl tert-butylether	4757	4593	4645	4438	4489	4254	AVG		4529		3.88958	25.00000	O
2,2,4-Trimethylpentane	6776	6122	6120	6291	5877	5856	AVG		6174		5.47183	25.00000	O
Benzene	8348	7766	7854	7562	7655	7422	AVG		7768		4.14755	25.00000	O
Toluene	7992	7645	7785	7430	7597	7360	AVG		7635		3.03927	25.00000	O
n-Nonane	5958	4981	5047	5352	5323	5976	AVG		5440		7.98006	25.00000	O
n-Decane	5184	3954	4388	4921	5631	6171	AVG		5041		16.03873	25.00000	O
Ethylbenzene	6885	7132	7315	7238	7408	7185	AVG		7194		2.50112	25.00000	O
m+p-Xylene	7545	7537	7644	7458	7558	7299	AVG		7507		1.56655	25.00000	O
o-Xylene	7629	7702	7761	7620	7702	7405	AVG		7637		1.63397	25.00000	O
1,2,4-trimethylbenzene	6725	7129	7421	7619	7676	7335	AVG		7317		4.79909	25.00000	O
n-Butylcyclohexane	6768	5798	5681	5638	5535	6172	AVG		5932		7.83932	25.00000	O
Naphthalene	4246	4598	4980	5389	5526	5319	AVG		5010		10.01691	25.00000	O
2,5-Dibromotoluene (FID)	1598	1470	1725	2110	2040	1895	AVG		1806		13.96877	25.00000	

Legend: O = Kept Original Curve
Y = Failed Minimum RF
W = Failed %RSD Value

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Data File: 2OF10011.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

RECOVERY REPORT

Client Name: Client SDG: SDGa01556
Sample Matrix: LIQUID Fraction: VPH
Lab Smp Id: WG301241-7
Level: LOW Operator: DL
Data Type: GC DATA SampleType: INDSOURCE
SpikeList File: ind.spk Quant Type: ESTD
Sublist File: IND.sub
Method File: \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m\VPHFIDA5.m
Misc Info: WG301241,WG301241-4

SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5	n-Pentane	100	83.1	83.11	80-120
6	2-Methylpentane	100	88.4	88.43	80-120
7	Methyl tert-butyle	100	95.1	95.08	80-120
8	2,2,4-Trimethylpen	100	94.3	94.29	80-120
9	Benzene	100	97.9	97.94	80-120
11	Toluene	100	98.6	98.66	80-120
12	n-Nonane	100	96.2	96.24	80-120
13	n-Decane	100	109	109.12	80-120
14	Ethylbenzene	100	103	102.78	80-120
15	m+p-Xylene	200	199	99.75	80-120
16	o-Xylene	100	100	100.05	80-120
18	1,2,4-trimethylben	100	102	101.55	80-120
19	n-Butylcyclohexane	100	92.2	92.24	80-120
20	Naphthalene	100	113	112.89	80-120

SURROGATE	COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 21	2,5-Dibromotoluene	100	110	110.38	70-130

Data File: \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10006.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10006.D
Lab Smp Id: WG301241-1
Inj Date : 22-JUN-2021 15:05
Operator : DL   Inst ID: gc02.i
Smp Info : WG301241-1
Misc Info :
Comment   : AROMATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m
Meth Date : 23-Jun-2021 07:30 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 15:05   Cal File: 2OF10006.D
Als bottle: 1   Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

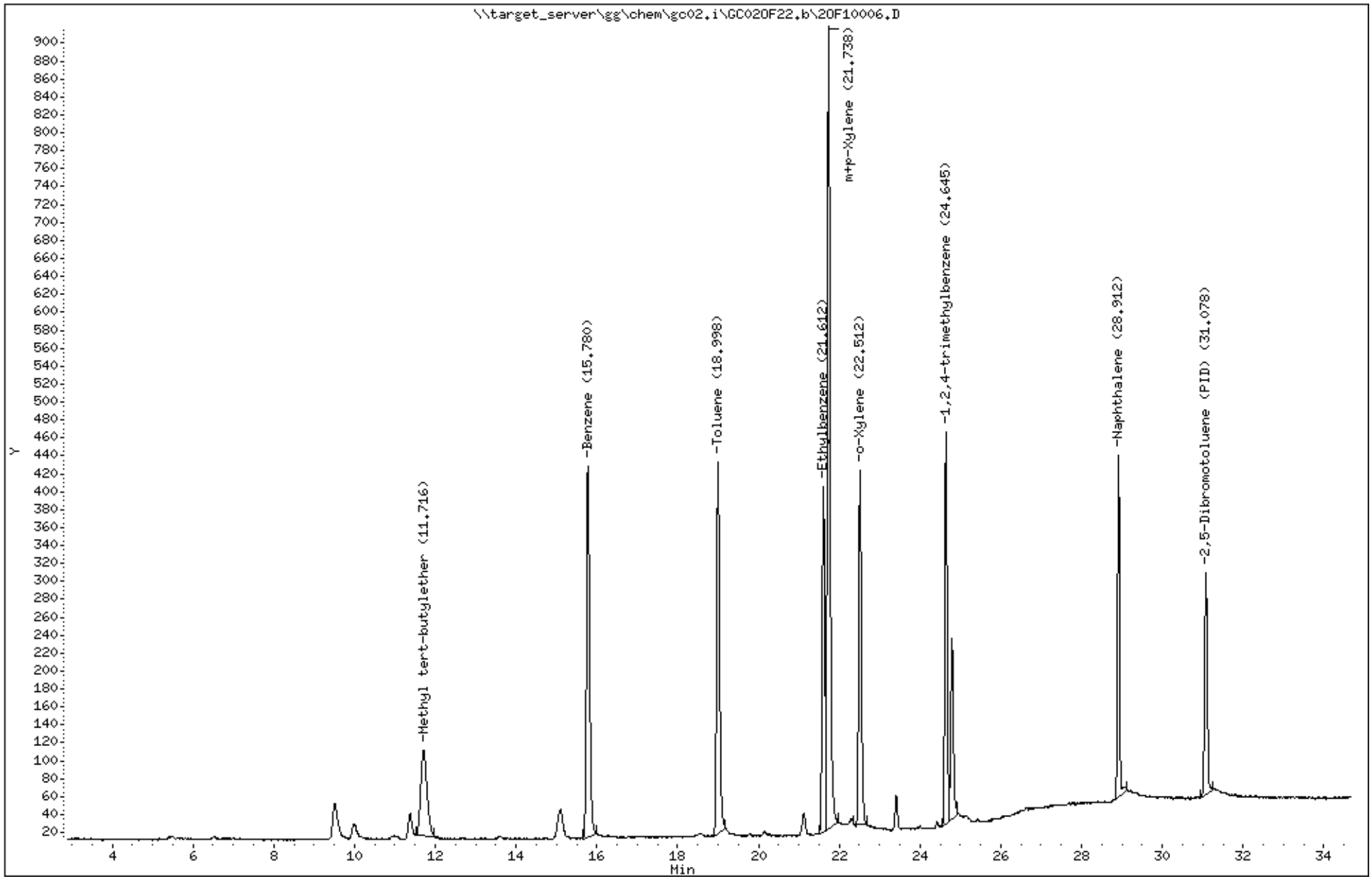
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
2	Methyl tert-butylether	11.715	11.696	0.019	2108	1.00000	0.987	
3	Benzene	15.780	15.780	0.000	4697	1.00000	1.04	
4	Toluene	18.998	18.998	0.000	4123	1.00000	1.02	
5	Ethylbenzene	21.611	21.612	-0.001	3367	1.00000	0.981	
6	m+p-Xylene	21.737	21.739	-0.002	8583	2.00000	2.04	
7	o-Xylene	22.511	22.511	0.000	3533	1.00000	0.994	
8	1,2,4-trimethylbenzene	24.645	24.643	0.002	3415	1.00000	0.941(M)	M9
10	Naphthalene	28.911	28.916	-0.005	2820	1.00000	0.863(M)	M9
M 1	C9-C10 Aromatic				3415	1.00000	0.941	
$ 11	2,5-Dibromotoluene (PID)	31.078	31.083	-0.005	2258	1.00000	0.854(M)	M9

DL
9:11 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\20F10006.D
Date : 22-JUN-2021 15:05
Client ID:
Instrument: gc02.i
Sample Info: WG301241-1
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000050

Data File: 2OF10006.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\GC02OF22.b\2OF10006.D
Lab Smp Id: WG301241-1
Inj Date : 22-JUN-2021 15:05
Operator : DL Inst ID: gc02.i
Smp Info : WG301241-1
Misc Info :
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 23-Jun-2021 07:36 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 15:05 Cal File: 2OF10006.D
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

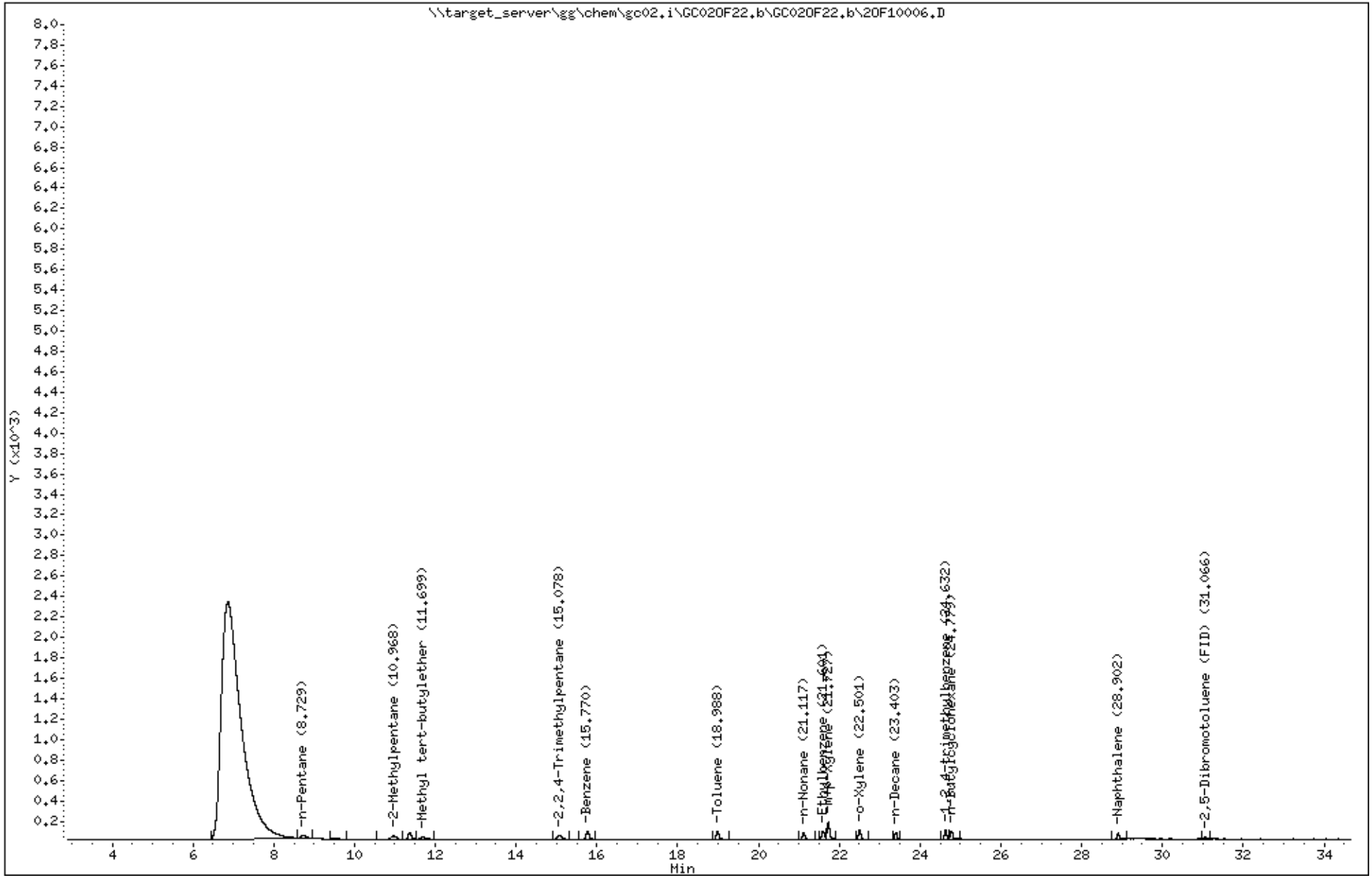
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
5	n-Pentane	8.729	8.743	-0.014	5797	1.00000	1.02(M)	M2
6	2-Methylpentane	10.967	10.966	0.001	6596	1.00000	1.05	
7	Methyl tert-butylether	11.699	11.687	0.012	4757	1.00000	1.03	
8	2,2,4-Trimethylpentane	15.078	15.093	-0.015	6776	1.00000	1.04	
9	Benzene	15.769	15.769	0.000	8348	1.00000	1.05	
11	Toluene	18.987	18.989	-0.002	7992	1.00000	1.04	
12	n-Nonane	21.116	21.127	-0.011	5958	1.00000	1.05	
14	Ethylbenzene	21.601	21.606	-0.005	6885	1.00000	0.975	
15	m+p-Xylene	21.727	21.736	-0.009	15090	2.00000	2.01	
16	o-Xylene	22.501	22.505	-0.004	7629	1.00000	1.00	
13	n-Decane	23.402	23.409	-0.007	5184	1.00000	1.03	
18	1,2,4-trimethylbenzene	24.631	24.638	-0.007	6725	1.00000	0.938	
19	n-Butylcyclohexane	24.779	24.785	-0.006	6768	1.00000	1.09	
20	Naphthalene	28.902	28.910	-0.008	4246	1.00000	0.881	
M 1	C5-C8 Aliphatic				19169	3.00000	3.11	
M 2	C9-C12 Aliphatic				11952	2.00000	2.12	
$ 21	2,5-Dibromotoluene (FID)	31.066	31.076	-0.010	1598	1.00000	0.862	

DL
9:11 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\GC020F22.b\20F10006.D
Date : 22-JUN-2021 15:05
Client ID:
Instrument: gc02.i
Sample Info: WG301241-1
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000052

Data File: \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10007.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10007.D
Lab Smp Id: WG301241-2
Inj Date : 22-JUN-2021 15:45
Operator : DL   Inst ID: gc02.i
Smp Info : WG301241-2
Misc Info :
Comment   : AROMATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m
Meth Date : 23-Jun-2021 07:30 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 15:45   Cal File: 2OF10007.D
Als bottle: 1   Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
2	Methyl tert-butylether	11.707	11.696	0.011	11137	5.00000	5.14	
3	Benzene	15.780	15.780	0.000	22521	5.00000	5.09	
4	Toluene	18.998	18.998	0.000	20356	5.00000	5.09	
5	Ethylbenzene	21.610	21.612	-0.002	17298	5.00000	5.02	
6	m+p-Xylene	21.736	21.739	-0.003	42180	10.0000	10.5	
7	o-Xylene	22.510	22.511	-0.001	18059	5.00000	5.12	
8	1,2,4-trimethylbenzene	24.641	24.643	-0.002	18084	5.00000	4.96	
10	Naphthalene	28.914	28.916	-0.002	15916	5.00000	4.73(M)	M9
M 1	C9-C10 Aromatic				18084	5.00000	4.96	
$ 11	2,5-Dibromotoluene (PID)	31.072	31.083	-0.011	11028	5.00000	4.40(M)	M9

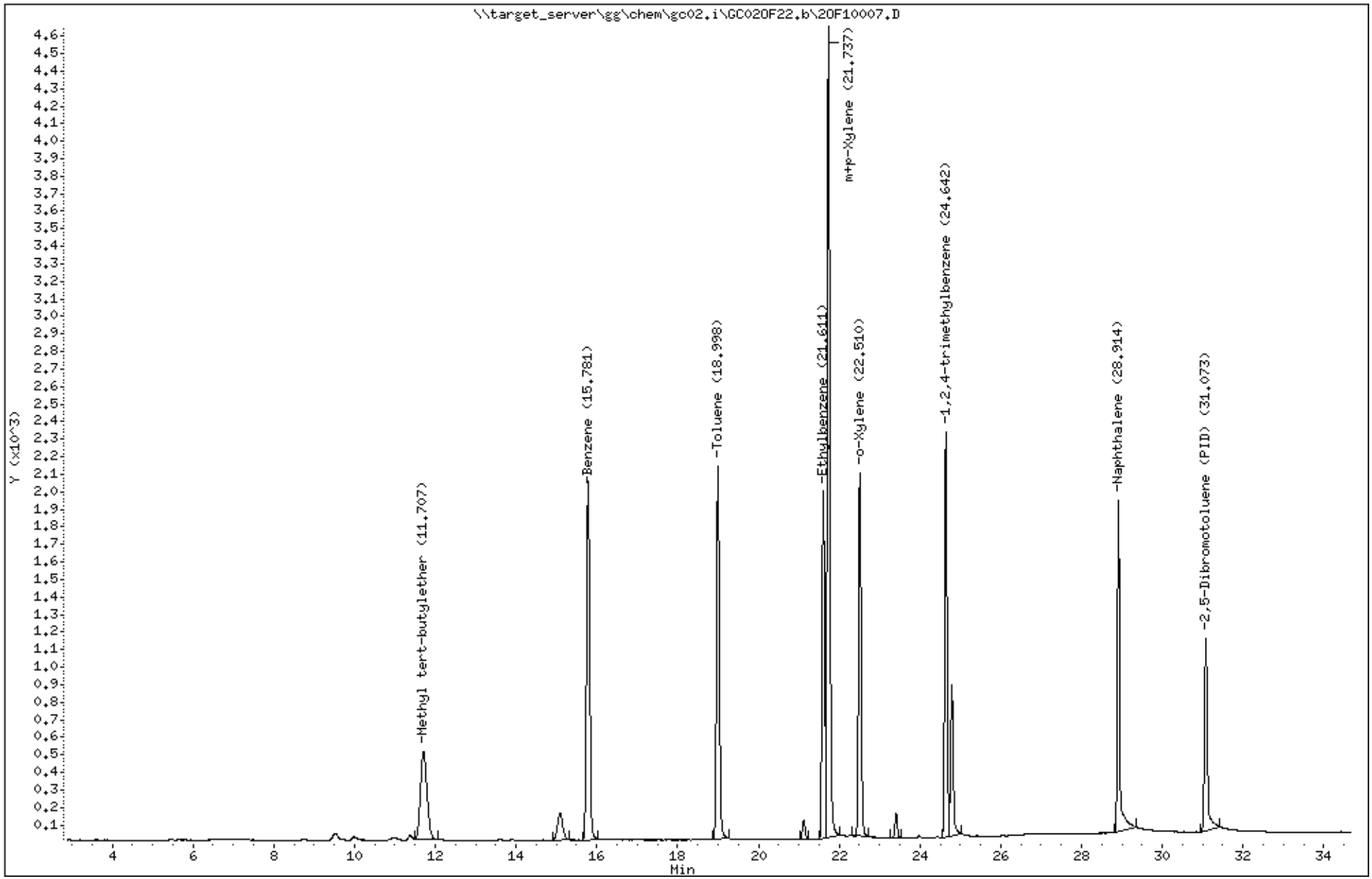
DL

9:11 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\20F10007.D
Date : 22-JUN-2021 15:45
Client ID:
Instrument: gc02.i
Sample Info: WG301241-2
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000054

Data File: 2OF10007.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\GC02OF22.b\2OF10007.D
Lab Smp Id: WG301241-2
Inj Date : 22-JUN-2021 15:45
Operator : DL   Inst ID: gc02.i
Smp Info : WG301241-2
Misc Info :
Comment   : ALIPHATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 23-Jun-2021 07:36 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 15:45   Cal File: 2OF10007.D
Als bottle: 1   Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

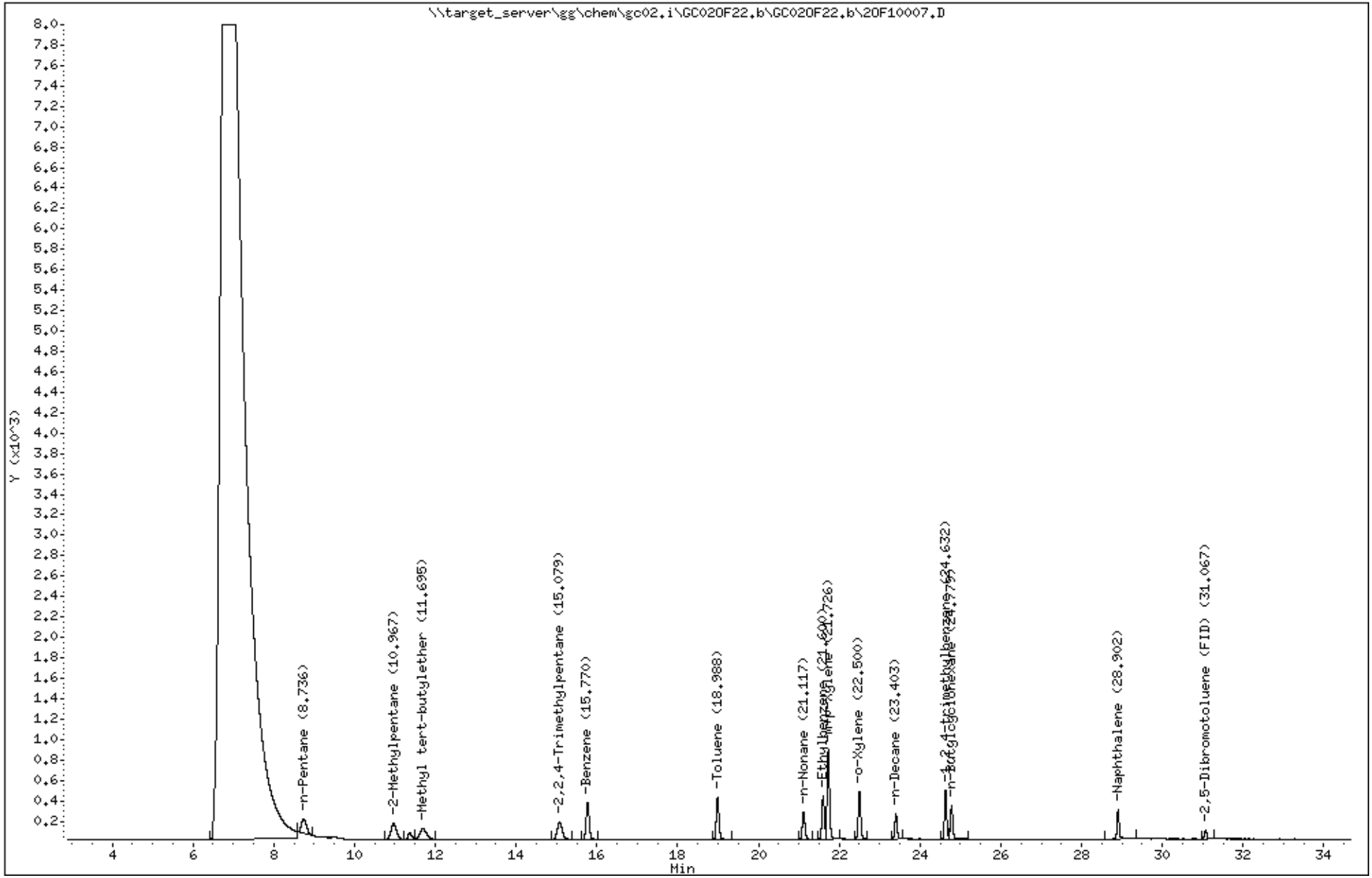
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
5	n-Pentane	8.736	8.743	-0.007	24657	5.00000	4.05(M)	M2
6	2-Methylpentane	10.967	10.966	0.001	29486	5.00000	4.98	
7	Methyl tert-butylether	11.694	11.687	0.007	22963	5.00000	5.07	
8	2,2,4-Trimethylpentane	15.079	15.093	-0.014	30609	5.00000	4.96	
9	Benzene	15.770	15.769	0.001	38832	5.00000	5.00	
11	Toluene	18.987	18.989	-0.002	38227	5.00000	5.01	
12	n-Nonane	21.116	21.127	-0.011	24903	5.00000	4.58	
14	Ethylbenzene	21.599	21.606	-0.007	35658	5.00000	4.96	
15	m+p-Xylene	21.726	21.736	-0.010	75367	10.0000	10.0	
16	o-Xylene	22.499	22.505	-0.006	38512	5.00000	5.04	
13	n-Decane	23.402	23.409	-0.007	19769	5.00000	3.92	
18	1,2,4-trimethylbenzene	24.631	24.638	-0.007	35645	5.00000	4.87	
19	n-Butylcyclohexane	24.778	24.785	-0.007	28989	5.00000	4.89	
20	Naphthalene	28.901	28.910	-0.009	22992	5.00000	4.59	
M 1	C5-C8 Aliphatic				84752	15.0000	14.0	
M 2	C9-C12 Aliphatic				48758	10.0000	8.80	
$ 21	2,5-Dibromotoluene (FID)	31.066	31.076	-0.010	7348	5.00000	4.00	

DL
9:11 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\GC020F22.b\20F10007.D
Date : 22-JUN-2021 15:45
Client ID:
Instrument: gc02.i
Sample Info: WG301241-2
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000056

Data File: \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10008.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

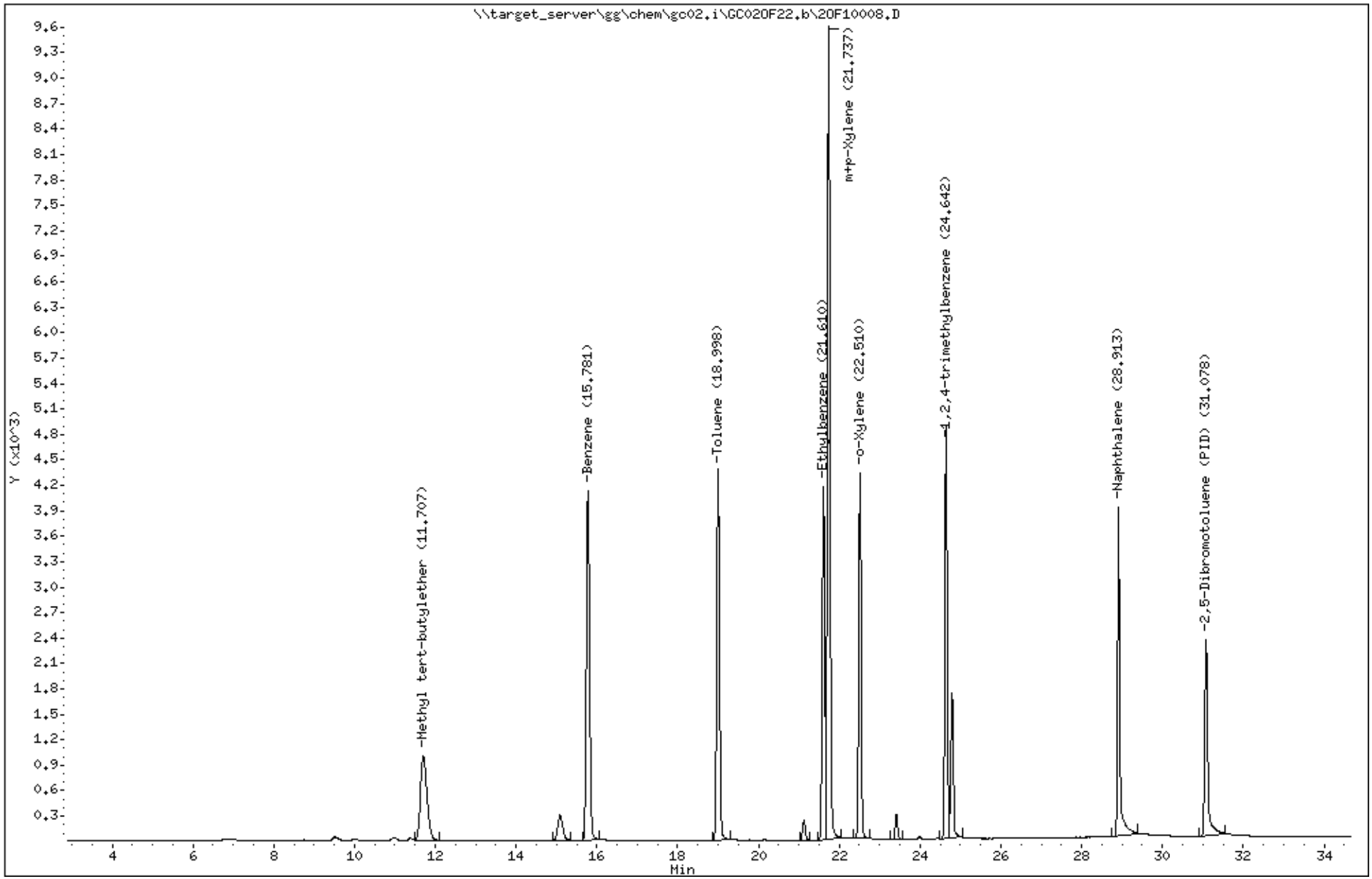
Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10008.D
Lab Smp Id: WG301241-3
Inj Date : 22-JUN-2021 16:26
Operator : DL   Inst ID: gc02.i
Smp Info : WG301241-3
Misc Info :
Comment   : AROMATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m
Meth Date : 23-Jun-2021 07:30 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 16:26   Cal File: 2OF10008.D
Als bottle: 1   Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
						CAL-AMT	ON-COL	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)	REVIEW CODE
	2 Methyl tert-butylether	11.707	11.696	0.011	22460	10.0000	10.3	
	3 Benzene	15.780	15.780	0.000	45136	10.0000	9.99	
	4 Toluene	18.997	18.998	-0.001	41165	10.0000	10.1	
	5 Ethylbenzene	21.610	21.612	-0.002	35604	10.0000	10.2	
	6 m+p-Xylene	21.736	21.739	-0.003	85274	20.0000	20.2	
	7 o-Xylene	22.509	22.511	-0.002	36594	10.0000	10.2	
	8 1,2,4-trimethylbenzene	24.642	24.643	-0.001	37474	10.0000	10.2	
	10 Naphthalene	28.913	28.916	-0.003	33202	10.0000	10.3	
M	1 C9-C10 Aromatic				37474	10.0000	10.2	
$	11 2,5-Dibromotoluene (PID)	31.077	31.083	-0.006	24177	10.0000	9.79	

Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\20F10008.D
Date : 22-JUN-2021 16:26
Client ID:
Instrument: gc02.i
Sample Info: WG301241-3
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000058

Data File: 2OF10008.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\GC02OF22.b\2OF10008.D
Lab Smp Id: WG301241-3
Inj Date : 22-JUN-2021 16:26
Operator : DL   Inst ID: gc02.i
Smp Info : WG301241-3
Misc Info :
Comment   : ALIPHATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 23-Jun-2021 07:36 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 16:26   Cal File: 2OF10008.D
Als bottle: 1   Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

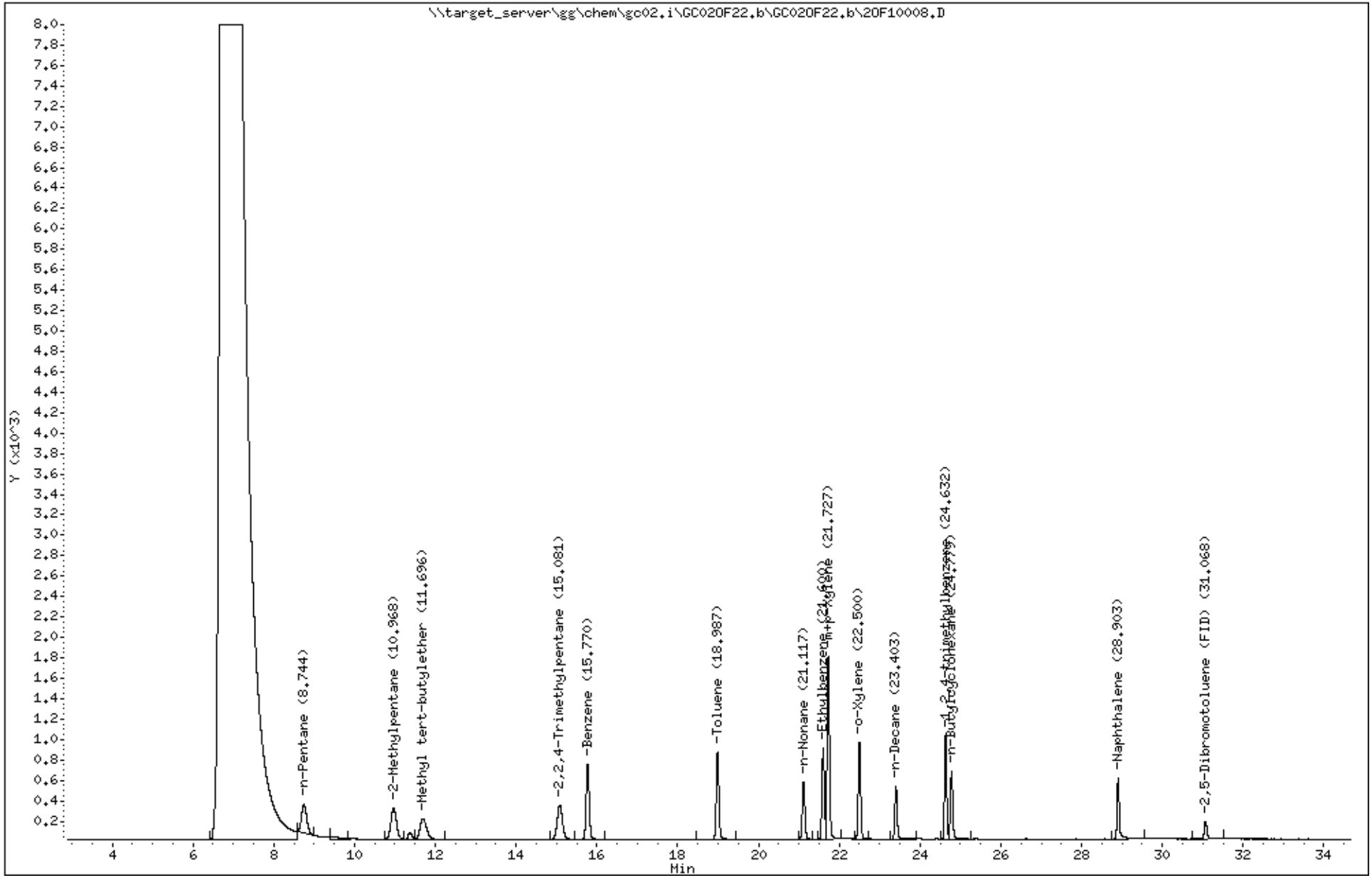
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
5	n-Pentane	8.743	8.743	0.000	52449	10.0000	9.69(M)	M2
6	2-Methylpentane	10.967	10.966	0.001	58641	10.0000	9.90	
7	Methyl tert-butylether	11.695	11.687	0.008	46452	10.0000	10.2	
8	2,2,4-Trimethylpentane	15.081	15.093	-0.012	61195	10.0000	9.91	
9	Benzene	15.770	15.769	0.001	78537	10.0000	10.1	
11	Toluene	18.987	18.989	-0.002	77852	10.0000	10.2	
12	n-Nonane	21.117	21.127	-0.010	50474	10.0000	9.28	
14	Ethylbenzene	21.600	21.606	-0.006	73145	10.0000	10.2	
15	m+p-Xylene	21.726	21.736	-0.010	152875	20.0000	20.4	
16	o-Xylene	22.499	22.505	-0.006	77610	10.0000	10.2	
13	n-Decane	23.402	23.409	-0.007	43875	10.0000	8.69	
18	1,2,4-trimethylbenzene	24.631	24.638	-0.007	74214	10.0000	10.1	
19	n-Butylcyclohexane	24.778	24.785	-0.007	56810	10.0000	9.58	
20	Naphthalene	28.903	28.910	-0.007	49801	10.0000	9.94	
M 1	C5-C8 Aliphatic				172285	30.0000	29.5	
M 2	C9-C12 Aliphatic				100685	20.0000	18.3	
$ 21	2,5-Dibromotoluene (FID)	31.067	31.076	-0.009	17248	10.0000	9.38	

DL
9:11 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\GC020F22.b\20F10008.D
Date : 22-JUN-2021 16:26
Client ID:
Instrument: gc02.i
Sample Info: WG301241-3
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000060

Data File: \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10005.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

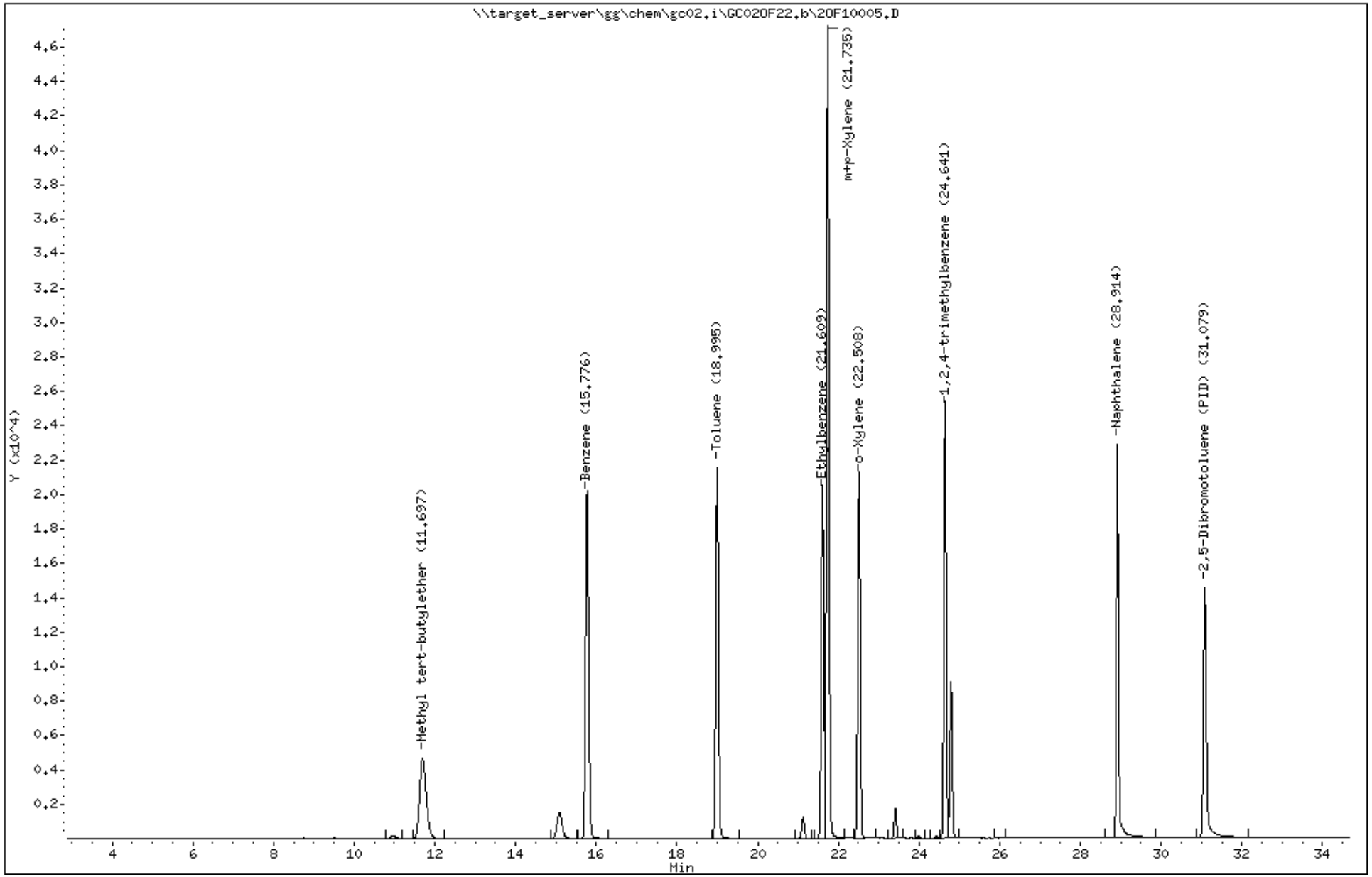
Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10005.D
Lab Smp Id: WG301241-4
Inj Date : 22-JUN-2021 14:24
Operator : DL   Inst ID: gc02.i
Smp Info : WG301241-4
Misc Info :
Comment   : AROMATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m
Meth Date : 23-Jun-2021 07:30 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 14:24   Cal File: 2OF10005.D
Als bottle: 1   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
2	Methyl tert-butylether	11.697	11.696	0.001	108180	50.0000	50.0	
3	Benzene	15.775	15.780	-0.005	218078	50.0000	50.0	
4	Toluene	18.994	18.998	-0.004	198279	50.0000	50.0	
5	Ethylbenzene	21.608	21.612	-0.004	174779	50.0000	50.0	
6	m+p-Xylene	21.735	21.739	-0.004	410964	100.000	100	
7	o-Xylene	22.508	22.511	-0.003	178921	50.0000	50.0	
8	1,2,4-trimethylbenzene	24.641	24.643	-0.002	191974	50.0000	50.0	
10	Naphthalene	28.913	28.916	-0.003	185869	50.0000	50.0	
M 1	C9-C10 Aromatic				191974	50.0000	50.0	
$ 11	2,5-Dibromotoluene (PID)	31.078	31.083	-0.005	151538	50.0000	50.0	

Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\20F10005.D
Date : 22-JUN-2021 14:24
Client ID:
Instrument: gc02.i
Sample Info: WG301241-4
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000062

Data File: 2OF10005.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\GC02OF22.b\2OF10005.D
Lab Smp Id: WG301241-4
Inj Date : 22-JUN-2021 14:24
Operator : DL   Inst ID: gc02.i
Smp Info : WG301241-4
Misc Info :
Comment   : ALIPHATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 23-Jun-2021 07:36 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 14:24   Cal File: 2OF10005.D
Als bottle: 1   Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

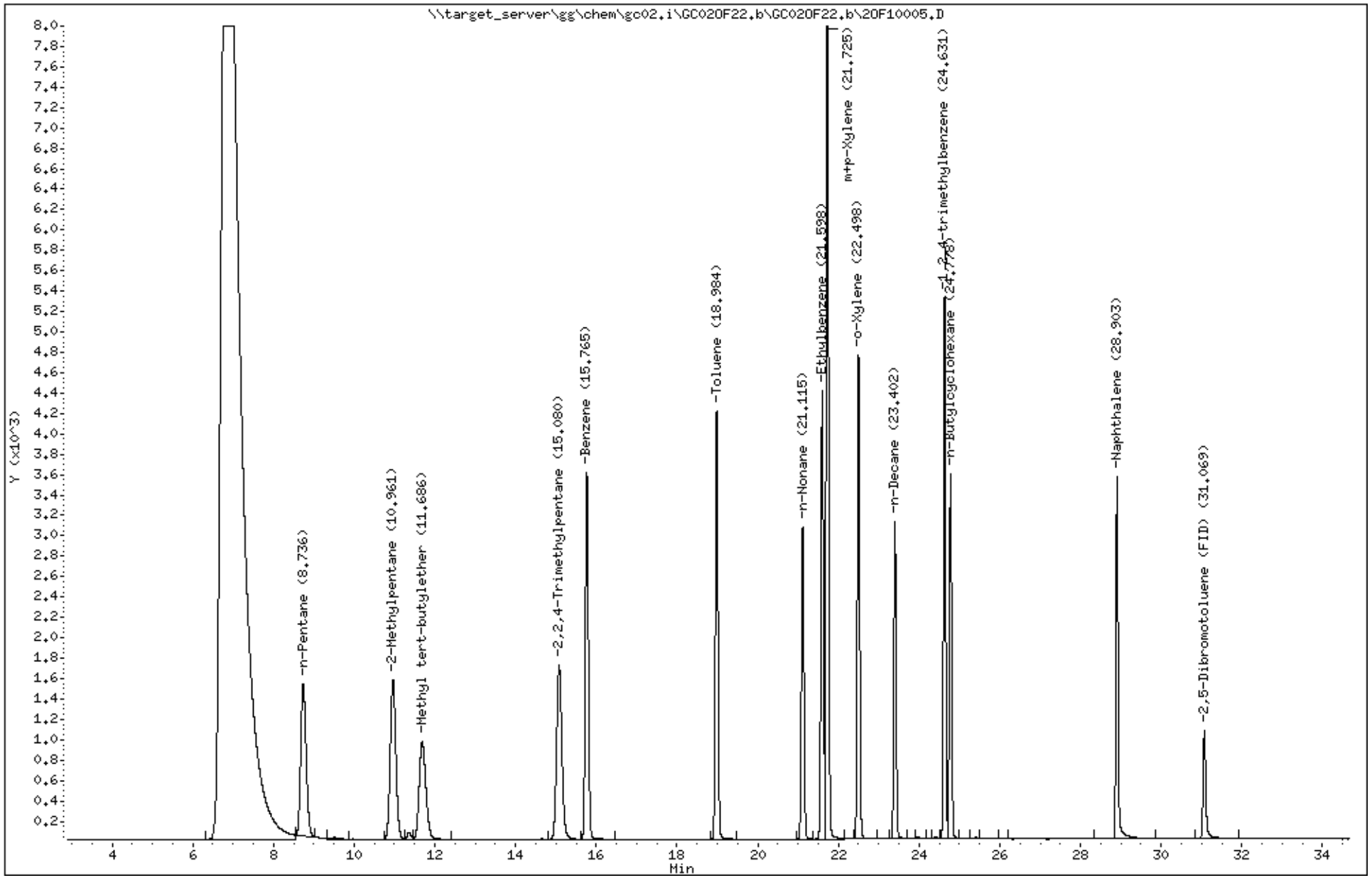
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
5	n-Pentane	8.736	8.743	-0.007	276684	50.0000	50.0(M)	M2
6	2-Methylpentane	10.961	10.966	-0.005	300487	50.0000	50.0	
7	Methyl tert-butylether	11.686	11.687	-0.001	221920	50.0000	50.0	
8	2,2,4-Trimethylpentane	15.079	15.093	-0.014	314538	50.0000	50.0	
9	Benzene	15.765	15.769	-0.004	378100	50.0000	50.0	
11	Toluene	18.984	18.989	-0.005	371513	50.0000	50.0	
12	n-Nonane	21.115	21.127	-0.012	267590	50.0000	50.0	
14	Ethylbenzene	21.598	21.606	-0.008	361883	50.0000	50.0	
15	m+p-Xylene	21.725	21.736	-0.011	745806	100.000	100	
16	o-Xylene	22.497	22.505	-0.008	381012	50.0000	50.0	
13	n-Decane	23.401	23.409	-0.008	246036	50.0000	50.0	
18	1,2,4-trimethylbenzene	24.631	24.638	-0.007	380927	50.0000	50.0	
19	n-Butylcyclohexane	24.778	24.785	-0.007	281918	50.0000	50.0	
20	Naphthalene	28.903	28.910	-0.007	269429	50.0000	50.0	
M 1	C5-C8 Aliphatic				891709	150.000	150	
M 2	C9-C12 Aliphatic				527954	100.000	100	
$ 21	2,5-Dibromotoluene (FID)	31.068	31.076	-0.008	105514	50.0000	50.0	

DL
9:11 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\GC020F22.b\20F10005.D
Date : 22-JUN-2021 14:24
Client ID:
Instrument: gc02.i
Sample Info: WG301241-4
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000064

Data File: \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10009.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10009.D
Lab Smp Id: WG301241-5
Inj Date : 22-JUN-2021 17:07
Operator : DL Inst ID: gc02.i
Smp Info : WG301241-5
Misc Info :
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m
Meth Date : 23-Jun-2021 07:30 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07 Cal File: 2OF10009.D
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

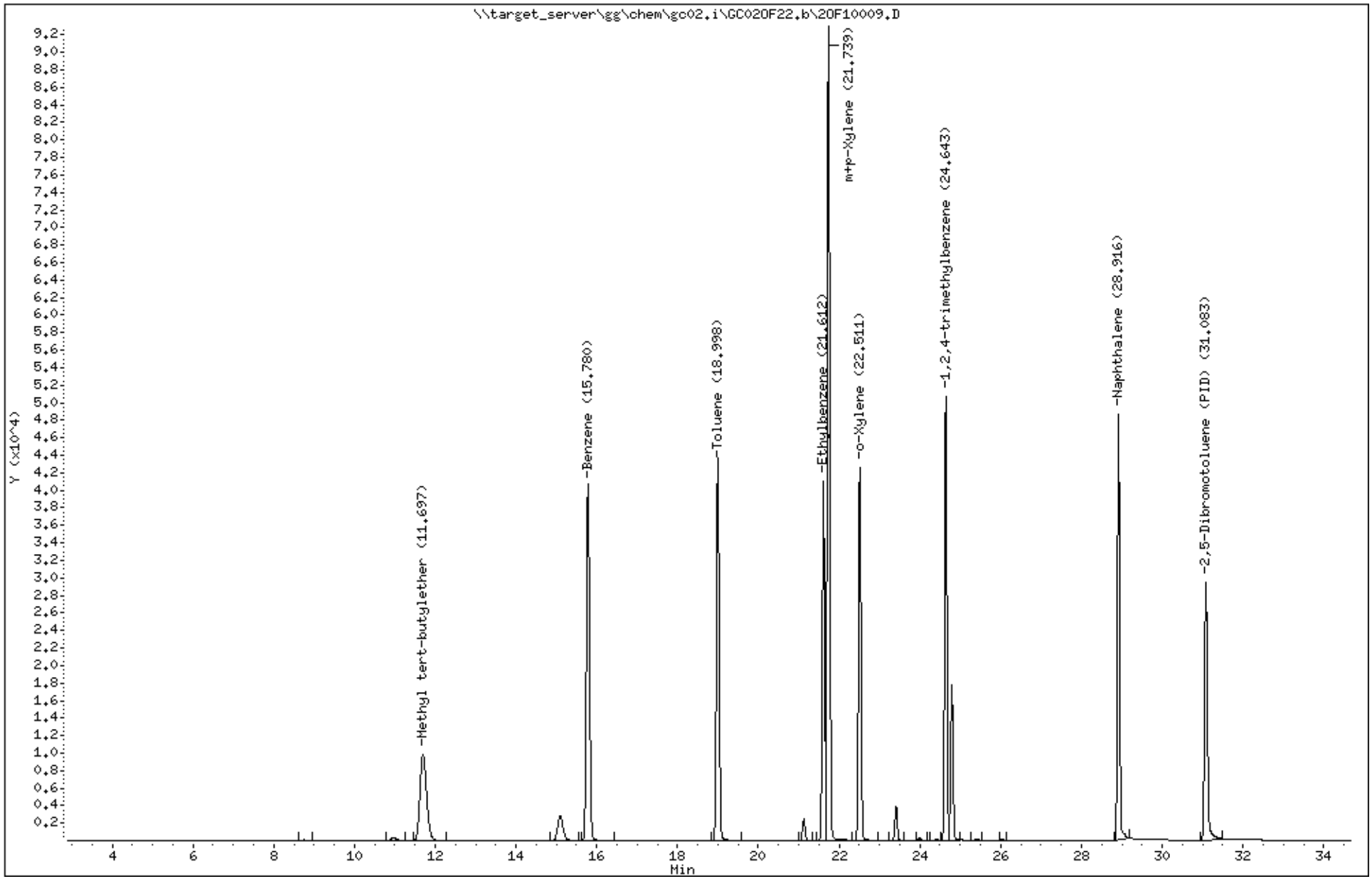
	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)	REVIEW CODE
2	Methyl tert-butylether	11.696	11.696	0.000	219695	100.000	101	
3	Benzene	15.779	15.780	-0.001	437073	100.000	98.7	
4	Toluene	18.998	18.998	0.000	398941	100.000	99.8	
5	Ethylbenzene	21.611	21.612	-0.001	352681	100.000	102	
6	m+p-Xylene	21.739	21.739	0.000	807683	200.000	201	
7	o-Xylene	22.511	22.511	0.000	354903	100.000	101	
8	1,2,4-trimethylbenzene	24.643	24.643	0.000	381018	100.000	104	
10	Naphthalene	28.916	28.916	0.000	364203	100.000	109(M)	M9
M 1	C9-C10 Aromatic				381018	100.000	104	
$ 11	2,5-Dibromotoluene (PID)	31.083	31.083	0.000	291067	100.000	116(M)	M9

DL
9:11 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\20F10009.D
Date : 22-JUN-2021 17:07
Client ID:
Instrument: gc02.i
Sample Info: WG301241-5
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000066

Data File: 2OF10009.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\GC02OF22.b\2OF10009.D
Lab Smp Id: WG301241-5
Inj Date : 22-JUN-2021 17:07
Operator : DL   Inst ID: gc02.i
Smp Info : WG301241-5
Misc Info :
Comment   : ALIPHATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 23-Jun-2021 07:36 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07   Cal File: 2OF10009.D
Als bottle: 1   Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

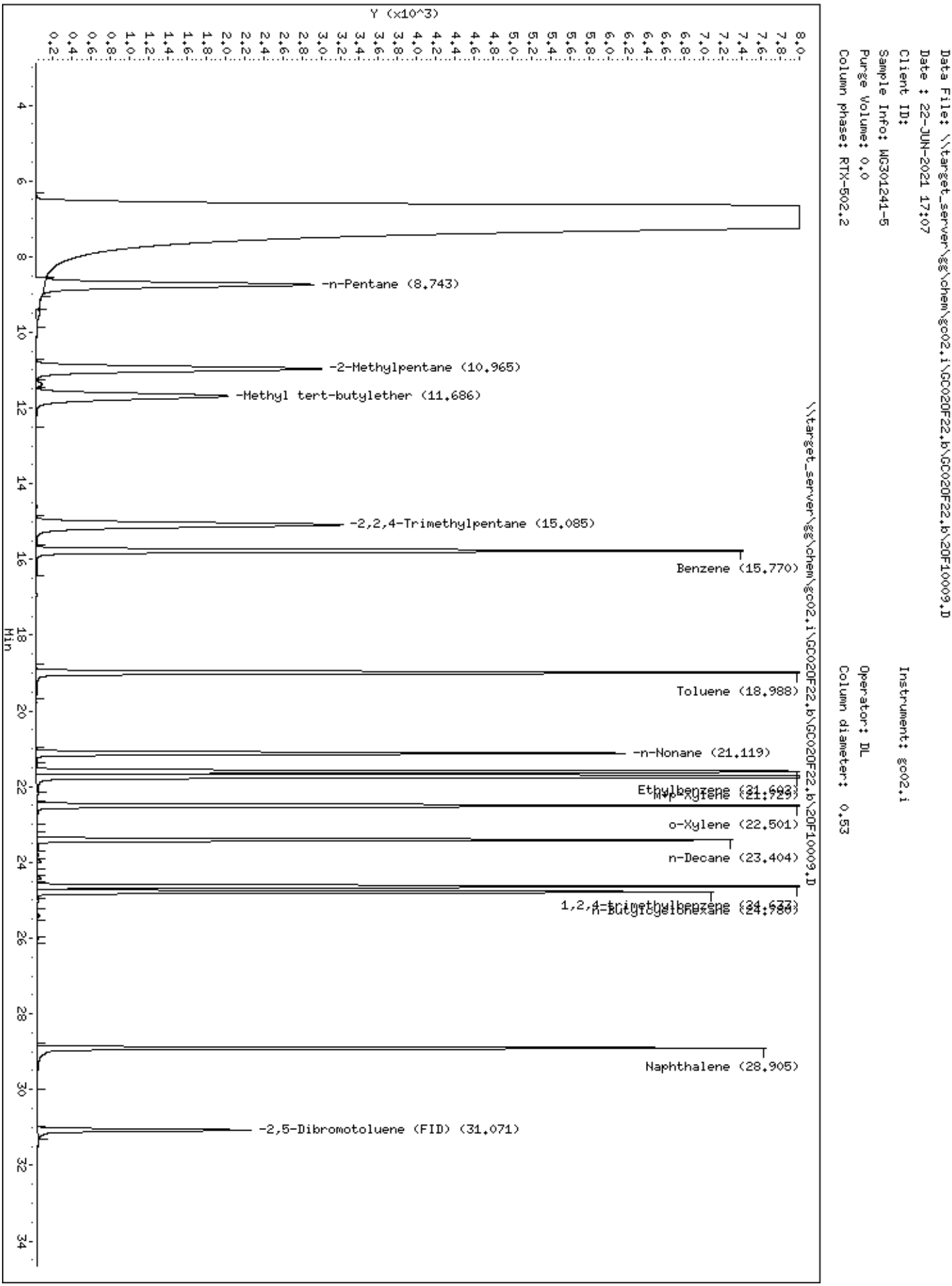
Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
5	n-Pentane	8.743	8.743	0.000	515058	100.000	97.0(M)	M2
6	2-Methylpentane	10.965	10.966	-0.001	563017	100.000	95.0	
7	Methyl tert-butylether	11.686	11.687	-0.001	448906	100.000	99.1	
8	2,2,4-Trimethylpentane	15.084	15.093	-0.009	587749	100.000	95.2	
9	Benzene	15.769	15.769	0.000	765465	100.000	98.5	
11	Toluene	18.987	18.989	-0.002	759728	100.000	99.5	
12	n-Nonane	21.119	21.127	-0.008	532341	100.000	97.9	
14	Ethylbenzene	21.601	21.606	-0.005	740844	100.000	103	
15	m+p-Xylene	21.729	21.736	-0.007	1511674	200.000	201	
16	o-Xylene	22.500	22.505	-0.005	770157	100.000	101	
13	n-Decane	23.404	23.409	-0.005	563082	100.000	112	
18	1,2,4-trimethylbenzene	24.632	24.638	-0.006	767567	100.000	105	
19	n-Butylcyclohexane	24.780	24.785	-0.005	553509	100.000	93.3	
20	Naphthalene	28.904	28.910	-0.006	552625	100.000	110	
M 1	C5-C8 Aliphatic				1665824	300.000	287	
M 2	C9-C12 Aliphatic				1116591	200.000	205	
$ 21	2,5-Dibromotoluene (FID)	31.070	31.076	-0.006	203998	100.000	112(M)	M9

DL
9:11 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.


Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\GC020F22.b\20F10009.D
Date : 22-JUN-2021 17:07
Client ID:
Sample Info: WG301241-5
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: DL
Column diameter: 0.53
\\target_server\gg\chem\gc02.i\GC020F22.b\GC020F22.b\20F10009.D
Y (x10^3)
Min
-n-Pentane (8.743)
-2-Methylpentane (10.965)
-Methyl tert-butylether (11.686)
-2,2,4-Trimethylpentane (15.085)
Benzene (15.770)
Toluene (18.988)
-n-Nonane (21.119)
Ethylbenzene (21.693)
m+p-Xylene (21.729)
o-Xylene (22.501)
n-Decane (23.404)
1,2,4-Trimethylbenzene (24.677)
n-Butylcyclohexane (24.980)
Naphthalene (28.905)
-2,5-Dibromotoluene (FID) (31.071)

Data File: \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10010.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

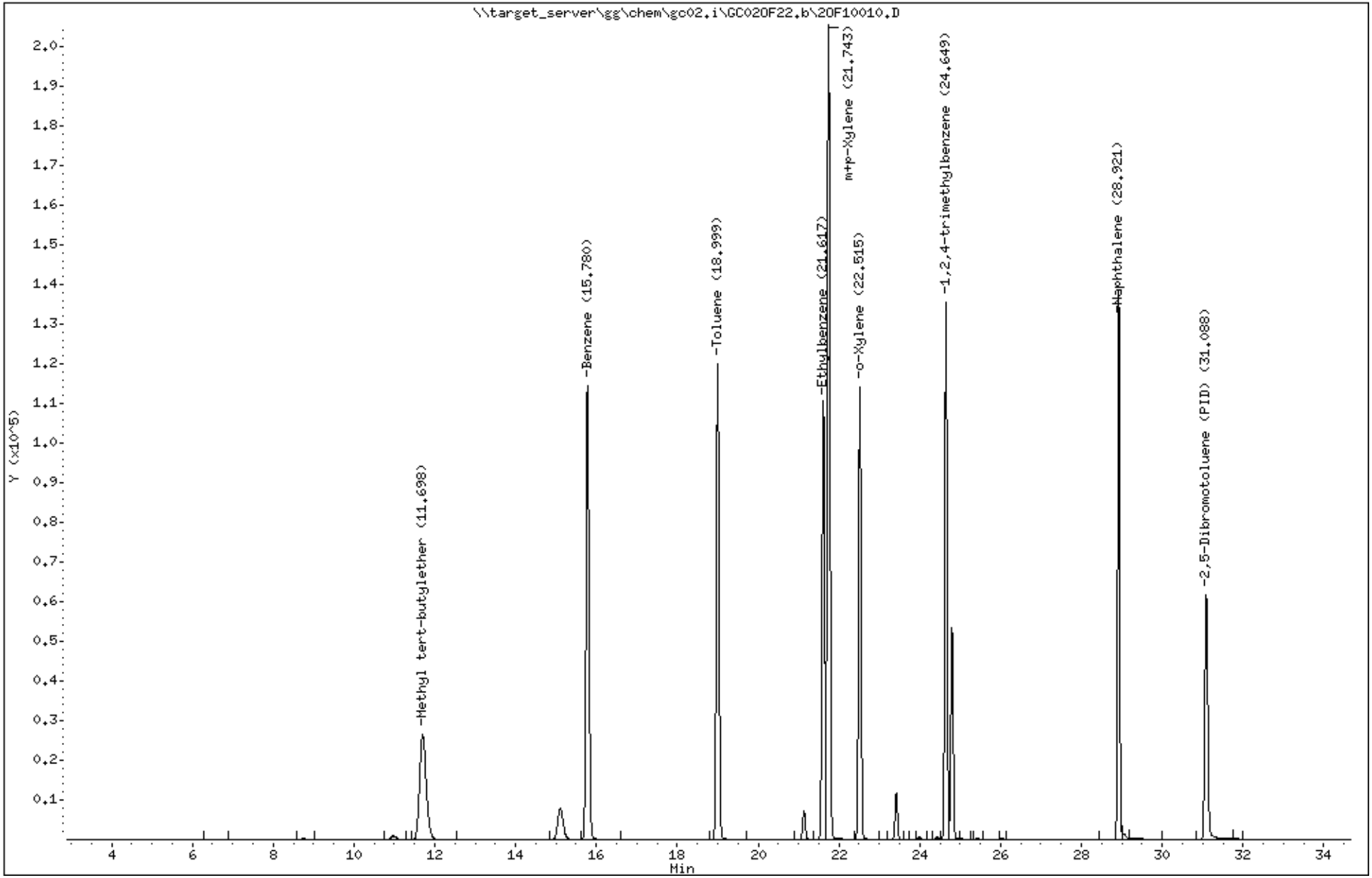
Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10010.D
Lab Smp Id: WG301241-6
Inj Date : 22-JUN-2021 17:48
Operator : DL   Inst ID: gc02.i
Smp Info : WG301241-6
Misc Info :
Comment   : AROMATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m
Meth Date : 23-Jun-2021 07:30 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48   Cal File: 2OF10010.D
Als bottle: 1   Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
2	Methyl tert-butylether	11.698	11.696	0.002	618476	300.000	285	
3	Benzene	15.779	15.780	-0.001	1233062	300.000	278	
4	Toluene	18.999	18.998	0.001	1112968	300.000	278	
5	Ethylbenzene	21.617	21.612	0.005	976339	300.000	283	
6	m+p-Xylene	21.742	21.739	0.003	1939639	600.000	482	
7	o-Xylene	22.515	22.511	0.004	965117	300.000	274	
8	1,2,4-trimethylbenzene	24.648	24.643	0.005	1036924	300.000	284	
10	Naphthalene	28.920	28.916	0.004	1014933	300.000	304	
M 1	C9-C10 Aromatic				1036924	300.000	284	
$ 11	2,5-Dibromotoluene (PID)	31.088	31.083	0.005	648116	300.000	259	

Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\20F10010.D
Date : 22-JUN-2021 17:48
Client ID:
Instrument: gc02.i
Sample Info: WG301241-6
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000070

Data File: 2OF10010.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\GC02OF22.b\2OF10010.D
Lab Smp Id: WG301241-6
Inj Date : 22-JUN-2021 17:48
Operator : DL   Inst ID: gc02.i
Smp Info : WG301241-6
Misc Info :
Comment   : ALIPHATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 23-Jun-2021 07:36 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48   Cal File: 2OF10010.D
Als bottle: 1   Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)	REVIEW CODE
5	n-Pentane	8.743	8.743	0.000	1532897	300.000	290(M)	M2
6	2-Methylpentane	10.966	10.966	0.000	1663340	300.000	281	
7	Methyl tert-butylether	11.687	11.687	0.000	1276079	300.000	282	
8	2,2,4-Trimethylpentane	15.093	15.093	0.000	1756890	300.000	284	
9	Benzene	15.769	15.769	0.000	2226503	300.000	287	
11	Toluene	18.989	18.989	0.000	2207920	300.000	289	
12	n-Nonane	21.126	21.127	-0.001	1792784	300.000	330	
14	Ethylbenzene	21.606	21.606	0.000	2155555	300.000	300	
15	m+p-Xylene	21.736	21.736	0.000	4379655	600.000	583	
16	o-Xylene	22.505	22.505	0.000	2221591	300.000	291	
13	n-Decane	23.409	23.409	0.000	1851313	300.000	367(M)	M9
18	1,2,4-trimethylbenzene	24.638	24.638	0.000	2200538	300.000	301	
19	n-Butylcyclohexane	24.785	24.785	0.000	1851602	300.000	312	
20	Naphthalene	28.910	28.910	0.000	1595583	300.000	318	
M 1	C5-C8 Aliphatic				4953127	900.000	855	
M 2	C9-C12 Aliphatic				3702915	600.000	679	
$ 21	2,5-Dibromotoluene (FID)	31.076	31.076	0.000	568594	300.000	315(M)	M9

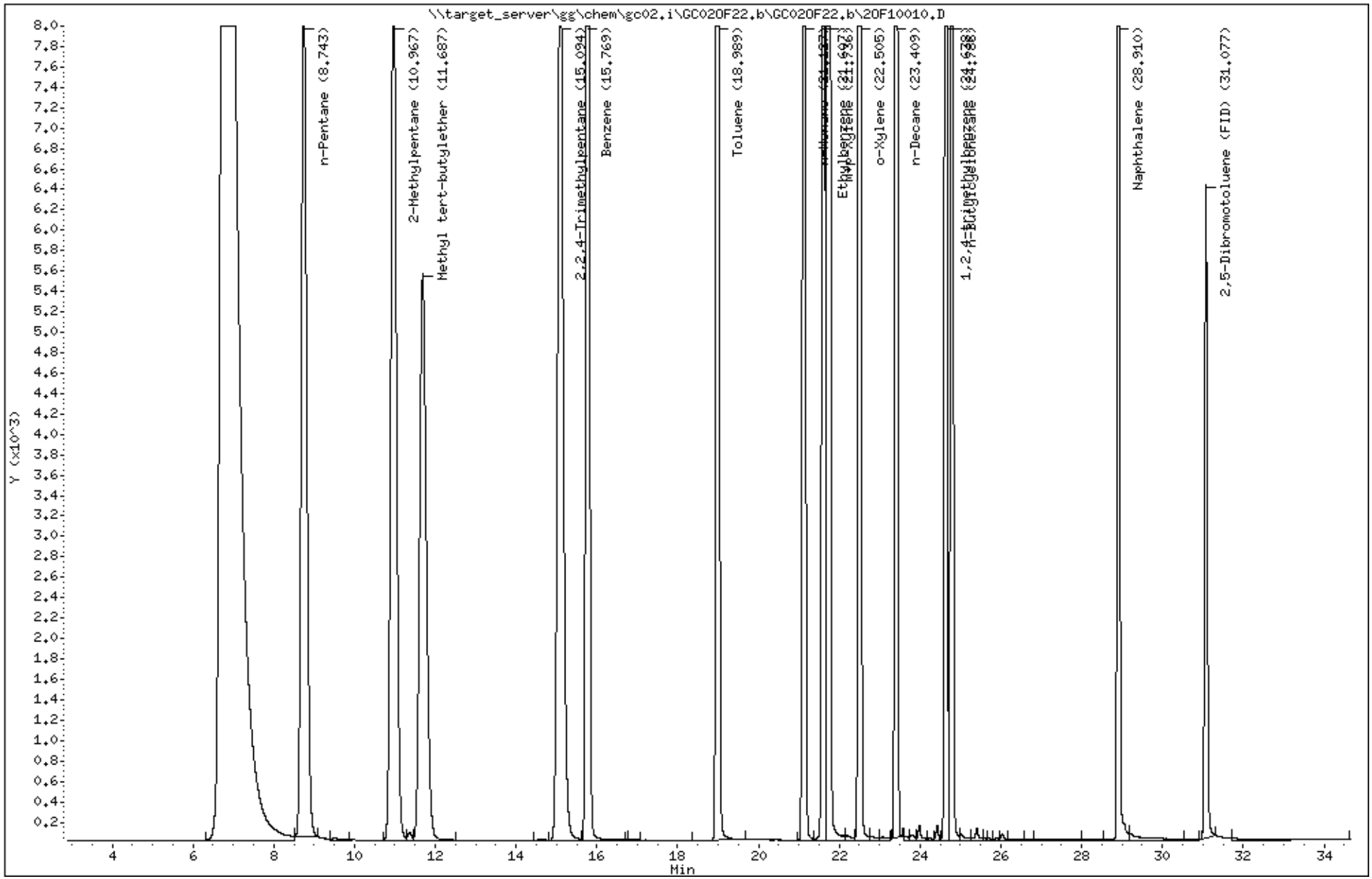
DL
9:12 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\GC020F22.b\20F10010.D
Date : 22-JUN-2021 17:48
Client ID:
Sample Info: WG301241-6
Purge Volume: 0.0
Column phase: RTX-502.2

Instrument: gc02.i
Operator: DL
Column diameter: 0.53



Katahdin Analytical Services 3000072

Data File: \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10011.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

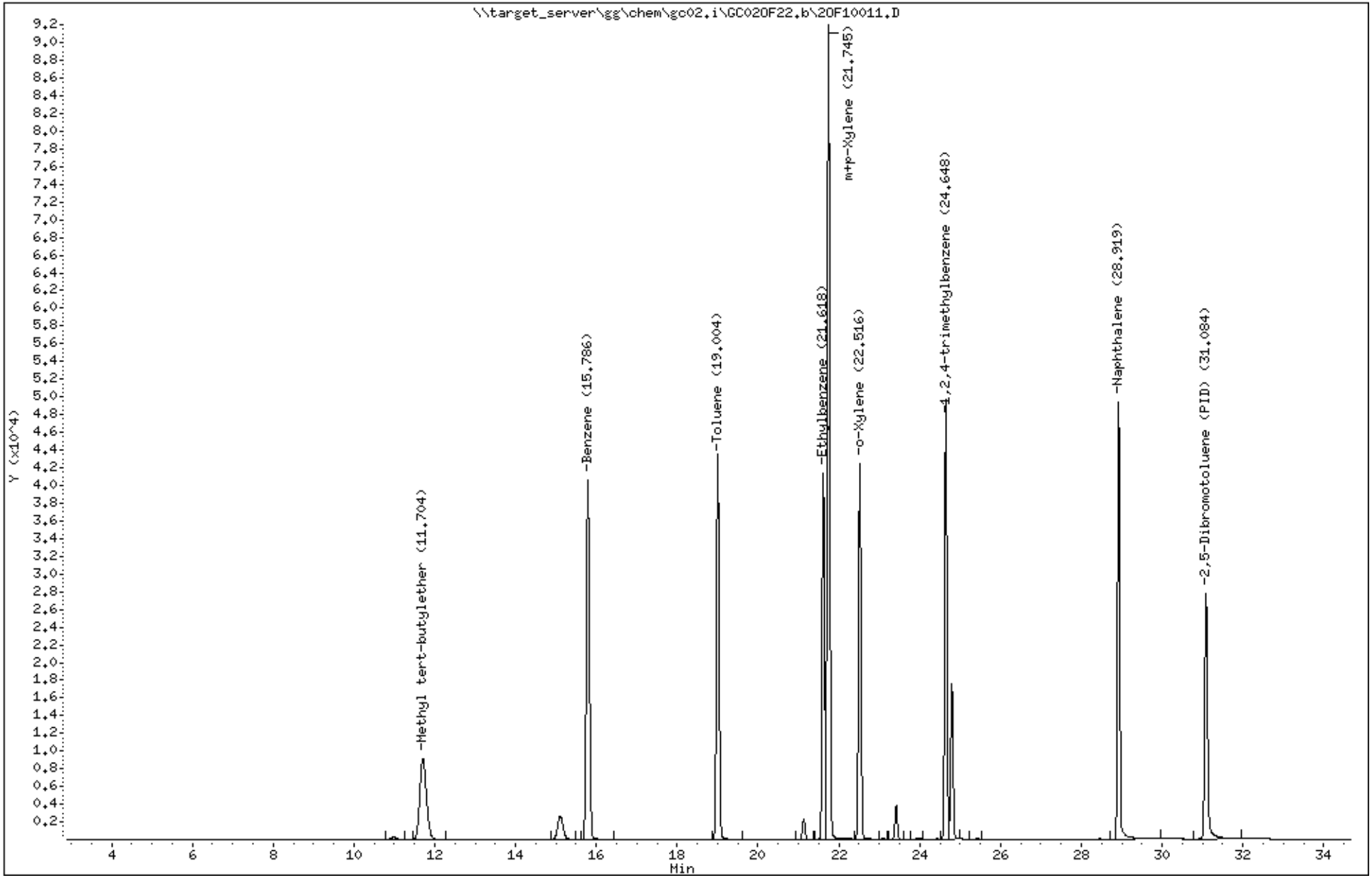
Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\2OF10011.D
Lab Smp Id: WG301241-7
Inj Date : 22-JUN-2021 18:30
Operator : DL   Inst ID: gc02.i
Smp Info : WG301241-7
Misc Info : WG301241,WG301241-4
Comment   : AROMATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m
Meth Date : 23-Jun-2021 07:30 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07   Cal File: 2OF10009.D
Als bottle: 1   QC Sample: INDSOURCE
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: IND.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
2	Methyl tert-butylether	11.703	11.696	0.007	206058	95.0778	95.1	
3	Benzene	15.786	15.780	0.006	435076	98.2952	98.3	
4	Toluene	19.003	18.998	0.005	396846	99.3125	99.3	
5	Ethylbenzene	21.617	21.612	0.005	352938	102.480	102	
6	m+p-Xylene	21.744	21.739	0.005	805359	200.056	200	
7	o-Xylene	22.516	22.511	0.005	354194	100.487	100	
8	1,2,4-trimethylbenzene	24.647	24.643	0.004	370567	101.594	102	
10	Naphthalene	28.919	28.916	0.003	384421	114.947	115	
$ 11	2,5-Dibromotoluene (PID)	31.084	31.083	0.001	280197	112.205	112	

Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\20F10011.D
Date : 22-JUN-2021 18:30
Client ID:
Instrument: gc02.i
Sample Info: WG301241-7
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000074

Data File: 2OF10011.D
Report Date: 30-Jul-2021 09:08

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OF22.b\GC02OF22.b\2OF10011.D
Lab Smp Id: WG301241-7
Inj Date : 22-JUN-2021 18:30
Operator : DL Inst ID: gc02.i
Smp Info : WG301241-7
Misc Info : WG301241,WG301241-4
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OF22.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 23-Jun-2021 07:36 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1 QC Sample: INDSOURCE
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: IND.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

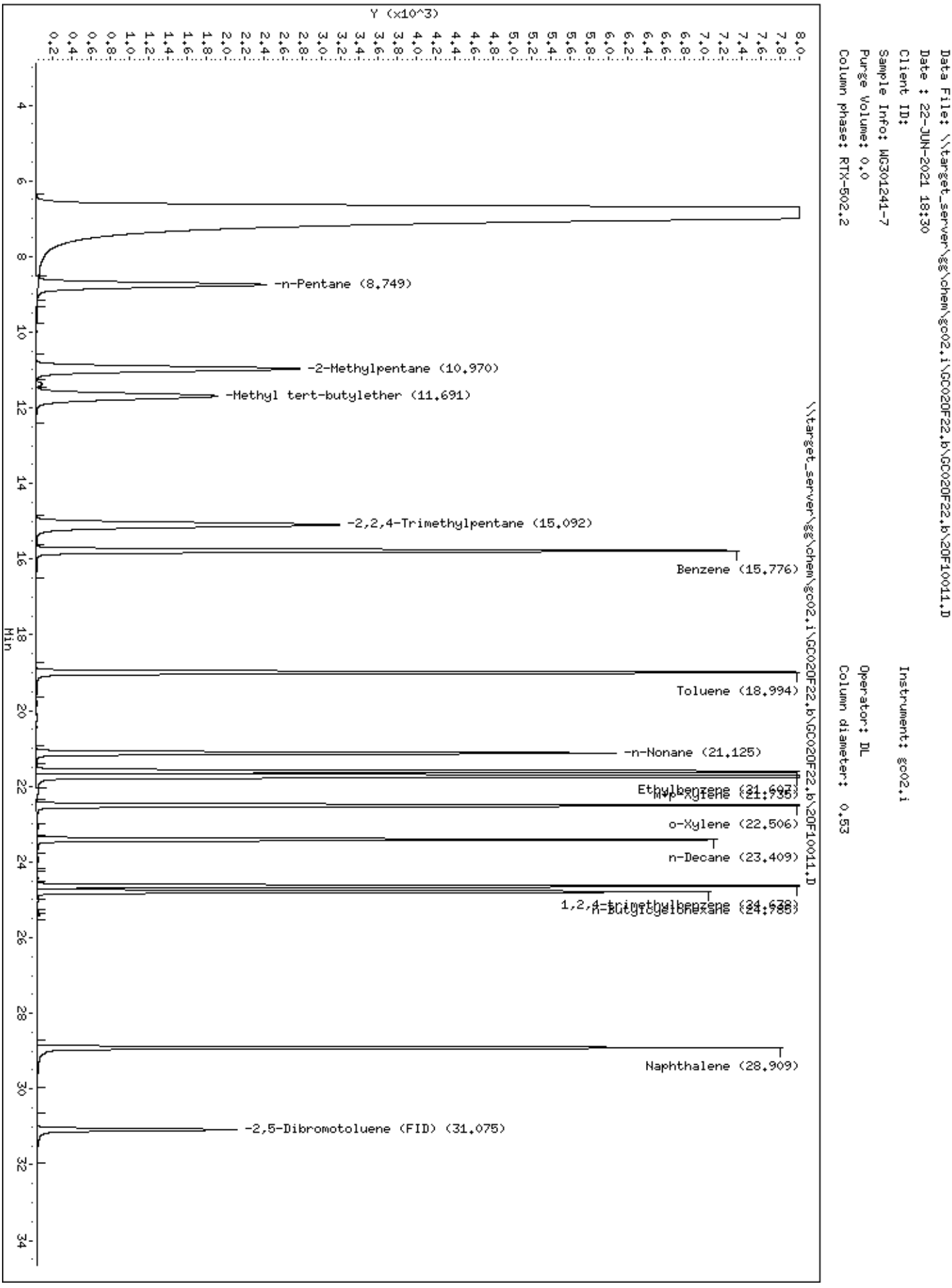
Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
5	n-Pentane	8.749	8.743	0.006	440034	83.1110	83.1(M)	M2
6	2-Methylpentane	10.970	10.966	0.004	523840	88.4325	88.4	
7	Methyl tert-butylether	11.691	11.687	0.004	430655	95.0818	95.1	
8	2,2,4-Trimethylpentane	15.092	15.093	-0.001	582113	94.2901	94.3	
9	Benzene	15.775	15.769	0.006	760753	97.9375	97.9	
11	Toluene	18.993	18.989	0.004	753240	98.6565	98.6	
12	n-Nonane	21.124	21.127	-0.003	523523	96.2442	96.2	
14	Ethylbenzene	21.607	21.606	0.001	739360	102.778	103	
15	m+p-Xylene	21.734	21.736	-0.002	1497579	199.494	199	
16	o-Xylene	22.506	22.505	0.001	764007	100.046	100	
13	n-Decane	23.409	23.409	0.000	550115	109.121	109	
18	1,2,4-trimethylbenzene	24.637	24.638	-0.001	743113	101.553	102	
19	n-Butylcyclohexane	24.784	24.785	-0.001	547158	92.2377	92.2	
20	Naphthalene	28.908	28.910	-0.002	565540	112.890	113	
$ 21	2,5-Dibromotoluene (FID)	31.074	31.076	-0.002	199386	110.382	110	

DL
9:12 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.


Data File: \\target_server\gg\chem\gc02.i\GC020F22.b\GC020F22.b\20F10011.D
Date : 22-JUN-2021 18:30
Client ID:
Sample Info: WG301241-7
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: DL
Column diameter: 0.53
Y (x10^3)
Min
\\target_server\gg\chem\gc02.i\GC020F22.b\GC020F22.b\20F10011.D
-n-Pentane (8.749)
-2-Methylpentane (10.970)
-Methyl tert-butylether (11.691)
-2,2,4-Trimethylpentane (15.092)
Benzene (15.776)
Toluene (18.994)
-n-Nonane (21.125)
Ethylbenzene (21.697)
m+p-Xylene (21.736)
o-Xylene (22.506)
n-Decane (23.409)
1,2,4-Trimethylbenzene (24.638)
n-Butylcyclohexane (24.788)
Naphthalene (28.909)
-2,5-Dibromotoluene (FID) (31.075)

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ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Lau
SDG: SO4724
Lab ID : WG303232-8
Analytical Date: 07/27/21 07:40
Lab File ID : 2OG10061.D
Instrument ID: GC02
Initial Calibration Date(s): 06/22/21 14:24 06/22/21 17:48
Column ID: A

	Compound	$\overline{RRF}$/Amount	RF50	Min RRF	%D/ %Drift	Max %D/ %Drift	Curve Type
1	C9-C10 Aromatic	3648	3336	0.100	-8.53114	25.00000	Averaged
2	Methyl tert-butylether	2167	1890	0.100	-12.81510	25.00000	Averaged
3	Benzene	4426	3834	0.100	-13.37386	25.00000	Averaged
4	Toluene	3996	3517	0.100	-11.98295	25.00000	Averaged
5	Ethylbenzene	3444	3096	0.100	-10.11841	25.00000	Averaged
6	m+p-Xylene	4026	3620	0.100	-10.06652	25.00000	Averaged
7	o-Xylene	3525	3116	0.100	-11.59005	25.00000	Averaged
8	1,2,4-trimethylbenzene	3648	3336	0.100	-8.53137	25.00000	Averaged
10	Naphthalene	3344	3210	0.100	-4.02294	25.00000	Averaged
11	2,5-Dibromotoluene (PID)	2497	2478	0.100	-0.78353	25.00000	Averaged

*** = Compound out of QC criteria**

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

http://katahdinlab.com
sales@katahdinlab.com

Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10061.D
Report Date: 30-Jul-2021 10:25

Katahdin Analytical Services

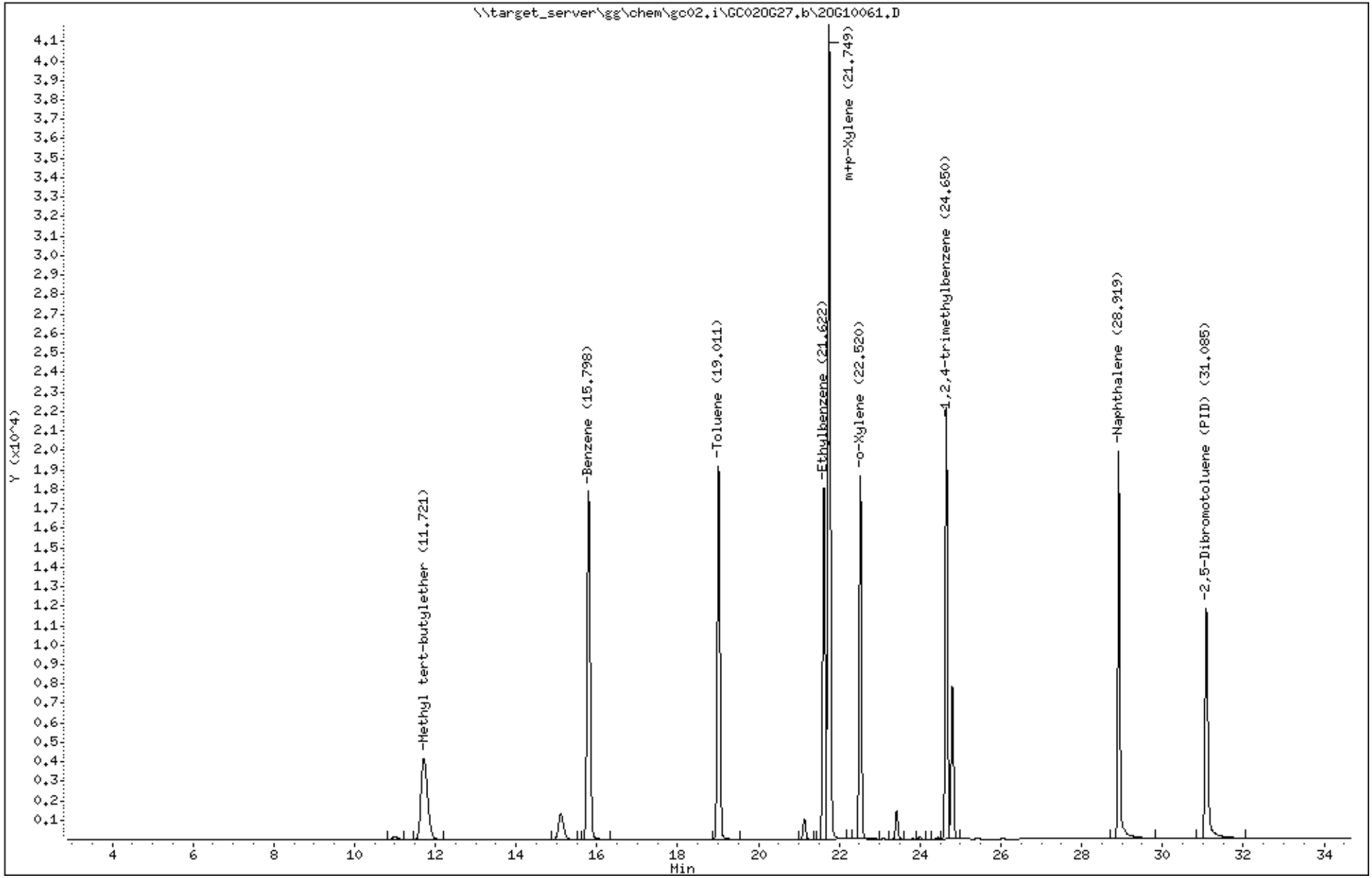
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10061.D
Lab Smp Id: WG303232-8
Inj Date : 27-JUL-2021 07:40
Operator : DL   Inst ID: gc02.i
Smp Info : WG303232-8,SO4724
Misc Info : WG303232,WG301241-4,SO4724-2
Comment   : AROMATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07   Cal File: 2OF10009.D
Als bottle: 1   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
						CAL-AMT	ON-COL	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)	REVIEW CODE
	2 Methyl tert-butylether	11.721	11.696	0.025	94476	50.0000	43.6	
	3 Benzene	15.797	15.780	0.017	191713	50.0000	43.3	
	4 Toluene	19.011	18.998	0.013	175855	50.0000	44.0	
	5 Ethylbenzene	21.622	21.612	0.010	154775	50.0000	44.9	
	6 m+p-Xylene	21.748	21.739	0.009	362042	100.000	89.9	
	7 o-Xylene	22.520	22.511	0.009	155813	50.0000	44.2	
	8 1,2,4-trimethylbenzene	24.650	24.643	0.007	166818	50.0000	45.7	
	10 Naphthalene	28.919	28.916	0.003	160489	50.0000	48.0	
M	1 C9-C10 Aromatic				166818	50.0000	45.7	
$	11 2,5-Dibromotoluene (PID)	31.085	31.083	0.002	123881	50.0000	49.6	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10061.D
Date : 27-JUL-2021 07:40
Client ID:
Instrument: gc02.i
Sample Info: WG303232-8,S04724
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000079

Katahdin
ANALYTICAL SERVICES

Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Lau
SDG: SO4724
Lab ID : WG303232-8
Analytical Date: 07/27/21 07:40
Lab File ID : 2OG10061.D
Instrument ID: GC02
Initial Calibration Date(s): 06/22/21 14:24 06/22/21 17:48
Column ID: B

	Compound	$\overline{RRF}$/Amount	RF50	Min RRF	%D/ %Drift	Max %D/ %Drift	Curve Type
1	C5-C8 Aliphatic	5797	5951	0.100	2.65131	25.00000	Averaged
2	C9-C12 Aliphatic	5487	5177	0.100	-5.65075	25.00000	Averaged
5	n-Pentane	5295	5532	0.100	4.47903	25.00000	Averaged
6	2-Methylpentane	5924	6039	0.100	1.94758	25.00000	Averaged
7	Methyl tert-butylether	4529	4390	0.100	-3.08368	25.00000	Averaged
8	2,2,4-Trimethylpentane	6174	6282	0.100	1.75906	25.00000	Averaged
9	Benzene	7768	7655	0.100	-1.45496	25.00000	Averaged
11	Toluene	7635	7613	0.100	-0.29206	25.00000	Averaged
12	n-Nonane	5440	5380	0.100	-1.09763	30.00000	Averaged
13	n-Decane	5041	4771	0.100	-5.37110	25.00000	Averaged
14	Ethylbenzene	7194	7400	0.100	2.87291	25.00000	Averaged
15	m+p-Xylene	7507	7628	0.100	1.61340	25.00000	Averaged
16	o-Xylene	7637	7705	0.100	0.89771	25.00000	Averaged
18	1,2,4-trimethylbenzene	7317	7624	0.100	4.19222	25.00000	Averaged
19	n-Butylcyclohexane	5932	5583	0.100	-5.88841	25.00000	Averaged
20	Naphthalene	5010	5386	0.100	7.50437	25.00000	Averaged
21	2,5-Dibromotoluene (FID)	1806	1993	0.100	10.33207	25.00000	Averaged

*** = Compound out of QC criteria**

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Data File: 2OG10061.D
Report Date: 30-Jul-2021 10:26

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10061.D
Lab Smp Id: WG303232-8
Inj Date : 27-JUL-2021 07:40
Operator : DL   Inst ID: gc02.i
Smp Info : WG303232-8,SO4724
Misc Info : WG303232,WG301241-4,SO4724-2
Comment   : ALIPHATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48   Cal File: 2OF10010.D
Als bottle: 1   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

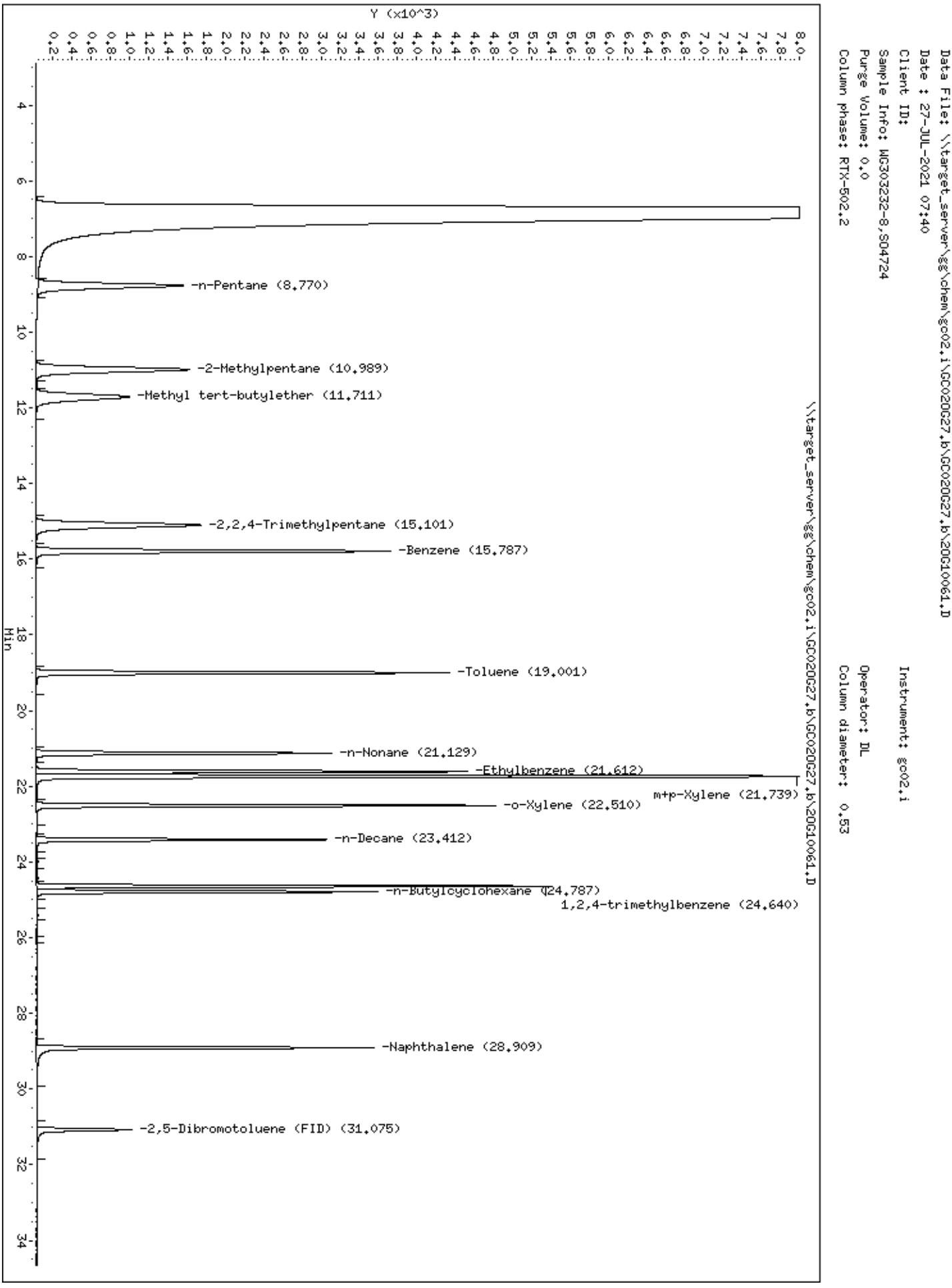
Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)	REVIEW CODE
5	n-Pentane	8.769	8.743	0.026	276584	50.0000	52.2(M)	M2
6	2-Methylpentane	10.989	10.966	0.023	301949	50.0000	51.0	
7	Methyl tert-butylether	11.710	11.687	0.023	219482	50.0000	48.4	
8	2,2,4-Trimethylpentane	15.100	15.093	0.007	314112	50.0000	50.9	
9	Benzene	15.787	15.769	0.018	382736	50.0000	49.3	
11	Toluene	19.000	18.989	0.011	380634	50.0000	49.8	
12	n-Nonane	21.128	21.127	0.001	268991	50.0000	49.4	
14	Ethylbenzene	21.611	21.606	0.005	370020	50.0000	51.4	
15	m+p-Xylene	21.738	21.736	0.002	762800	100.000	102	
16	o-Xylene	22.509	22.505	0.004	385257	50.0000	50.4	
13	n-Decane	23.411	23.409	0.002	238527	50.0000	47.3	
18	1,2,4-trimethylbenzene	24.639	24.638	0.001	381211	50.0000	52.1	
19	n-Butylcyclohexane	24.786	24.785	0.001	279137	50.0000	47.0	
20	Naphthalene	28.909	28.910	-0.001	269280	50.0000	53.8	
M 1	C5-C8 Aliphatic				892645	150.000	154	
M 2	C9-C12 Aliphatic				517664	100.000	94.4	
$ 21	2,5-Dibromotoluene (FID)	31.075	31.076	-0.001	99648	50.0000	55.2	

DL
10:48 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.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Date : 27-JUL-2021 07:40
Client ID:
Sample Info: WG303232-8,S04724
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: DL
Column diameter: 0.53
Y (x10^3)
Min
\\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20610061.D
-n-Pentane (8.770)
-2-Methylpentane (10.989)
-Methyl tert-butylether (11.711)
-2,2,4-Trimethylpentane (15.101)
-Benzene (15.787)
-Toluene (19.001)
-n-Nonane (21.129)
-Ethylbenzene (21.612)
m+p-Xylene (21.739)
-o-Xylene (22.510)
-n-Decane (23.412)
-n-Butylcyclohexane (24.787)
1,2,4-trimethylbenzene (24.640)
-Naphthalene (28.909)
-2,5-Dibromotoluene (FID) (31.075)

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Lau
SDG: SO4724
Lab ID : WG303232-9
Analytical Date: 07/28/21 01:25
Lab File ID : 2OG10085.D
Instrument ID: GC02
Initial Calibration Date(s): 06/22/21 14:24 06/22/21 17:48
Column ID: A

	Compound	$\overline{RRF}$/Amount	RF50	Min RRF	%D/ %Drift	Max %D/ %Drift	Curve Type
1	C9-C10 Aromatic	3648	3365	0.100	-7.75224	25.00000	Averaged
2	Methyl tert-butylether	2167	1923	0.100	-11.24815	25.00000	Averaged
3	Benzene	4426	3845	0.100	-13.14206	25.00000	Averaged
4	Toluene	3996	3516	0.100	-12.01249	25.00000	Averaged
5	Ethylbenzene	3444	3097	0.100	-10.08763	25.00000	Averaged
6	m+p-Xylene	4026	3610	0.100	-10.31493	25.00000	Averaged
7	o-Xylene	3525	3150	0.100	-10.62319	25.00000	Averaged
8	1,2,4-trimethylbenzene	3648	3365	0.100	-7.75276	25.00000	Averaged
10	Naphthalene	3344	3343	0.100	-0.04844	25.00000	Averaged
11	2,5-Dibromotoluene (PID)	2497	2515	0.100	0.70375	25.00000	Averaged

*** = Compound out of QC criteria**

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Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10085.D
Report Date: 30-Jul-2021 10:25

Katahdin Analytical Services

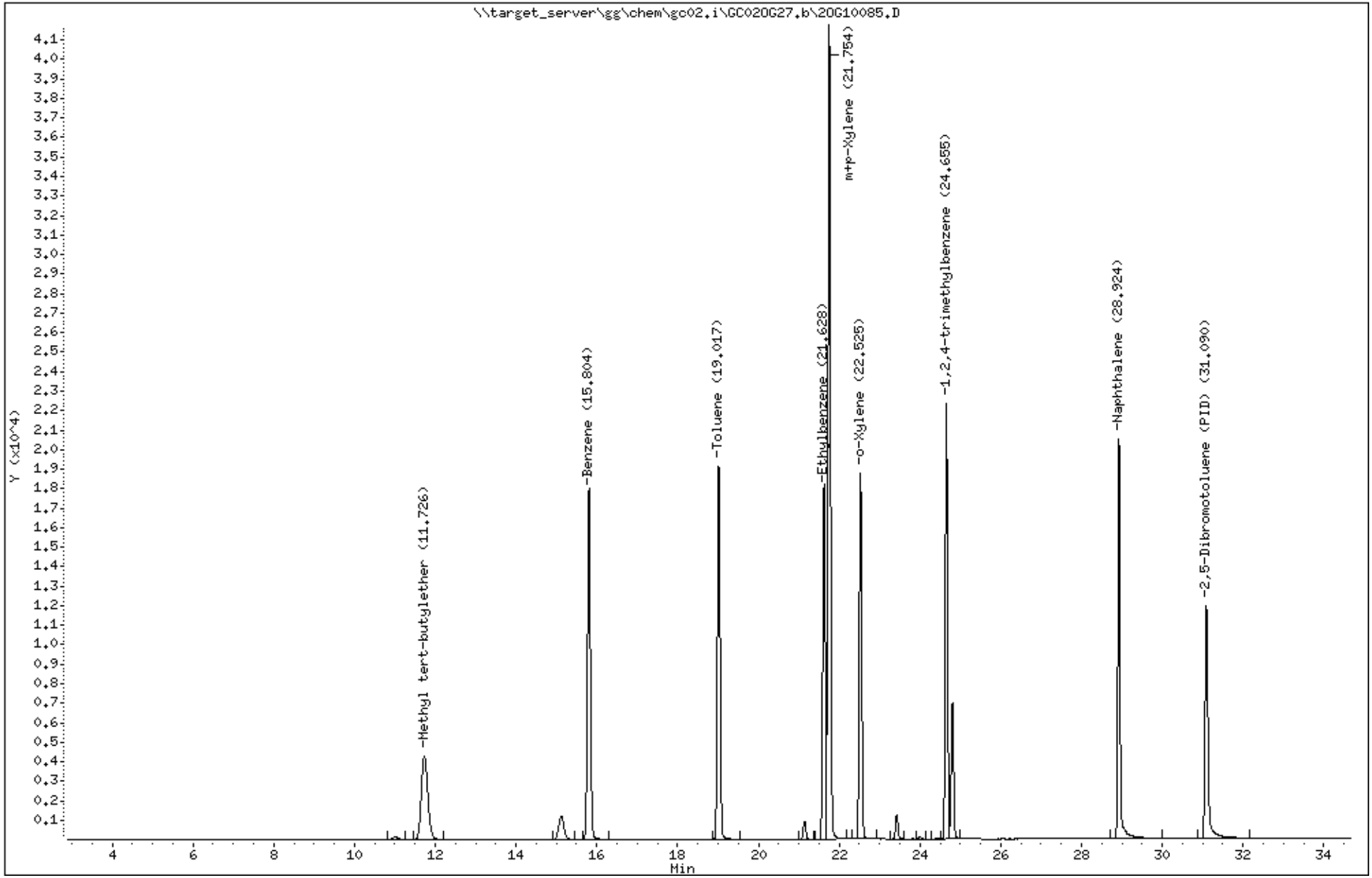
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10085.D
Lab Smp Id: WG303232-9
Inj Date : 28-JUL-2021 01:25
Operator : DL   Inst ID: gc02.i
Smp Info : WG303232-9,SO4724
Misc Info : WG303232,WG301241-4,SO4724-2
Comment   : AROMATIC
Method   : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry   Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07   Cal File: 2OF10009.D
Als bottle: 1   Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie   Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
						CAL-AMT	ON-COL	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)	REVIEW CODE
	2 Methyl tert-butylether	11.726	11.696	0.030	96174	50.0000	44.4	
	3 Benzene	15.803	15.780	0.023	192226	50.0000	43.4	
	4 Toluene	19.017	18.998	0.019	175796	50.0000	44.0	
	5 Ethylbenzene	21.627	21.612	0.015	154828	50.0000	45.0	
	6 m+p-Xylene	21.754	21.739	0.015	361042	100.000	89.7	
	7 o-Xylene	22.525	22.511	0.014	157517	50.0000	44.7	
	8 1,2,4-trimethylbenzene	24.655	24.643	0.012	168238	50.0000	46.1	
	10 Naphthalene	28.923	28.916	0.007	167135	50.0000	50.0	
M	1 C9-C10 Aromatic				168238	50.0000	46.1	
$	11 2,5-Dibromotoluene (PID)	31.089	31.083	0.006	125738	50.0000	50.4	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10085.D
Date : 28-JUL-2021 01:25
Client ID:
Instrument: gc02.i
Sample Info: WG303232-9,S04724
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000085

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Form 7
Calibration Verification Summary

Lab Name : Katahdin Analytical Services
Project : LO-58 Nike Missile Battery Lau
SDG: SO4724
Lab ID : WG303232-9
Analytical Date: 07/28/21 01:25
Lab File ID : 2OG10085.D
Instrument ID: GC02
Initial Calibration Date(s): 06/22/21 14:24 06/22/21 17:48
Column ID: B

	Compound	$\overline{RRF}$/Amount	RF50	Min RRF	%D/ %Drift	Max %D/ %Drift	Curve Type
1	C5-C8 Aliphatic	5797	5477	0.100	-5.52278	25.00000	Averaged
2	C9-C12 Aliphatic	5487	4472	0.100	-18.49859	25.00000	Averaged
5	n-Pentane	5295	5144	0.100	-2.83492	25.00000	Averaged
6	2-Methylpentane	5924	5582	0.100	-5.77406	25.00000	Averaged
7	Methyl tert-butylether	4529	4469	0.100	-1.32182	25.00000	Averaged
8	2,2,4-Trimethylpentane	6174	5705	0.100	-7.58680	25.00000	Averaged
9	Benzene	7768	7599	0.100	-2.17538	25.00000	Averaged
11	Toluene	7635	7519	0.100	-1.52062	25.00000	Averaged
12	n-Nonane	5440	4606	0.100	-15.32314	30.00000	Averaged
13	n-Decane	5041	4063	0.100	-19.40791	25.00000	Averaged
14	Ethylbenzene	7194	7315	0.100	1.68048	25.00000	Averaged
15	m+p-Xylene	7507	7481	0.100	-0.34254	25.00000	Averaged
16	o-Xylene	7637	7614	0.100	-0.29602	25.00000	Averaged
18	1,2,4-trimethylbenzene	7317	7563	0.100	3.35149	25.00000	Averaged
19	n-Butylcyclohexane	5932	4881	0.100	-17.72581	25.00000	Averaged
20	Naphthalene	5010	5482	0.100	9.42387	25.00000	Averaged
21	2,5-Dibromotoluene (FID)	1806	1947	0.100	7.76554	25.00000	Averaged

*** = Compound out of QC criteria**

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Data File: 2OG10085.D
Report Date: 30-Jul-2021 10:27

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10085.D
Lab Smp Id: WG303232-9
Inj Date : 28-JUL-2021 01:25
Operator : DL Inst ID: gc02.i
Smp Info : WG303232-9,SO4724
Misc Info : WG303232,WG301241-4,SO4724-2
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: cv.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

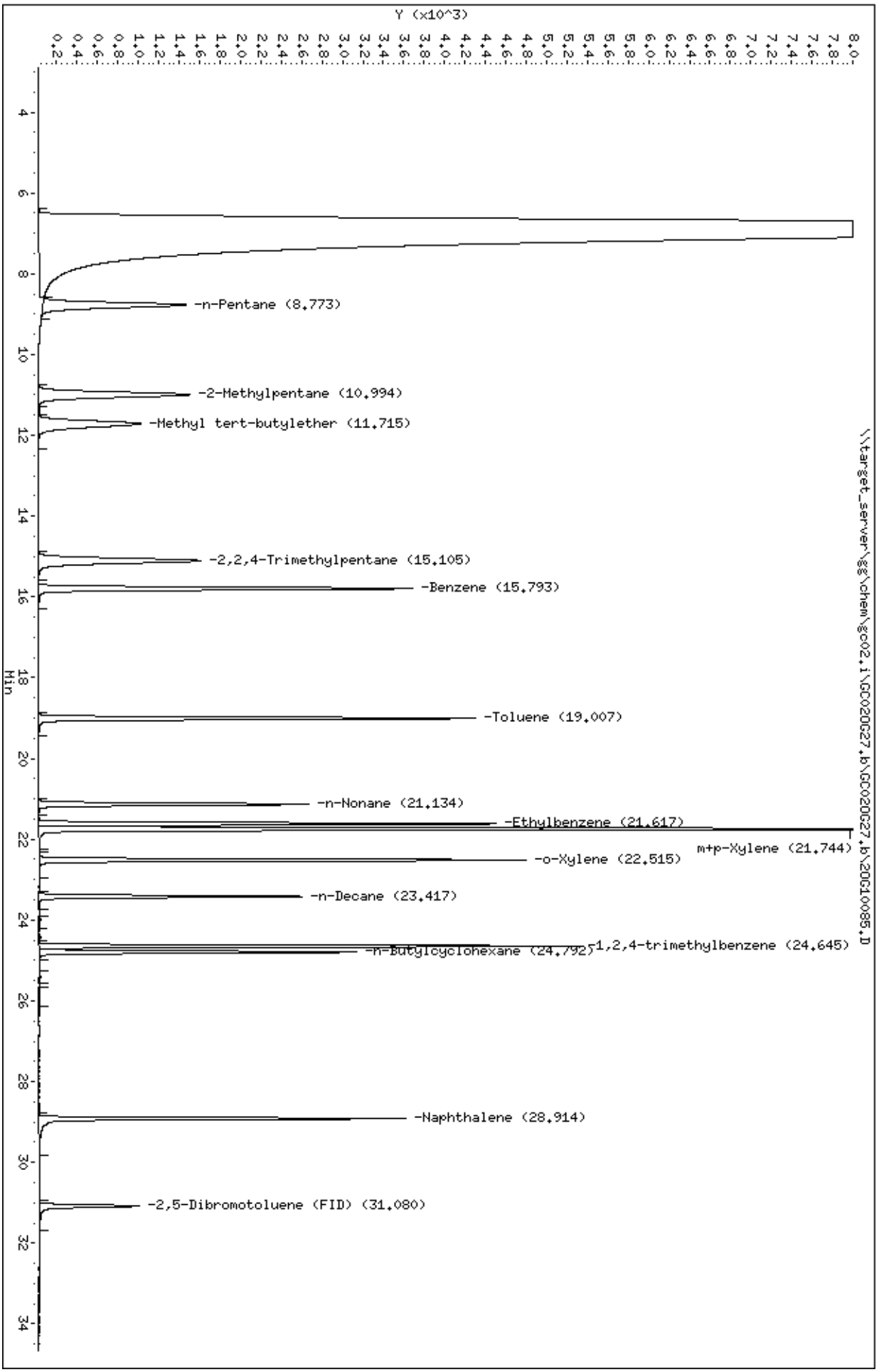
Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						AMOUNTS		
						CAL-AMT	ON-COL	
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ug/L)	(ug/L)	REVIEW CODE
	5 n-Pentane	8.772	8.743	0.029	257222	50.0000	48.6(M)	M2
	6 2-Methylpentane	10.993	10.966	0.027	279079	50.0000	47.1	
	7 Methyl tert-butylether	11.714	11.687	0.027	223472	50.0000	49.3	
	8 2,2,4-Trimethylpentane	15.105	15.093	0.012	285263	50.0000	46.2	
	9 Benzene	15.792	15.769	0.023	379938	50.0000	48.9	
	11 Toluene	19.006	18.989	0.017	375944	50.0000	49.2	
	12 n-Nonane	21.134	21.127	0.007	230301	50.0000	42.3	
	14 Ethylbenzene	21.617	21.606	0.011	365731	50.0000	50.8	
	15 m+p-Xylene	21.743	21.736	0.007	748117	100.000	99.6	
	16 o-Xylene	22.515	22.505	0.010	380699	50.0000	49.8	
	13 n-Decane	23.416	23.409	0.007	203145	50.0000	40.3	
	18 1,2,4-trimethylbenzene	24.644	24.638	0.006	378135	50.0000	51.7	
	19 n-Butylcyclohexane	24.791	24.785	0.006	244027	50.0000	41.1	
	20 Naphthalene	28.913	28.910	0.003	274088	50.0000	54.7	
M	1 C5-C8 Aliphatic				821564	150.000	142	
M	2 C9-C12 Aliphatic				447172	100.000	81.4	
$	21 2,5-Dibromotoluene (FID)	31.079	31.076	0.003	97330	50.0000	53.9	

DL
10:48 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.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Date : 28-JUL-2021 01:25
Client ID:
Sample Info: WG303232-9,S04724
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: DL
Column diameter: 0.53
\\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20010085.D
Y (x10^3)
Min
-n-Pentane (8.773)
-2-Methylpentane (10.994)
-Methyl tert-butylether (11.715)
-2,2,4-Trimethylpentane (15.105)
-Benzene (15.793)
-Toluene (19.007)
-n-Nonane (21.134)
-Ethylbenzene (21.617)
m+p-Xylene (21.744)
-o-Xylene (22.515)
-n-Decane (23.417)
-n-Butylcyclohexane (24.792)
1,2,4-trimethylbenzene (24.645)
-Naphthalene (28.914)
-2,5-Dibromotoluene (FID) (31.080)

Raw QC Data Section

Katahdin
ANALYTICAL SERVICES

Report of Analytical Results

Lab ID: WG303232-1
Client ID: Method Blank
SDG: SO4724
Lab File ID: 2OG10063.D

Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232
% Solids: NA

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
Report Date: 30-JUL-21

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
C5-C8 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C12 Aliphatics	U	75	ug/L	1	100	100	50.	75.
C9-C10 Aromatics	U	75	ug/L	1	100	100	50.	75.
Benzene	U	2.0	ug/L	1	3	3.0	0.31	2.0
Ethylbenzene	U	3.8	ug/L	1	5	5.0	0.42	3.8
Methyl tert-butylether	U	3.8	ug/L	1	5	5.0	0.31	3.8
Naphthalene	U	3.8	ug/L	1	5	5.0	1.6	3.8
Toluene	U	3.8	ug/L	1	5	5.0	0.34	3.8
m+p-Xylenes	U	7.5	ug/L	1	10	10.	0.92	7.5
o-Xylene	U	3.8	ug/L	1	5	5.0	0.47	3.8
2,5-Dibromotoluene (FID)		90.5	%					
2,5-Dibromotoluene (PID)		81.3	%					

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Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10063.D
Report Date: 30-Jul-2021 10:25

Katahdin Analytical Services

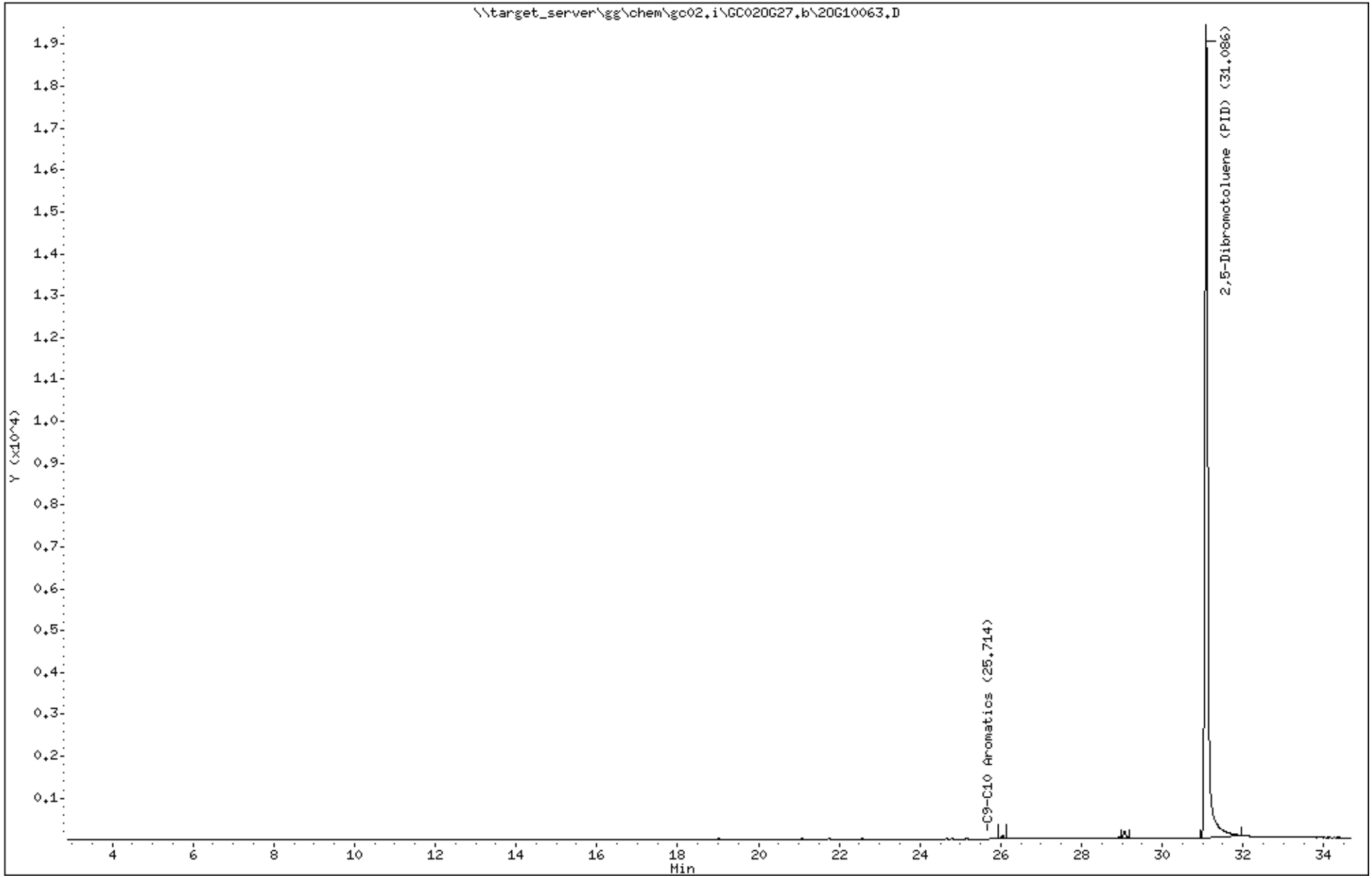
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10063.D
Lab Smp Id: WG303232-1 Client Smp ID: WG303232-Blank
Inj Date : 27-JUL-2021 09:26
Operator : DL Inst ID: gc02.i
Smp Info : WG303232-1,SO4724
Misc Info : WG303232,WG301241-4,SO4724-2
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07 Cal File: 2OF10009.D
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 11 2,5-Dibromotoluene (PID)	31.086	31.083	0.003	203046	81.3099	81.3	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10063.D
Date : 27-JUL-2021 09:26
Client ID: WG303232-Blank
Instrument: gc02.i
Sample Info: WG303232-1,S04724
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000092

Data File: 2OG10063.D
Report Date: 30-Jul-2021 10:26

Katahdin Analytical Services

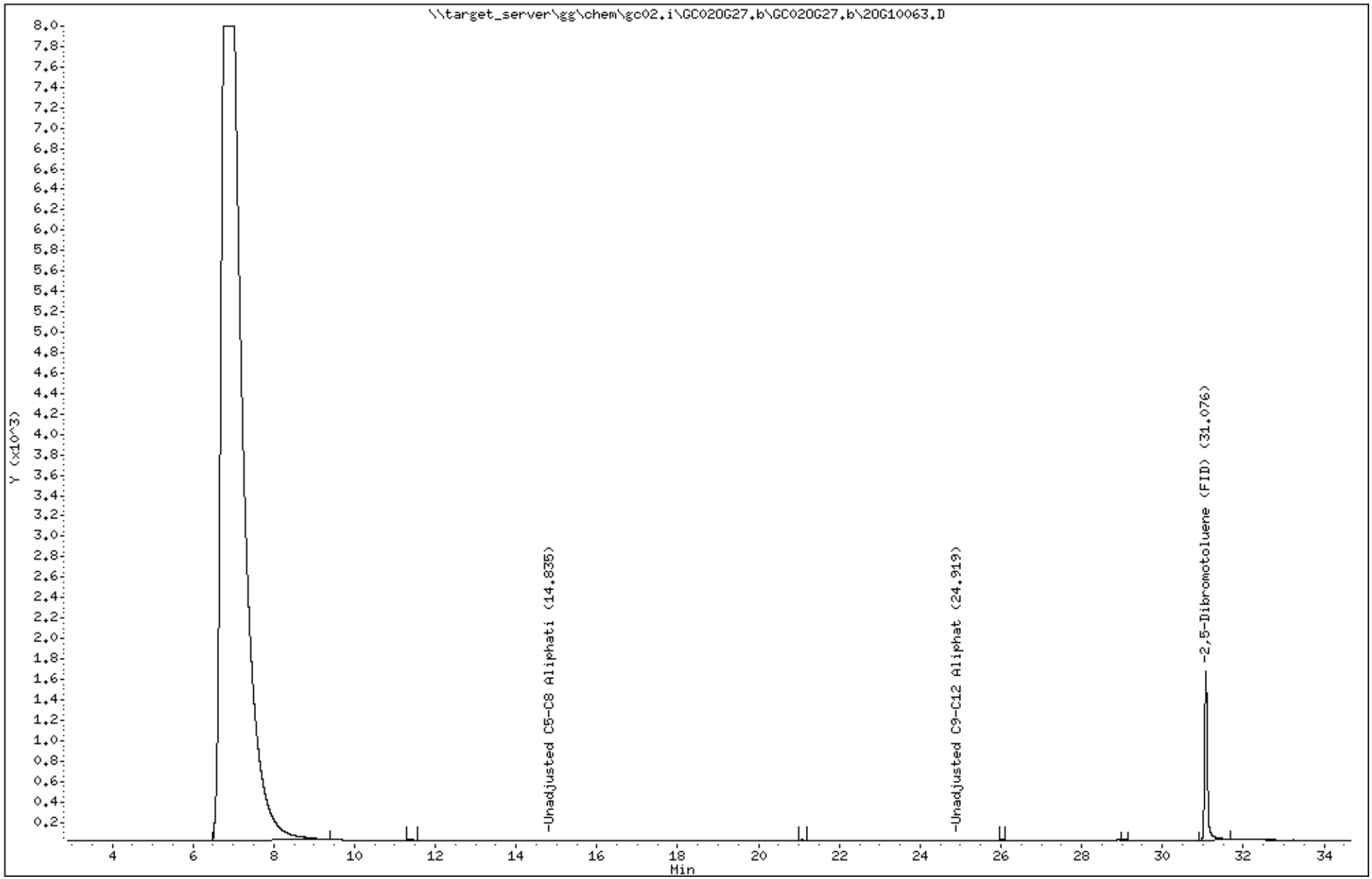
Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10063.D
Lab Smp Id: WG303232-1 Client Smp ID: WG303232-Blank
Inj Date : 27-JUL-2021 09:26
Operator : DL Inst ID: gc02.i
Smp Info : WG303232-1,SO4724
Misc Info : WG303232,WG301241-4,SO4724-2
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: MA-VPH-LOD.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
$ 21 2,5-Dibromotoluene (FID)	31.076	31.076	0.000	163483	90.5057	90.5	

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20G10063.D
Date : 27-JUL-2021 09:26
Client ID: WG303232-Blank
Instrument: gc02.i
Sample Info: WG303232-1,S04724
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000094

Katahdin
ANALYTICAL SERVICES

LCS/LCSD Recovery Report

LCS ID: WG303232-2
LCSD ID: WG303232-3
SDG: SO4724
LCS File ID: 2OG10064.D

Extract Date: 27-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232
LCSD File ID: 2OG10065.D

Analysis Date: 27-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
Report Date: 30-JUL-21

Compound	Spike Amt	LCS Conc	LCS Rec (%)	LCSD Conc	LCSD Rec (%)	Conc Units	RPD (%)	RPD Limit	Limits
C5-C8 Aliphatics	300.	278.	92.7	273.	91.0	ug/L	2	25	70-130
C9-C12 Aliphatics	200.	206.	103.	201.	100.	ug/L	2	25	70-130
C9-C10 Aromatics	100.	87.6	87.6	87.2	87.2	ug/L	0	25	70-130
Benzene	100.	83.9	83.9	83.9	83.9	ug/L	0	25	70-130
Ethylbenzene	100.	87.3	87.3	87.3	87.3	ug/L	0	25	70-130
Methyl tert-butylether	100.	83.8	83.8	83.7	83.7	ug/L	0	25	70-130
Naphthalene	100.	94.6	94.6	95.2	95.2	ug/L	1	25	70-130
Toluene	100.	84.8	84.8	84.7	84.7	ug/L	0	25	70-130
m+p-Xylenes	200.	170.	85.0	171.	85.5	ug/L	0	25	70-130
o-Xylene	100.	85.6	85.6	85.8	85.8	ug/L	0	25	70-130
2,5-Dibromotoluene (FID)			107.		106.				70-130
2,5-Dibromotoluene (PID)			96.0		96.0				70-130

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Tel:(207) 874-2400 Fax:(207) 775-4029

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Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10064.D
Report Date: 30-Jul-2021 10:38

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10064.D
Lab Smp Id: WG303232-2 Client Smp ID: WG303232-LCS
Inj Date : 27-JUL-2021 10:07
Operator : DL Inst ID: gc02.i
Smp Info : WG303232-2,SO4724
Misc Info : WG303232,WG301241-4,SO4724-2
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07 Cal File: 2OF10009.D
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: LCS-MS.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

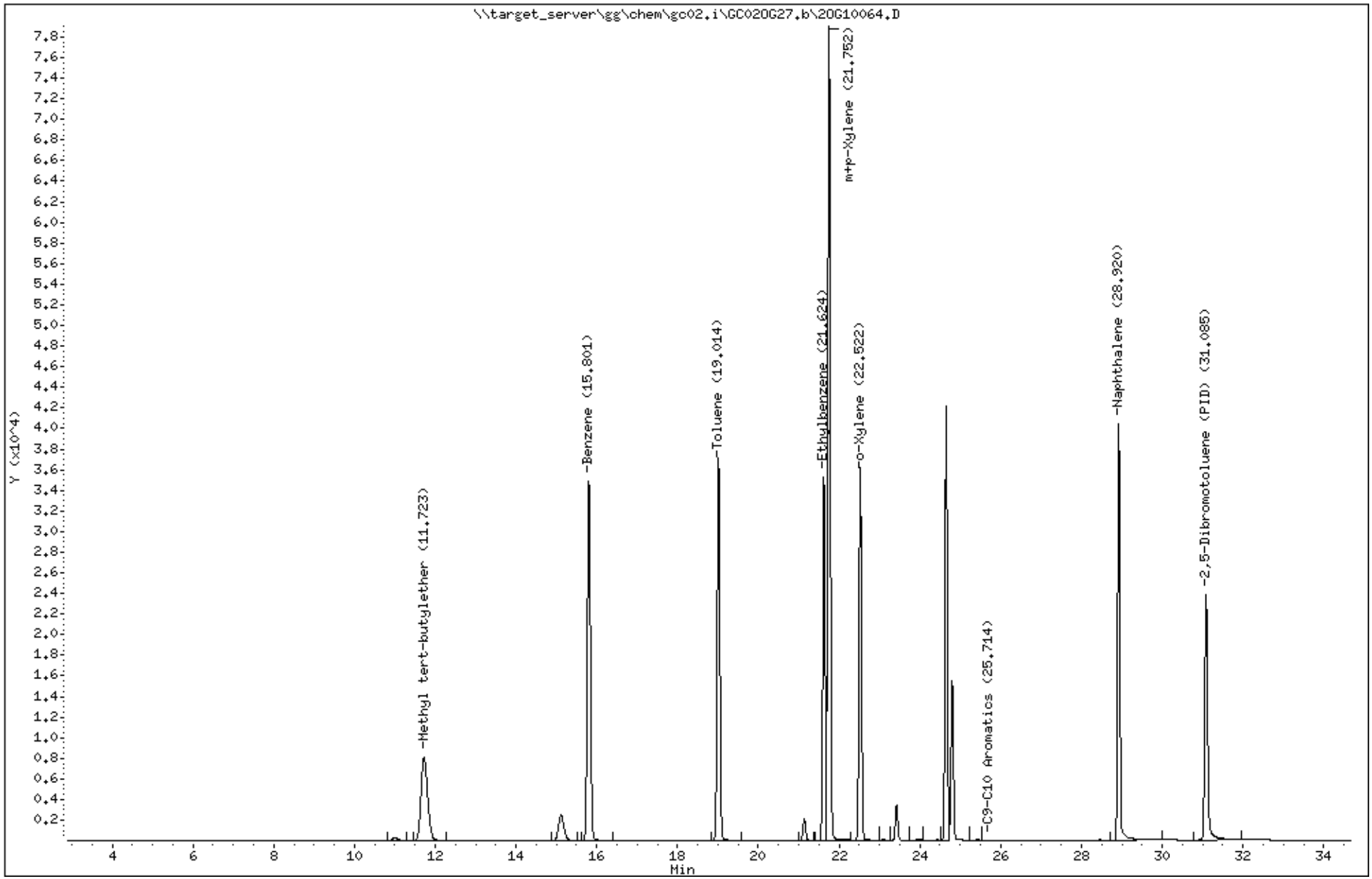
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
2	Methyl tert-butylether	11.722	11.696	0.026	181554	83.7714	83.8	
3	Benzene	15.800	15.780	0.020	371503	83.9324	83.9	
4	Toluene	19.013	18.998	0.015	338830	84.7938	84.8	
5	Ethylbenzene	21.624	21.612	0.012	300689	87.3087	87.3	
6	m+p-Xylene	21.751	21.739	0.012	686384	170.502	170	
7	o-Xylene	22.522	22.511	0.011	301809	85.6248	85.6	
S 9	C9-C10 Aromatics	22.611	-28.816		319440	87.5767	87.6(aM)	M3
10	Naphthalene	28.919	28.916	0.003	316231	94.5576	94.6	
$ 11	2,5-Dibromotoluene (PID)	31.084	31.083	0.001	239803	96.0293	96.0	

DL
11:05 am, Jul 30, 2021

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10064.D
Date : 27-JUL-2021 10:07
Client ID: WG303232-LCS
Instrument: gc02.i
Sample Info: WG303232-2,S04724
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000097

Data File: 2OG10064.D
Report Date: 30-Jul-2021 10:39

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10064.D
Lab Smp Id: WG303232-2 Client Smp ID: WG303232-LCS
Inj Date : 27-JUL-2021 10:07
Operator : DL Inst ID: gc02.i
Smp Info : WG303232-2,SO4724
Misc Info : WG303232,WG301241-4,SO4724-2
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: LCS-MS.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

			RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE	
	7	Methyl tert-butylether	11.711	11.687	0.024	424774	93.7834	93.8		
	9	Benzene	15.790	15.769	0.021	747329	96.2093	96.2		
	11	Toluene	19.003	18.989	0.014	738542	96.7314	96.7		
	12	n-Nonane	21.131	21.127	0.004	537480	98.8101	98.8		
	14	Ethylbenzene	21.614	21.606	0.008	727185	101.086	101		
	15	m+p-Xylene	21.741	21.736	0.005	1470210	195.848	196		
	16	o-Xylene	22.512	22.505	0.007	751514	98.4097	98.4		
	18	1,2,4-trimethylbenzene	24.641	24.638	0.003	730172	99.7850	99.8		
S	10	Unadjusted C5-C8 Aliphatics	8.643-21.027			1613948	278.398	278(M)	M2	
S	17	Unadjusted C9-C12 Aliphatics	21.028-28.810			1127897	205.570	206(M)	M2	
$	21	2,5-Dibromotoluene (FID)	31.074	31.076	-0.002	193636	107.199	107		

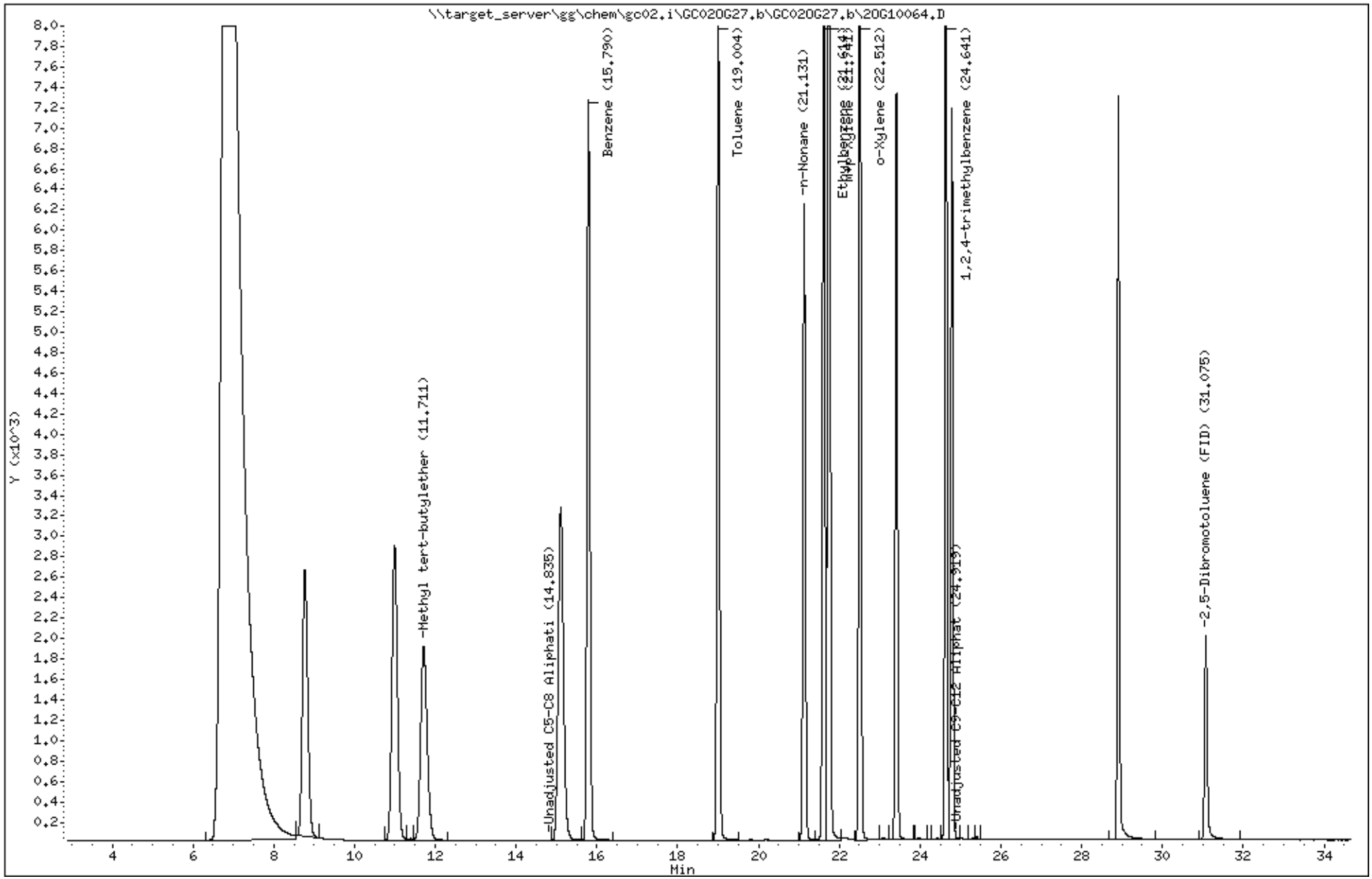
DL

11:05 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20G10064.D
Date : 27-JUL-2021 10:07
Client ID: WG303232-LCS
Instrument: gc02.i
Sample Info: WG303232-2,S04724
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000099

Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10065.D
Report Date: 30-Jul-2021 10:38

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10065.D
Lab Smp Id: WG303232-3 Client Smp ID: WG303232-LCSD
Inj Date : 27-JUL-2021 10:48
Operator : DL Inst ID: gc02.i
Smp Info : WG303232-3,SO4724
Misc Info : WG303232,WG301241-4,SO4724-2
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07 Cal File: 2OF10009.D
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: LCS-MS.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

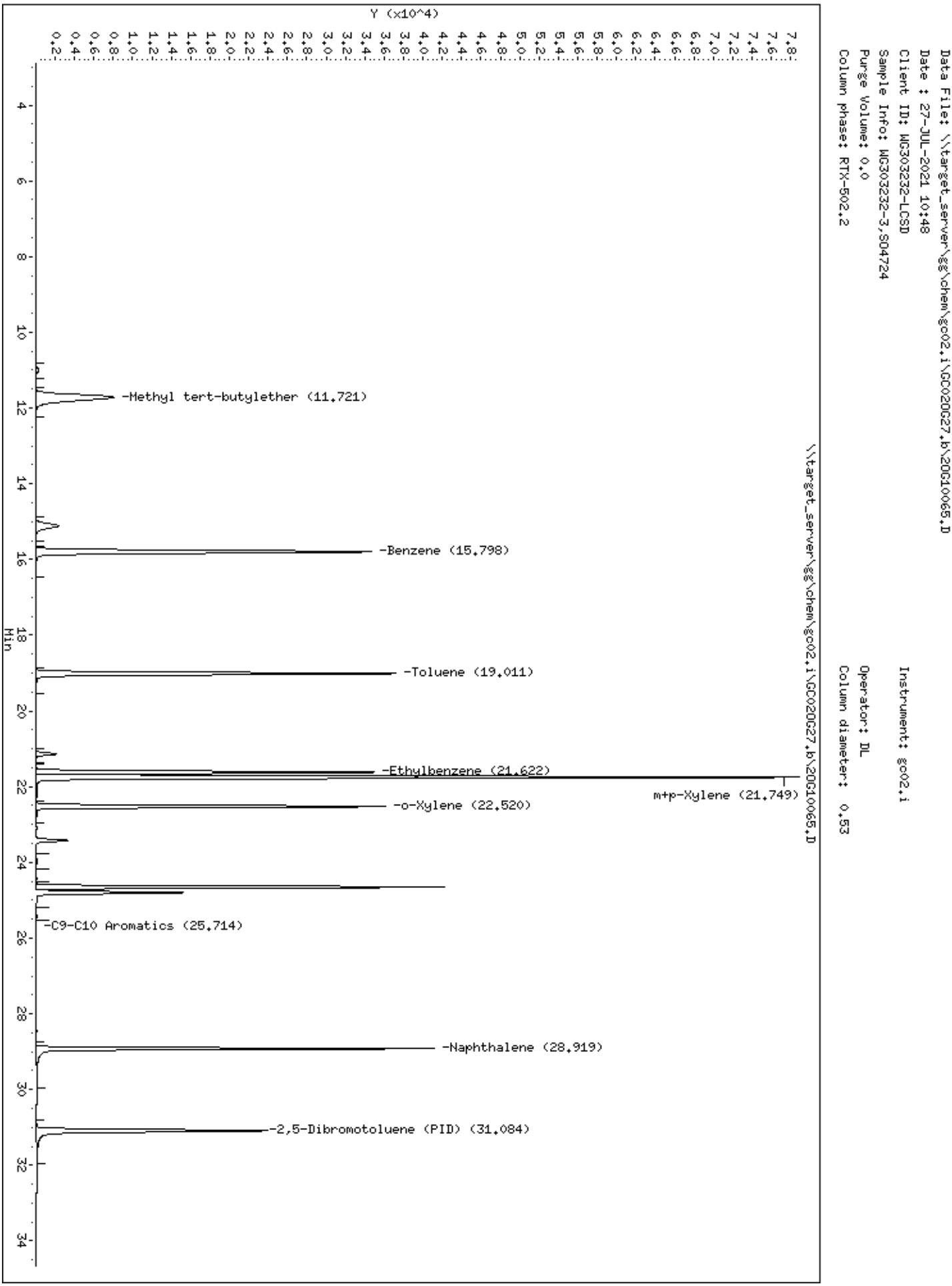
Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)	REVIEW CODE
	2 Methyl tert-butylether	11.720	11.696	0.024	181450	83.7234	83.7	
	3 Benzene	15.797	15.780	0.017	371197	83.8633	83.9	
	4 Toluene	19.011	18.998	0.013	338571	84.7289	84.7	
	5 Ethylbenzene	21.622	21.612	0.010	300561	87.2715	87.3	
	6 m+p-Xylene	21.749	21.739	0.010	686996	170.654	171	
	7 o-Xylene	22.520	22.511	0.009	302266	85.7545	85.8	
S	9 C9-C10 Aromatics	22.611-28.816			317915	87.1586	87.2(aM)	M3
	10 Naphthalene	28.918	28.916	0.002	318261	95.1646	95.2	
$	11 2,5-Dibromotoluene (PID)	31.084	31.083	0.001	239707	95.9908	96.0	

DL
11:05 am, Jul 30, 2021

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.


Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10065.D
Date : 27-JUL-2021 10:48
Client ID: WG303232-LCSD
Sample Info: WG303232-3,S04724
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: DL
Column diameter: 0.53
Y (x10^4)
Min
-Methyl tert-butylether (11.721)
-Benzene (15.798)
-Toluene (19.011)
-Ethylbenzene (21.622)
m+p-Xylene (21.749)
-o-Xylene (22.520)
-C9-C10 Aromatics (25.714)
-Naphthalene (28.919)
-2,5-Dibromotoluene (PID) (31.084)
\\target_server\gg\chem\gc02.i\GC020G27.b\20G10065.D

Data File: 2OG10065.D
Report Date: 30-Jul-2021 10:39

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Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10065.D
Lab Smp Id: WG303232-3 Client Smp ID: WG303232-LCSD
Inj Date : 27-JUL-2021 10:48
Operator : DL Inst ID: gc02.i
Smp Info : WG303232-3,SO4724
Misc Info : WG303232,WG301241-4,SO4724-2
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: LCS-MS.sub
Target Version: 4.12

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

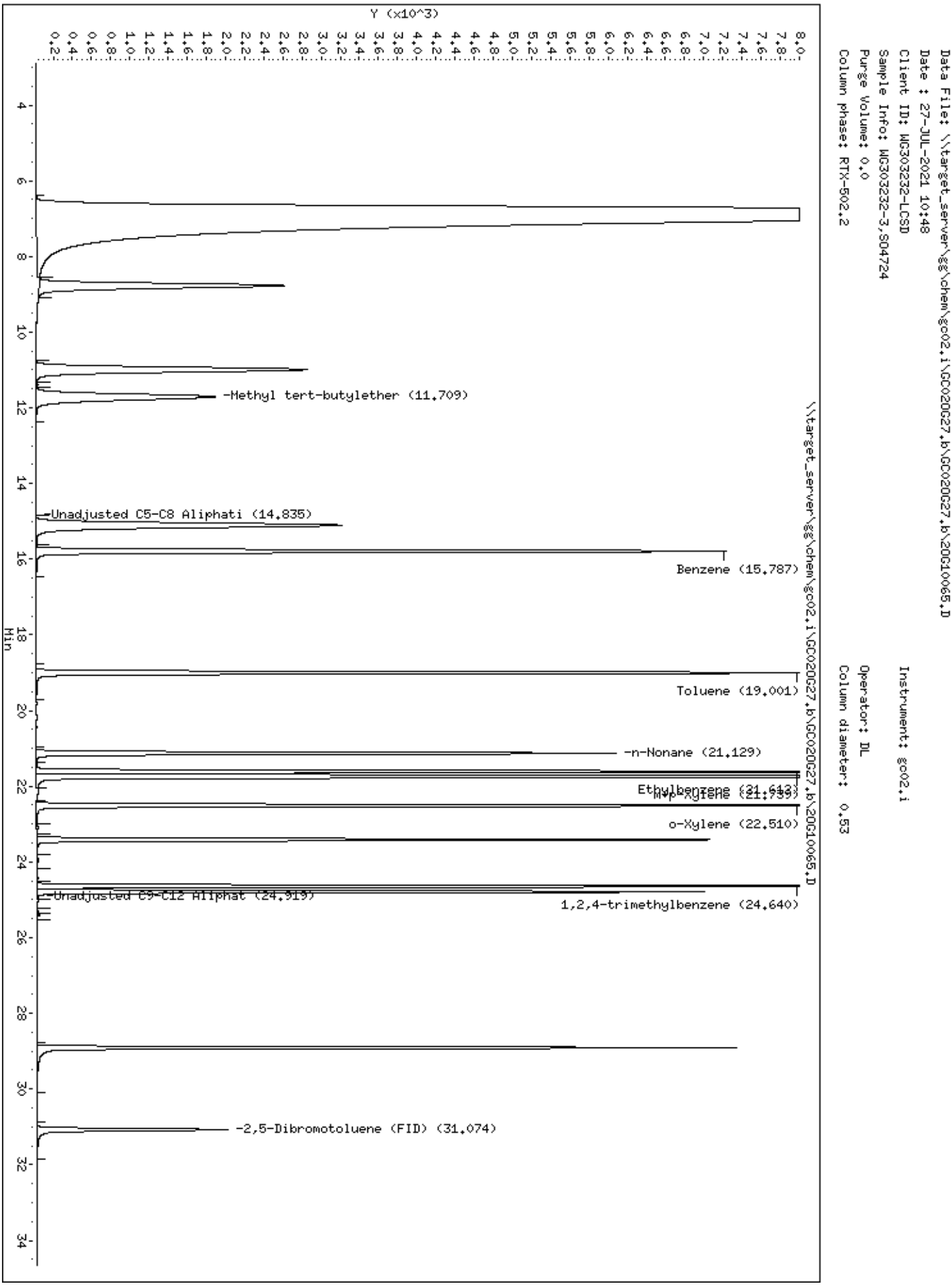
Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)	REVIEW CODE
	7 Methyl tert-butylether	11.709	11.687	0.022	422566	93.2959	93.3	
	9 Benzene	15.787	15.769	0.018	743257	95.6851	95.7	
	11 Toluene	19.000	18.989	0.011	735723	96.3622	96.4	
	12 n-Nonane	21.129	21.127	0.002	523632	96.2643	96.3	
	14 Ethylbenzene	21.611	21.606	0.005	720192	100.114	100	
	15 m+p-Xylene	21.739	21.736	0.003	1461740	194.720	195	
	16 o-Xylene	22.509	22.505	0.004	747663	97.9054	97.9	
	18 1,2,4-trimethylbenzene	24.639	24.638	0.001	724326	98.9860	99.0	
S	10 Unadjusted C5-C8 Aliphatics	8.643-21.027			1584866	273.382	273(M)	M2
S	17 Unadjusted C9-C12 Aliphatics	21.028-28.810			1102313	200.907	201(M)	M2
$	21 2,5-Dibromotoluene (FID)	31.073	31.076	-0.003	191571	106.055	106	

DL
11:05 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.


Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20010065.D
Date : 27-JUL-2021 10:48
Client ID: WG303232-LCSD
Sample Info: WG303232-3,S04724
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: DL
Column diameter: 0.53
Y (x10^3)
-Methyl tert-butylether (11.709)
Unadjusted C5-C8 Aliphati (14.835)
Benzene (15.787)
Toluene (19.001)
-n-Nonane (21.129)
Ethylbenzene (21.643)
m+p-Xylene (21.739)
o-Xylene (22.510)
Unadjusted C9-C12 Aliphat (24.919)
1,2,4-trimethylbenzene (24.640)
-2,5-Dibromotoluene (FID) (31.074)
Min
\\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20010065.D

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ANALYTICAL SERVICES

MS/MSD Recovery Report

MS ID: WG303232-6
MSD ID: WG303232-7
Sample ID: SO4724-2
Client ID: DW-01-INF-SUMMER2021
SDG: SO4724
MS File ID: 2OG10083.D

Extract Date: 28-JUL-21
Extracted By: DL
Extraction Method: MA-VPH
Lab Prep Batch: WG303232
Report Date: 30-JUL-21
MSD File ID: 2OG10084.D

Analysis Date: 28-JUL-21
Analyst: DL
Analysis Method: MA DEP VPH 04-1.1
Matrix: AQ
% Solids: NA

Compound	MS Spike	MSD Spike	Conc Units	Samp Conc	MS Conc	MSD Conc	MS Rec (%)	MSD Rec (%)	RPD (%)	RPD Limit	Limits
C5-C8 Aliphatics	300.	300.	ug/L	U75	292	285	97.3	95.0	2	50	70-130
C9-C12 Aliphatics	200.	200.	ug/L	U75	189	189	94.5	94.5	0	50	70-130
C9-C10 Aromatics	100.	100.	ug/L	U75	87.1	80	87.1	80.0	8	50	70-130
Benzene	100.	100.	ug/L	U2.0	85	78.1	85.0	78.1	8	50	70-130
Ethylbenzene	100.	100.	ug/L	U3.8	88.5	81.1	88.5	81.1	9	50	70-130
Methyl tert-butylether	100.	100.	ug/L	U3.8	82.5	75.1	82.5	75.1	9	50	70-130
Naphthalene	100.	100.	ug/L	U3.8	92.7	85	92.7	85.0	9	50	70-130
Toluene	100.	100.	ug/L	U3.8	85.8	78.6	85.8	78.6	9	50	70-130
m+p-Xylenes	200.	200.	ug/L	U7.5	172	158	86.0	79.0	8	50	70-130
o-Xylene	100.	100.	ug/L	U3.8	86.1	78.6	86.1	78.6	9	50	70-130
2,5-Dibromotoluene (FID)							100.	92.1			70-130
2,5-Dibromotoluene (PID)							91.2	83.6			70-130

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Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10083.D
Report Date: 30-Jul-2021 10:25

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10083.D
Lab Smp Id: WG303232-6 Client Smp ID: W-01-INF-SUMMER2021
Inj Date : 28-JUL-2021 00:01
Operator : DL Inst ID: gc02.i
Smp Info : WG303232-6,SO4724
Misc Info : WG303232,WG301241-4,SO4724-2
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07 Cal File: 2OF10009.D
Als bottle: 1 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: LCS-MS.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

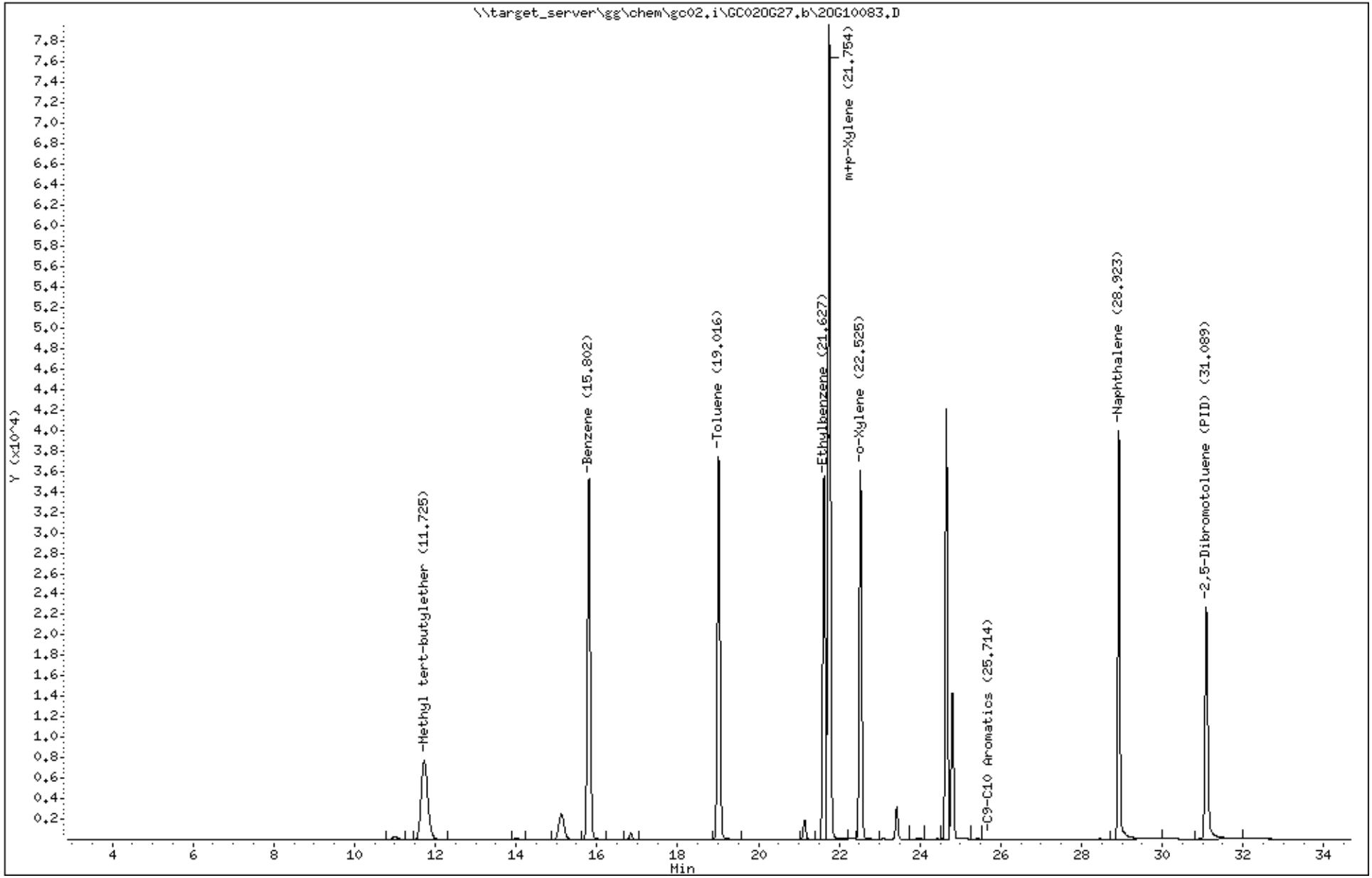
	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
2	Methyl tert-butylether	11.724	11.696	0.028	178880	82.5375	82.5	
3	Benzene	15.801	15.780	0.021	376135	84.9789	85.0	
4	Toluene	19.016	18.998	0.018	342682	85.7577	85.8	
5	Ethylbenzene	21.627	21.612	0.015	304945	88.5445	88.5	
6	m+p-Xylene	21.754	21.739	0.015	690563	171.540	172	
7	o-Xylene	22.525	22.511	0.014	303428	86.0841	86.1	
S 9	C9-C10 Aromatics	22.611-28.816			317645	87.0846	87.1(aM)	M3
10	Naphthalene	28.922	28.916	0.006	310016	92.6993	92.7	
$ 11	2,5-Dibromotoluene (PID)	31.088	31.083	0.005	227834	91.2363	91.2	

DL
11:05 am, Jul 30, 2021

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10083.D
Date : 28-JUL-2021 00:01
Client ID: W-01-INF-SUMMER2021
Instrument: gc02.i
Sample Info: WG303232-6,S04724
Purge Volume: 0.0
Operator: DL
Column phase: RTX-502.2
Column diameter: 0.53



Katahdin Analytical Services 3000106

Data File: 2OG10083.D
Report Date: 30-Jul-2021 10:27

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10083.D
Lab Smp Id: WG303232-6 Client Smp ID: W-01-INF-SUMMER2021
Inj Date : 28-JUL-2021 00:01
Operator : DL Inst ID: gc02.i
Smp Info : WG303232-6,SO4724
Misc Info : WG303232,WG301241-4,SO4724-2
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: LCS-MS.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

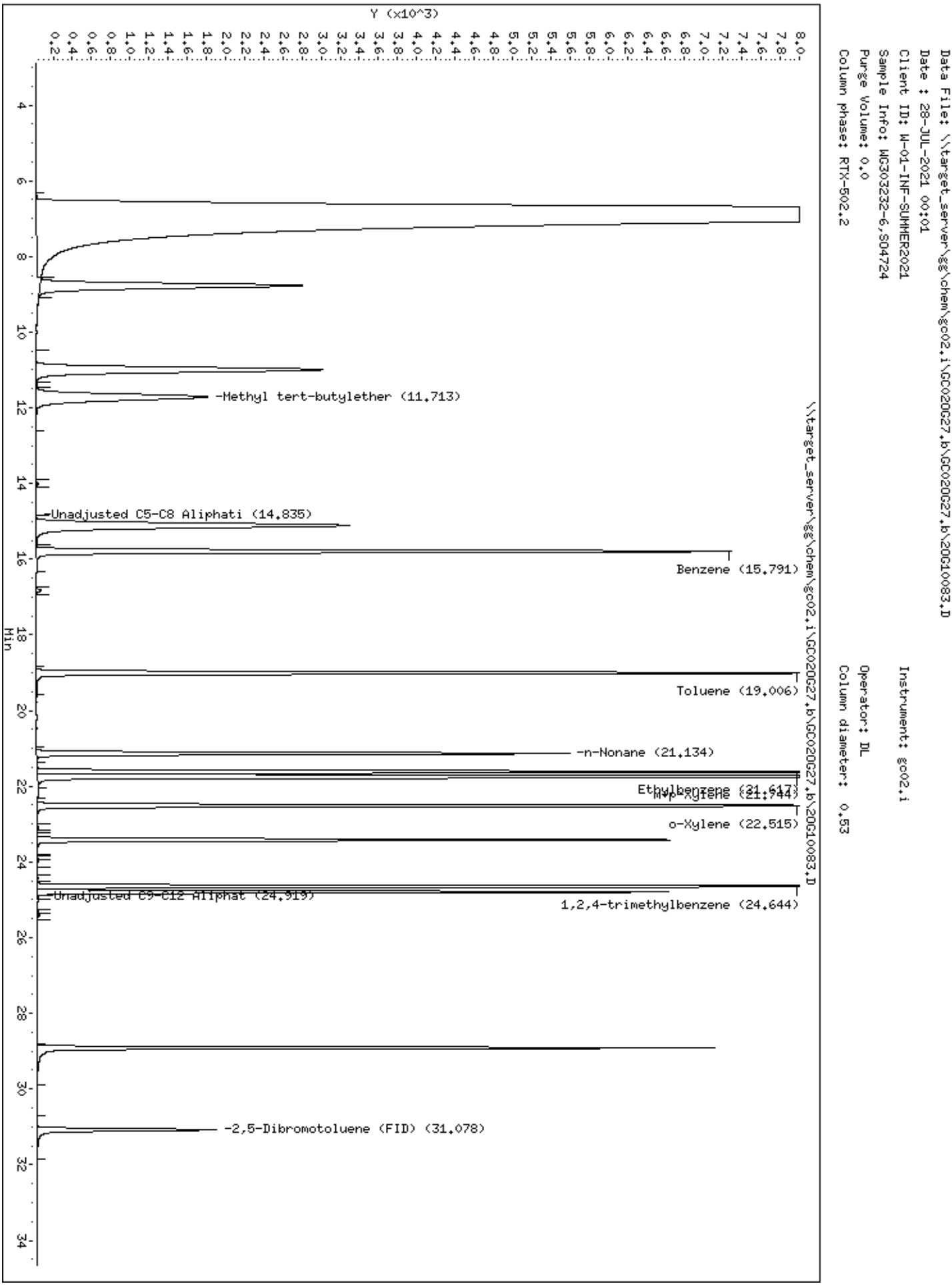
Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
7	Methyl tert-butylether	11.712	11.687	0.025	417202	92.1116	92.1	
9	Benzene	15.791	15.769	0.022	750442	96.6101	96.6	
11	Toluene	19.005	18.989	0.016	742210	97.2118	97.2	
12	n-Nonane	21.134	21.127	0.007	479459	88.1435	88.1	
14	Ethylbenzene	21.616	21.606	0.010	727939	101.191	101	
15	m+p-Xylene	21.744	21.736	0.008	1464229	195.051	195	
16	o-Xylene	22.514	22.505	0.009	741955	97.1580	97.2	
18	1,2,4-trimethylbenzene	24.644	24.638	0.006	721413	98.5880	98.6	
S 10	Unadjusted C5-C8 Aliphatics	8.643-21.027			1691259	291.734	292(M)	M2
S 17	Unadjusted C9-C12 Aliphatics	21.028-28.810			1035350	188.703	189(M)	M2
$ 21	2,5-Dibromotoluene (FID)	31.078	31.076	0.002	181269	100.352	100	

DL
11:05 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.


Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20010083.D
Date : 28-JUL-2021 00:01
Client ID: W-01-INF-SUMMER2021
Sample Info: WG303232-6,S04724
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: DL
Column diameter: 0.53
Y (x10^3)
Min
-Methyl tert-butylether (11.713)
Unadjusted C5-C8 Aliphati (14.835)
Benzene (15.791)
Toluene (19.006)
-n-Nonane (21.134)
Ethylbenzene (21.647)
m,p-Xylene (21.744)
o-Xylene (22.515)
Unadjusted C9-C12 Aliphat (24.519)
1,2,4-trimethylbenzene (24.644)
-2,5-Dibromotoluene (FID) (31.078)
\\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20010083.D

Data File: \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10084.D
Report Date: 30-Jul-2021 10:25

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\2OG10084.D
Lab Smp Id: WG303232-7 Client Smp ID: W-01-INF-SUMMER2021
Inj Date : 28-JUL-2021 00:43
Operator : DL Inst ID: gc02.i
Smp Info : WG303232-7,SO4724
Misc Info : WG303232,WG301241-4,SO4724-2
Comment : AROMATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m
Meth Date : 28-Jul-2021 07:44 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:07 Cal File: 2OF10009.D
Als bottle: 1 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: LCS-MS.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

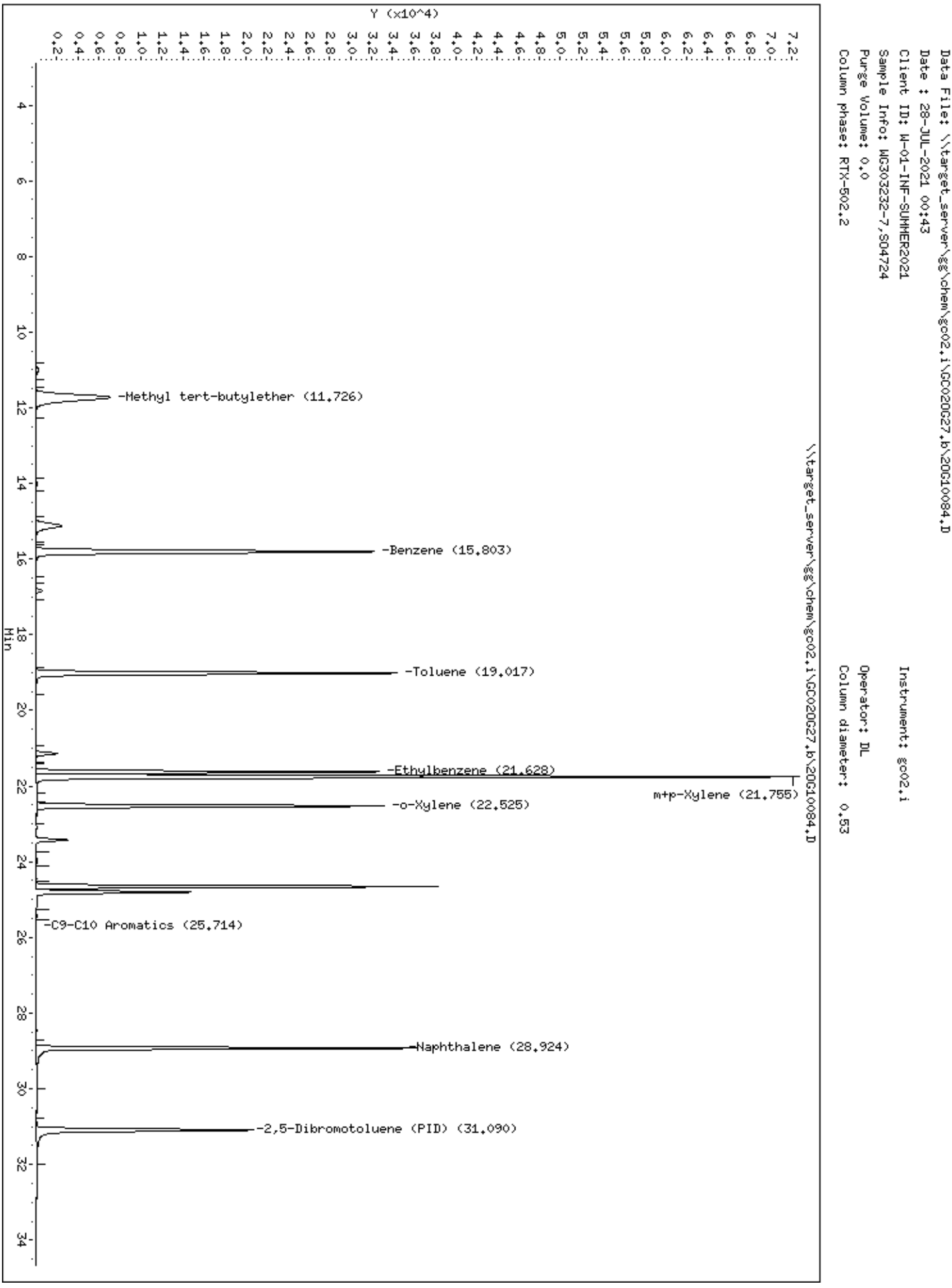
Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)	REVIEW CODE
2	Methyl tert-butylether	11.726	11.696	0.030	162821	75.1277	75.1	
3	Benzene	15.803	15.780	0.023	345717	78.1067	78.1	
4	Toluene	19.017	18.998	0.019	314236	78.6390	78.6	
5	Ethylbenzene	21.627	21.612	0.015	279267	81.0886	81.1	
6	m+p-Xylene	21.754	21.739	0.015	634603	157.639	158	
7	o-Xylene	22.525	22.511	0.014	277061	78.6037	78.6	
S 9	C9-C10 Aromatics	22.611-28.816			291995	80.0525	80.0(aM)	M3
10	Naphthalene	28.923	28.916	0.007	284159	84.9676	85.0	
$ 11	2,5-Dibromotoluene (PID)	31.089	31.083	0.006	208872	83.6429	83.6	

DL
11:05 am, Jul 30, 2021

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.


Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\20G10084.D
Date : 28-JUL-2021 00:43
Client ID: W-01-INF-SUMMER2021
Sample Info: WG303232-7,SD4724
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: DL
Column diameter: 0.53
Y (x10^4)
Min
-Methyl tert-butylether (11.726)
-Benzene (15.803)
-Toluene (19.017)
-Ethylbenzene (21.628)
m+p-Xylene (21.755)
-o-Xylene (22.525)
-C9-C10 Aromatics (25.714)
-Naphthalene (28.924)
-2,5-Dibromotoluene (PID) (31.090)
\\target_server\gg\chem\gc02.i\GC020G27.b\20G10084.D

Data File: 2OG10084.D
Report Date: 30-Jul-2021 10:27

Katahdin Analytical Services

Data file : \\target_server\gg\chem\gc02.i\GC02OG27.b\GC02OG27.b\2OG10084.D
Lab Smp Id: WG303232-7 Client Smp ID: W-01-INF-SUMMER2021
Inj Date : 28-JUL-2021 00:43
Operator : DL Inst ID: gc02.i
Smp Info : WG303232-7,SO4724
Misc Info : WG303232,WG301241-4,SO4724-2
Comment : ALIPHATIC
Method : \\target_server\gg\chem\gc02.i\GC02OG27.b\VPHPIDA5.m\VPHFIDA5.m
Meth Date : 28-Jul-2021 07:49 dlewry Quant Type: ESTD
Cal Date : 22-JUN-2021 17:48 Cal File: 2OF10010.D
Als bottle: 1 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: LCS-MS.sub
Target Version: 4.12
Processing Host: V200T3

Concentration Formula: Amt * DF * 0.005/Vo * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vo	0.00500	Sample Volume (L)
Cpnd Variable		Local Compound Variable

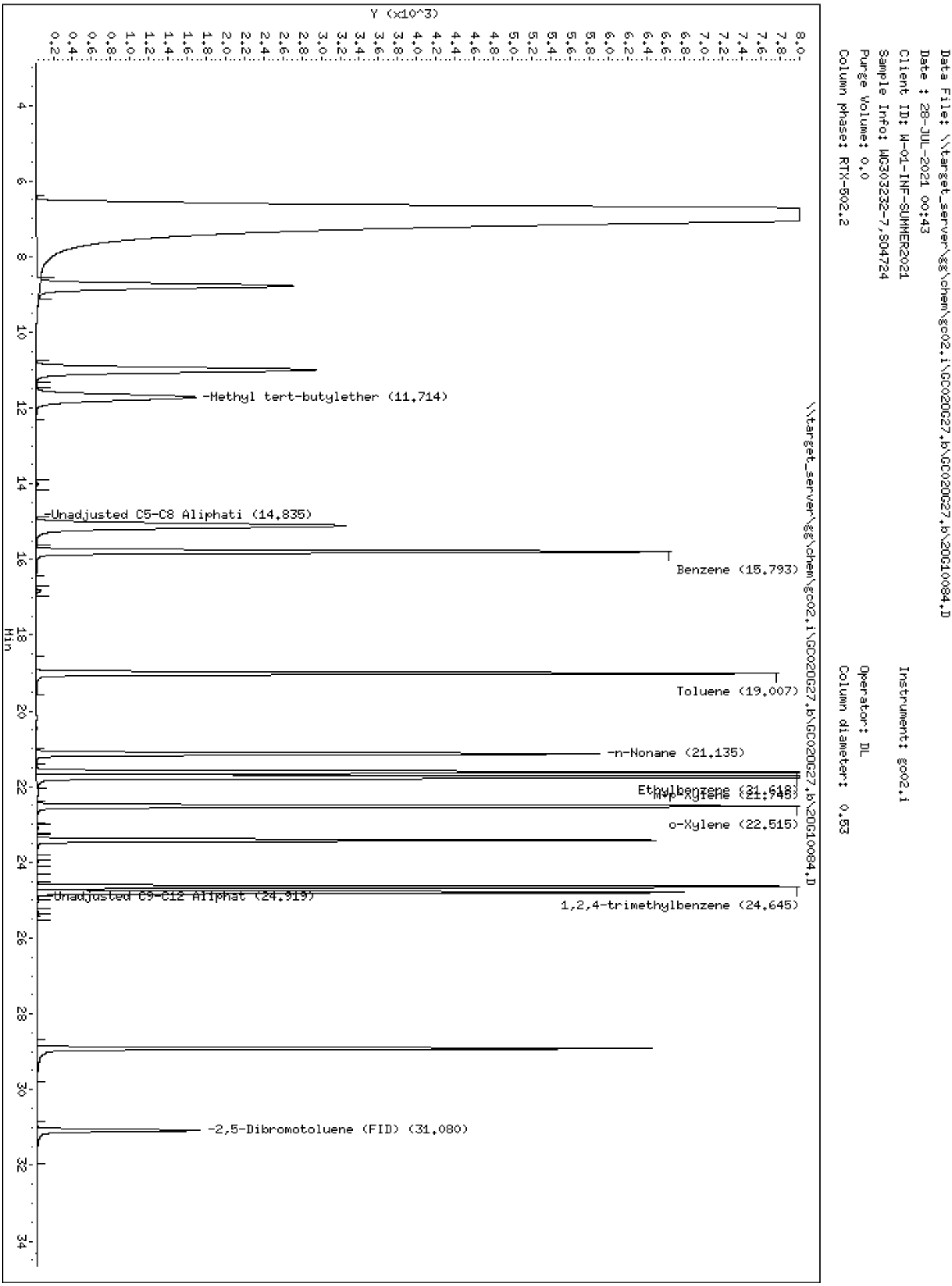
			RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)	REVIEW CODE
	7	Methyl tert-butylether	11.714	11.687	0.027	379572	83.8035	83.8	
	9	Benzene	15.792	15.769	0.023	687677	88.5299	88.5	
	11	Toluene	19.006	18.989	0.017	678124	88.8181	88.8	
	12	n-Nonane	21.134	21.127	0.007	508416	93.4670	93.5	
	14	Ethylbenzene	21.617	21.606	0.011	667274	92.7577	92.8	
	15	m+p-Xylene	21.744	21.736	0.008	1346354	179.349	179	
	16	o-Xylene	22.515	22.505	0.010	680009	89.0462	89.0	
	18	1,2,4-trimethylbenzene	24.644	24.638	0.006	659834	90.1726	90.2	
S	10	Unadjusted C5-C8 Aliphatics	8.643-21.027			1650378	284.682	285(M)	M2
S	17	Unadjusted C9-C12 Aliphatics	21.028-28.810			1036122	188.843	189(M)	M2
$	21	2,5-Dibromotoluene (FID)	31.079	31.076	0.003	166323	92.0779	92.1	

DL

11:05 am, Jul 30, 2021

QC Flag Legend

M - Compound response manually integrated.


Data File: \\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20010084.D
Date : 28-JUL-2021 00:43
Client ID: W-01-INF-SUMMER2021
Sample Info: WG303232-7,S04724
Purge Volume: 0.0
Column phase: RTX-502.2
Instrument: gc02.i
Operator: DL
Column diameter: 0.53
\\target_server\gg\chem\gc02.i\GC020G27.b\GC020G27.b\20010084.D
Y (x10^3)
Min
-Methyl tert-butylether (11.714)
=Unadjusted C5-C8 Aliphati (14.835)
Benzene (15.793)
Toluene (19.007)
-n-Nonane (21.135)
Ethylbenzene (21.618)
m,p-Xylene (21.748)
o-Xylene (22.515)
=Unadjusted C9-C12 Aliphat (24.519)
1,2,4-trimethylbenzene (24.645)
-2,5-Dibromotoluene (FID) (31.080)

Logbooks and Supporting Documents

Katahdin Analytical Services
GC Laboratory Instrument Runlog

Instrument: GC02

Method (Circle): MADEP-VPH-98-1 MEDEP 4.2.17 SW846 8015(M)

Date	Init.	Sample Name	Amt. Purged	SP. #	Result File	Dil.	Y/N	Method	pH	Comments
6-22-21	DL	CV50	5mL	2	20F0002	1	N	VPHPJDFJDAS	—	PID Lamp off
		CV50		3	3		N			6hPID
		CV50		4	4		N			24PID
		ICal 50	50uL	5	5		Y	VPHPJDFJDAS		WG301211-4
		1	10uL	6	6		Y			-1
		5	50uL	7	7		Y			-2
		10	100uL	8	8		Y			-3
		100		9	9		Y			-5
		300	600uL	10	20F0010		Y			-6
		IND	50uL	11	11		Y			-7
6-23-21	DL	Rinse	5mL	1	20F0012	1	N	VPHPJDFJDAS	—	
		CV50		2	13		Y			WG301253-4
		WG301253-1	200uL	3	14		Y			
		-2		4	15		Y			
		-3		5	16		Y			
		S03730-1E		6	17		Y			
		-2E		7	18		Y			
		-3E		8	19		Y			
		-4E		9	20		Y			
		-5E		10	21		Y			
		CV50	5mL	11	22		Y			WG301253-5
6-24-21	DL	Rinse	5mL	1	20F0023	1	N	VPHPJDFJDAS	—	
		CV50		2	24		Y			WG301340-4
		WG301340-1		3	25		Y			200uL Antifoam
		-2		4	26		Y			
		-3		5	27		Y			
		S03655-1A		6	28		Y		<2	40uL Antifoam
		CV50		7	29		Y		—	WG301340-5

	Std. Name	Conc.	Std. Code	Std. Code
1	VPH Cal mix	50 ug/ml	GCV 4590	GCV
2	VPH Surr. mix	100 ug/ml	GCV 4582	GCV
3	VPH LCS mix	100 ug/ml	GCV 4583	GCV
4	GRO Cal mix	250 ug/mL Total	GCV	GCV
5	GRO Surr. Mix	50 ug/mL	GCV	GCV
6	GRO LCS mix	250 ug/mL Total	GCV	GCV
7	VPH Cal 4	250 ug/mL	GW 4592	
8	VPH Cal 6	500 ug/mL	GW 4591	

VPH CC = 50uL Std. 1
VPH LCS = 50uL Std. 3
VPH Samples = 50uL Std. 2

GRO CC = 20uL Std. 4
GRO LCS = 20uL Std. 5 and 6
GRO Samples = 20uL Std. 5

Antifoam lot #17
12/1/24

Katahdin Analytical Services
GC Laboratory Instrument Runlog

Instrument: GC02

Method (Circle): MADEP-VPH-98-1 MEDEP 4.2.17 SW846 8015(M)

Date	Init.	Sample Name	Amt. Purged	SP. #	Result File	Dil.	Y/N	Method	pH	Comments
7-27-21	DL	Rinse	5mL	1	20G10060	1	N	VPHPIDFIDAS	—	
		CV50		2	61		Y			WG303232-8
		Low Pt		3	62		Y			
		WG303232-1		4	63		Y			
		-2		5	64		Y			
		-3		6	65		Y			
		504724-7D		7	66		Y		2	
		504723-7D		8	67		Y			
		-8D		9	68		Y			
		-1S		10	69		Y			
		-2D		11	70		Y			
		-3D		12	71		Y			
		-4D		13	72		Y			
		-5D		14	73		Y			
		-6D		15	74		Y			
		504724-1D		16	75		Y			
		-2S		17	76		Y			
		-3D		18	77		Y			
		-4D		19	78		Y			
		-5D		20	79		Y			
		-6D		21	80		Y			
		WG303234		22	81		Y			504723-1KMS
		-5		23	82		Y			-1LMSD
7-28-21		-6		24	83		Y			504724-2KMS
		-7		25	84		Y			-2LMSD
		CV50		26	85		Y		—	WG303232-9
7-28-21	DL	Rinse	5mL	1	20G10086	1	N	VPHPIDFIDAS	—	
		CV50		2	87					

	Std. Name	Conc.	Std. Code	Std. Code
1	VPH Cal mix	50 ug/ml	GCV 4596	GCV
2	VPH Surr. mix	100 ug/ml	GCV 4593	GCV
3	VPH LCS mix	100 ug/ml	GCV 4594	GCV
4	GRO Cal mix	250 ug/mL Total	GCV	GCV
5	GRO Surr. Mix	50 ug/mL	GCV	GCV
6	GRO LCS mix	250 ug/mL Total	GCV	GCV
7	VPH Calc Low Surr mL		GCV 4597	
8				

VPH CC = 50uL Std. 1
VPH LCS = 50uL Std. 3
VPH Samples = 50uL Std. 2

GRO CC = 20uL Std. 4
GRO LCS = 20uL Std. 5 and 6
GRO Samples = 20uL Std. 5

PH lot # 603003

METALS DATA

Sample Data Section

METALS SAMPLE FLAGGING

FLAG	SPECIFIED MEANING
E	The reported value is estimated because of the presence of interference (as indicated by serial dilution).
N	The pre-digestion spiked sample recovery is not within control limits.
*	The duplicate sample analysis relative percent difference (RPD) is not within control limits.
B	Indicates the analyte was detected in the laboratory method blank analyzed concurrently with the sample.
A	The post-digestion spiked sample recovery is not within control limits.
•	Analytical run QC sample (e.g. ICV, CCV, ICB, CCB, ICSA, ICSAB) not within control limits.
U	The analyte was not detected above the specified level. This level may be the Practical Quantitation Level (PQL) (also called Limit of Quantitation (LOQ)), the Limit of Detection (LOD) or Method Detection Limit (MDL) as required by the client. Note: All results reported as "U" MDL have a 50% rate for false negatives compared to those results reported as "U" PQL, "U" LOQ or "U" LOD, where the rate of false negatives is <1%.
J	Estimated value. The analyte was detected in the sample at a concentration less than the laboratory Practical Quantitation Level (PQL) (also called Limit of Quantitation (LOQ)), but above the Method Detection Limit (MDL).
Q	One or more quality control criteria failed (e.g., LCS recovery, surrogate spike recovery or CCV).

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: Katahdin Analytical Services

SDG Name: SO4724 **SOW No.** SW846

Client Field ID	Lab Sample ID
DW-01-EFF-SUMMER2021	SO4724-001
DW-01-INF-SUMMER2021	SO4724-002
DW-01-INF-SUMMER2021P	SO4724-002P
DW-01-INF-SUMMER2021S	SO4724-002S
DW-01-MID-SUMMER2021	SO4724-003
DW-02R-EFF-SUMMER2021	SO4724-004
DW-02R-INF-SUMMER2021	SO4724-005
DW-FD-SUMMER2021	SO4724-006

Were ICP interelement corrections applied ?	Yes
Were ICP background corrections applied ?	Yes
If yes - were raw data generated before application of background corrections ?	No

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: George Brewer Name: George Brewer

Date: 10/01/21 Title: Inorganics Dept. Mgr.

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DW-01-EFF-SUMMER2021

Matrix: WATER **SDG Name:** SO4724

Percent Solids: 0.00 **Lab Sample ID:** SO4724-001

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-36-0	ANTIMONY, TOTAL	0.50	U		MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	2.3	4.0
7440-41-7	BERYLLIUM, TOTAL	0.037	J		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.039	J		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	83800			MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	0.82	J		MS	5	5.0	0.22	4.0
7440-50-8	COPPER, TOTAL	13.7		B	MS	5	3.0	0.19	2.0
7439-92-1	LEAD, TOTAL	0.72	J		MS	5	1.0	0.075	0.50
7439-96-5	MANGANESE, TOTAL	0.89	J		MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	4.64			MS	5	2.0	0.15	1.2
7782-49-2	SELENIUM, TOTAL	3.0	U		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	1.0	0.060	0.40
7440-66-6	ZINC, TOTAL	35			MS	5	10	3.9	8.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DW-01-INF-SUMMER2021

Matrix: WATER **SDG Name:** SO4724

Percent Solids: 0.00 **Lab Sample ID:** SO4724-002

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	LOQ	ADJUSTED MDL	LOD
7440-36-0	ANTIMONY, TOTAL	0.063	J		MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	2.3	4.0
7440-41-7	BERYLLIUM, TOTAL	0.20	U		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.20	U		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	88500		NA	MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	1.3	J		MS	5	5.0	0.22	4.0
7440-50-8	COPPER, TOTAL	7.84		B	MS	5	3.0	0.19	2.0
7439-92-1	LEAD, TOTAL	0.34	J		MS	5	1.0	0.075	0.50
7439-96-5	MANGANESE, TOTAL	0.81	J		MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	1.2	J		MS	5	2.0	0.15	1.2
7782-49-2	SELENIUM, TOTAL	3.0	U		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	1.0	0.060	0.40
7440-66-6	ZINC, TOTAL	6.0	J		MS	5	10	3.9	8.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DW-01-MID-SUMMER2021

Matrix: WATER **SDG Name:** SO4724

Percent Solids: 0.00 **Lab Sample ID:** SO4724-003

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-36-0	ANTIMONY, TOTAL	0.17	J		MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	2.3	4.0
7440-41-7	BERYLLIUM, TOTAL	0.12	J		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.083	J		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	89300			MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	0.76	J		MS	5	5.0	0.22	4.0
7440-50-8	COPPER, TOTAL	11.8		B	MS	5	3.0	0.19	2.0
7439-92-1	LEAD, TOTAL	0.72	J		MS	5	1.0	0.075	0.50
7439-96-5	MANGANESE, TOTAL	0.71	J		MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	2.18			MS	5	2.0	0.15	1.2
7782-49-2	SELENIUM, TOTAL	0.30	J		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-28-0	THALLIUM, TOTAL	0.14	J		MS	5	1.0	0.060	0.40
7440-66-6	ZINC, TOTAL	35			MS	5	10	3.9	8.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DW-02R-EFF-SUMMER2021

Matrix: WATER **SDG Name:** SO4724

Percent Solids: 0.00 **Lab Sample ID:** SO4724-004

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-36-0	ANTIMONY, TOTAL	0.094	J		MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	2.3	4.0
7440-41-7	BERYLLIUM, TOTAL	0.20	U		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.20	U		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	59600			MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	0.81	J		MS	5	5.0	0.22	4.0
7440-50-8	COPPER, TOTAL	21.4		B	MS	5	3.0	0.19	2.0
7439-92-1	LEAD, TOTAL	0.43	J		MS	5	1.0	0.075	0.50
7439-96-5	MANGANESE, TOTAL	0.70	J		MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	0.95	J		MS	5	2.0	0.15	1.2
7782-49-2	SELENIUM, TOTAL	3.0	U		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	1.0	0.060	0.40
7440-66-6	ZINC, TOTAL	21			MS	5	10	3.9	8.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DW-02R-INF-SUMMER2021

Matrix: WATER **SDG Name:** SO4724

Percent Solids: 0.00 **Lab Sample ID:** SO4724-005

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-36-0	ANTIMONY, TOTAL	0.077	J		MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	2.3	4.0
7440-41-7	BERYLLIUM, TOTAL	0.038	J		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.037	J		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	59600			MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	0.89	J		MS	5	5.0	0.22	4.0
7440-50-8	COPPER, TOTAL	12.2		B	MS	5	3.0	0.19	2.0
7439-92-1	LEAD, TOTAL	0.60	J		MS	5	1.0	0.075	0.50
7439-96-5	MANGANESE, TOTAL	1.3	J		MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	1.3	J		MS	5	2.0	0.15	1.2
7782-49-2	SELENIUM, TOTAL	3.0	U		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	1.0	0.060	0.40
7440-66-6	ZINC, TOTAL	7.6	J		MS	5	10	3.9	8.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** DW-FD-SUMMER2021

Matrix: WATER **SDG Name:** SO4724

Percent Solids: 0.00 **Lab Sample ID:** SO4724-006

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7440-36-0	ANTIMONY, TOTAL	0.076	J		MS	5	1.0	0.055	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	2.3	4.0
7440-41-7	BERYLLIUM, TOTAL	0.053	J		MS	5	1.0	0.034	0.20
7440-43-9	CADMIUM, TOTAL	0.046	J		MS	5	1.0	0.029	0.20
7440-70-2	CALCIUM, TOTAL	58400			MS	5	100	21	80
7440-47-3	CHROMIUM, TOTAL	0.88	J		MS	5	5.0	0.22	4.0
7440-50-8	COPPER, TOTAL	18.5		B	MS	5	3.0	0.19	2.0
7439-92-1	LEAD, TOTAL	2.48			MS	5	1.0	0.075	0.50
7439-96-5	MANGANESE, TOTAL	1.0	J		MS	5	2.0	0.35	1.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.013	0.10
7440-02-0	NICKEL, TOTAL	2.98			MS	5	2.0	0.15	1.2
7782-49-2	SELENIUM, TOTAL	0.22	J		MS	5	5.0	0.19	3.0
7440-22-4	SILVER, TOTAL	0.40	U		MS	5	1.0	0.050	0.40
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	1.0	0.060	0.40
7440-66-6	ZINC, TOTAL	19			MS	5	10	3.9	8.0

Comments:

QC Summary Section

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Concentration Units: ug/L

SAMPLE: ICV

File: HOG29A Jul 29, 2021 14:47

Analyte	True	Found	%R (1)
MERCURY	6.0	6.02	100.3

SAMPLE: CCV

File: HOG29A Jul 29, 2021 14:54

Analyte	True	Found	%R (1)
MERCURY	5.0	5.05	101.0

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Concentration Units: ug/L

SAMPLE: CCV

File: HOG29A Jul 29, 2021 15:17

Analyte	True	Found	%R (1)
MERCURY	5.0	5.20	104.0

SAMPLE: CCV

File: HOG29A Jul 29, 2021 15:42

Analyte	True	Found	%R (1)
MERCURY	5.0	5.19	103.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Concentration Units: ug/L

SAMPLE: ICV

File: LOH27A Aug 27, 2021 17:25

Analyte	True	Found	%R (1)
ALUMINUM	400.0	397.25	99.3
ANTIMONY	20.0	19.94	99.7
ARSENIC	20.0	19.79	98.9
BERYLLIUM	20.0	19.57	97.9
CADMIUM	20.0	20.19	101.0
CALCIUM	4000.0	4000.87	100.0
CHROMIUM	20.0	20.11	100.6
IRON	4000.0	3960.97	99.0
LEAD	20.0	19.88	99.4
MAGNESIUM	4000.0	3937.04	98.4
MANGANESE	20.0	20.49	102.5
MOLYBDENUM	40.0	39.91	99.8
NICKEL	20.0	20.39	102.0
POTASSIUM	4000.0	4326.34	108.2
SELENIUM	20.0	20.01	100.1
SODIUM	4000.0	4093.12	102.3
THALLIUM	20.0	20.25	101.3

SAMPLE: CCV

File: LOH27A Aug 27, 2021 17:53

Analyte	True	Found	%R (1)	
ALUMINUM	500.0	515.12	103.0	
ANTIMONY	25.0	25.70	102.8	
ARSENIC	25.0	25.50	102.0	
BERYLLIUM	25.0	25.12	100.5	
CADMIUM	25.0	25.31	101.2	
CALCIUM	5000.0	5096.02	101.9	
CHROMIUM	25.0	26.04	104.2	
IRON	5000.0	5035.02	100.7	
LEAD	25.0	25.28	101.1	
MAGNESIUM	5000.0	4982.76	99.7	
MANGANESE	25.0	25.93	103.7	
MOLYBDENUM	25.0	25.72	102.9	
NICKEL	25.0	26.38	105.5	
POTASSIUM	5000.0	5555.28	111.1	•
SELENIUM	25.0	25.25	101.0	
SODIUM	5000.0	5134.01	102.7	
THALLIUM	25.0	24.89	99.6	

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Concentration Units: ug/L

SAMPLE: CCV

File: LOH27A Aug 27, 2021 18:23

Analyte	True	Found	%R (1)	
ALUMINUM	500.0	507.13	101.4	
ANTIMONY	25.0	25.23	100.9	
ARSENIC	25.0	25.15	100.6	
BERYLLIUM	25.0	24.89	99.6	
CADMIUM	25.0	25.01	100.0	
CALCIUM	5000.0	5147.26	102.9	
CHROMIUM	25.0	26.01	104.0	
IRON	5000.0	5049.48	101.0	
LEAD	25.0	25.22	100.9	
MAGNESIUM	5000.0	4979.86	99.6	
MANGANESE	25.0	25.68	102.7	
MOLYBDENUM	25.0	25.58	102.3	
NICKEL	25.0	26.61	106.4	
POTASSIUM	5000.0	5551.26	111.0	•
SELENIUM	25.0	25.46	101.8	
SODIUM	5000.0	5152.41	103.0	
THALLIUM	25.0	24.95	99.8	

SAMPLE: CCV

File: LOH27A Aug 27, 2021 18:53

Analyte	True	Found	%R (1)	
ALUMINUM	500.0	506.76	101.4	
ANTIMONY	25.0	27.48	109.9	
ARSENIC	25.0	25.84	103.4	
BERYLLIUM	25.0	23.79	95.2	
CADMIUM	25.0	22.99	92.0	
CALCIUM	5000.0	5181.50	103.6	
CHROMIUM	25.0	27.44	109.8	
IRON	5000.0	5439.23	108.8	
LEAD	25.0	25.46	101.8	
MAGNESIUM	5000.0	5049.99	101.0	
MANGANESE	25.0	27.05	108.2	
MOLYBDENUM	25.0	23.98	95.9	
NICKEL	25.0	26.55	106.2	
POTASSIUM	5000.0	5362.25	107.2	
SELENIUM	25.0	25.66	102.6	
SODIUM	5000.0	8079.57	161.6	•
THALLIUM	25.0	25.35	101.4	

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Concentration Units: ug/L

SAMPLE: CCV

File: LOH27A Aug 27, 2021 19:23

Analyte	True	Found	%R (1)	
ALUMINUM	500.0	500.62	100.1	
ANTIMONY	25.0	27.74	111.0	•
ARSENIC	25.0	25.76	103.0	
BERYLLIUM	25.0	25.60	102.4	
CADMIUM	25.0	23.96	95.8	
CALCIUM	5000.0	5114.88	102.3	
CHROMIUM	25.0	27.07	108.3	
IRON	5000.0	5175.95	103.5	
LEAD	25.0	25.85	103.4	
MAGNESIUM	5000.0	5116.04	102.3	
MANGANESE	25.0	27.13	108.5	
MOLYBDENUM	25.0	24.71	98.8	
NICKEL	25.0	26.36	105.4	
POTASSIUM	5000.0	5637.00	112.7	•
SELENIUM	25.0	25.37	101.5	
SODIUM	5000.0	5898.64	118.0	•
THALLIUM	25.0	25.80	103.2	

SAMPLE: CCV

File: LOH27A Aug 27, 2021 19:53

Analyte	True	Found	%R (1)	
ALUMINUM	500.0	494.18	98.8	
ANTIMONY	25.0	26.12	104.5	
ARSENIC	25.0	25.95	103.8	
BERYLLIUM	25.0	25.30	101.2	
CADMIUM	25.0	24.68	98.7	
CALCIUM	5000.0	5085.04	101.7	
CHROMIUM	25.0	26.50	106.0	
IRON	5000.0	5143.60	102.9	
LEAD	25.0	24.88	99.5	
MAGNESIUM	5000.0	4983.42	99.7	
MANGANESE	25.0	26.23	104.9	
MOLYBDENUM	25.0	25.37	101.5	
NICKEL	25.0	27.09	108.4	
POTASSIUM	5000.0	5592.70	111.9	•
SELENIUM	25.0	25.57	102.3	
SODIUM	5000.0	5520.31	110.4	
THALLIUM	25.0	24.71	98.8	

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Concentration Units: ug/L

SAMPLE: CCV

File: LOH27A Aug 27, 2021 20:23

Analyte	True	Found	%R (1)	
ALUMINUM	500.0	497.67	99.5	
ANTIMONY	25.0	25.92	103.7	
ARSENIC	25.0	25.79	103.2	
BERYLLIUM	25.0	26.01	104.0	
CADMIUM	25.0	24.59	98.4	
CALCIUM	5000.0	4983.04	99.7	
CHROMIUM	25.0	26.70	106.8	
IRON	5000.0	5082.49	101.6	
LEAD	25.0	25.25	101.0	
MAGNESIUM	5000.0	4985.15	99.7	
MANGANESE	25.0	26.04	104.2	
MOLYBDENUM	25.0	25.58	102.3	
NICKEL	25.0	27.10	108.4	
POTASSIUM	5000.0	5601.56	112.0	•
SELENIUM	25.0	25.45	101.8	
SODIUM	5000.0	5417.26	108.3	
THALLIUM	25.0	25.04	100.2	

SAMPLE: CCV

File: LOH27A Aug 27, 2021 20:53

Analyte	True	Found	%R (1)	
ALUMINUM	500.0	480.01	96.0	
ANTIMONY	25.0	26.13	104.5	
ARSENIC	25.0	25.89	103.6	
BERYLLIUM	25.0	26.78	107.1	
CADMIUM	25.0	24.70	98.8	
CALCIUM	5000.0	4993.97	99.9	
CHROMIUM	25.0	26.37	105.5	
IRON	5000.0	5119.54	102.4	
LEAD	25.0	25.23	100.9	
MAGNESIUM	5000.0	4886.87	97.7	
MANGANESE	25.0	25.96	103.8	
MOLYBDENUM	25.0	25.37	101.5	
NICKEL	25.0	27.06	108.2	
POTASSIUM	5000.0	5569.45	111.4	•
SELENIUM	25.0	25.35	101.4	
SODIUM	5000.0	5268.37	105.4	
THALLIUM	25.0	25.31	101.2	

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Concentration Units: ug/L

SAMPLE: CCV

File: LOH27A Aug 27, 2021 21:24

Analyte	True	Found	%R (1)
ALUMINUM	500.0	481.37	96.3
ANTIMONY	25.0	26.30	105.2
ARSENIC	25.0	25.66	102.6
BERYLLIUM	25.0	26.72	106.9
CADMIUM	25.0	25.00	100.0
CALCIUM	5000.0	5044.39	100.9
CHROMIUM	25.0	26.42	105.7
IRON	5000.0	4985.37	99.7
LEAD	25.0	25.26	101.0
MAGNESIUM	5000.0	4873.28	97.5
MANGANESE	25.0	26.00	104.0
MOLYBDENUM	25.0	25.74	103.0
NICKEL	25.0	26.76	107.0
POTASSIUM	5000.0	5520.11	110.4
SELENIUM	25.0	24.85	99.4
SODIUM	5000.0	5153.11	103.1
THALLIUM	25.0	25.15	100.6

SAMPLE: CCV

File: LOH27A Aug 27, 2021 21:54

Analyte	True	Found	%R (1)
ALUMINUM	500.0	480.54	96.1
ANTIMONY	25.0	25.39	101.6
ARSENIC	25.0	25.96	103.8
BERYLLIUM	25.0	26.16	104.6
CADMIUM	25.0	25.07	100.3
CALCIUM	5000.0	5037.33	100.7
CHROMIUM	25.0	26.25	105.0
IRON	5000.0	5122.97	102.5
LEAD	25.0	24.81	99.2
MAGNESIUM	5000.0	4908.74	98.2
MANGANESE	25.0	25.79	103.2
MOLYBDENUM	25.0	25.47	101.9
NICKEL	25.0	26.43	105.7
POTASSIUM	5000.0	5503.89	110.1
SELENIUM	25.0	25.61	102.4
SODIUM	5000.0	5222.34	104.4
THALLIUM	25.0	24.53	98.1

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Concentration Units: ug/L

SAMPLE: CCV

File: LOH27A Aug 27, 2021 22:24

Analyte	True	Found	%R (1)
ALUMINUM	500.0	489.23	97.8
ANTIMONY	25.0	25.92	103.7
ARSENIC	25.0	25.94	103.8
BERYLLIUM	25.0	26.11	104.4
CADMIUM	25.0	25.01	100.0
CALCIUM	5000.0	5059.77	101.2
CHROMIUM	25.0	26.36	105.4
IRON	5000.0	4989.47	99.8
LEAD	25.0	25.10	100.4
MAGNESIUM	5000.0	4946.47	98.9
MANGANESE	25.0	25.79	103.2
MOLYBDENUM	25.0	25.47	101.9
NICKEL	25.0	26.30	105.2
POTASSIUM	5000.0	5520.69	110.4
SELENIUM	25.0	24.76	99.0
SODIUM	5000.0	5230.81	104.6
THALLIUM	25.0	24.73	98.9

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Concentration Units: ug/L

SAMPLE: ICV

File: LOI24A Sep 24, 2021 09:14

Analyte	True	Found	%R (1)
ALUMINUM	400.0	404.64	101.2
CALCIUM	4000.0	4057.38	101.4
COPPER	20.0	20.31	101.5
IRON	4000.0	3995.43	99.9
MAGNESIUM	4000.0	3965.50	99.1
MOLYBDENUM	40.0	39.14	97.9
POTASSIUM	4000.0	4333.05	108.3
SODIUM	4000.0	4056.42	101.4
ZINC	20.0	20.23	101.2

SAMPLE: ICV

File: LOI24A Sep 24, 2021 09:16

Analyte	True	Found	%R (1)
SILVER	20.0	20.76	103.8

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Concentration Units: ug/L

SAMPLE: CCV

File: LOI24A Sep 24, 2021 09:42

Analyte	True	Found	%R (1)
ALUMINUM	500.0	504.75	101.0
CALCIUM	5000.0	5152.06	103.0
COPPER	25.0	26.35	105.4
IRON	5000.0	5095.15	101.9
MAGNESIUM	5000.0	5225.76	104.5
MOLYBDENUM	25.0	25.41	101.6
POTASSIUM	5000.0	5192.78	103.9
SILVER	25.0	25.67	102.7
SODIUM	5000.0	5365.05	107.3
ZINC	25.0	25.43	101.7

SAMPLE: CCV

File: LOI24A Sep 24, 2021 10:14

Analyte	True	Found	%R (1)
ALUMINUM	500.0	499.69	99.9
CALCIUM	5000.0	5169.27	103.4
COPPER	25.0	26.54	106.2
IRON	5000.0	5046.41	100.9
MAGNESIUM	5000.0	5256.88	105.1
MOLYBDENUM	25.0	25.75	103.0
POTASSIUM	5000.0	5166.73	103.3
SILVER	25.0	26.41	105.6
SODIUM	5000.0	5360.08	107.2
ZINC	25.0	25.80	103.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Concentration Units: ug/L

SAMPLE: CCV

File: LOI24A Sep 24, 2021 10:45

Analyte	True	Found	%R (1)
ALUMINUM	500.0	508.74	101.7
CALCIUM	5000.0	5066.16	101.3
COPPER	25.0	25.84	103.4
IRON	5000.0	4965.66	99.3
MAGNESIUM	5000.0	5360.88	107.2
MOLYBDENUM	25.0	25.53	102.1
POTASSIUM	5000.0	5181.82	103.6
SILVER	25.0	26.27	105.1
SODIUM	5000.0	5430.47	108.6
ZINC	25.0	25.42	101.7

SAMPLE: CCV

File: LOI24A Sep 24, 2021 11:16

Analyte	True	Found	%R (1)
ALUMINUM	500.0	508.21	101.6
CALCIUM	5000.0	5130.63	102.6
COPPER	25.0	25.89	103.6
IRON	5000.0	4983.88	99.7
MAGNESIUM	5000.0	5329.48	106.6
MOLYBDENUM	25.0	25.80	103.2
POTASSIUM	5000.0	5152.72	103.1
SILVER	25.0	26.65	106.6
SODIUM	5000.0	5436.19	108.7
ZINC	25.0	25.37	101.5

(1) Control Limits: Mercury 80-120; Other Metals 90-110

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Concentration Units: ug/L

SAMPLE: CCV

File: LOI24A Sep 24, 2021 11:47

Analyte	True	Found	%R (1)
ALUMINUM	500.0	504.59	100.9
CALCIUM	5000.0	5145.88	102.9
COPPER	25.0	26.22	104.9
IRON	5000.0	5024.38	100.5
MAGNESIUM	5000.0	5256.08	105.1
MOLYBDENUM	25.0	25.60	102.4
POTASSIUM	5000.0	5190.05	103.8
SILVER	25.0	26.31	105.2
SODIUM	5000.0	5389.42	107.8
ZINC	25.0	25.56	102.2

(1) Control Limits: Mercury 80-120; Other Metals 90-110

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Concentration Units: ug/L

SAMPLE: PQL

File: HOG29A Jul 29, 2021 14:51

Analyte	TRUE	FOUND	% R
MERCURY	0.2	0.21	105.0

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Concentration Units: ug/L

SAMPLE: PQL

File: LOH27A Aug 27, 2021 17:36

Analyte	TRUE	FOUND	% R
ALUMINUM	20.0	19.90	99.5
ANTIMONY	0.2	0.21	105.0
ARSENIC	1.0	1.08	108.0
BERYLLIUM	0.2	0.21	105.0
CADMIUM	0.2	0.21	105.0
CALCIUM	20.0	21.64	108.2
CHROMIUM	1.0	1.08	108.0
IRON	20.0	24.68	123.4•
LEAD	0.2	0.22	110.0
MAGNESIUM	20.0	21.98	109.9
MANGANESE	0.4	0.42	105.0
MOLYBDENUM	1.0	1.08	108.0
NICKEL	0.4	0.44	110.0
POTASSIUM	200.0	227.10	113.6
SELENIUM	1.0	1.09	109.0
SODIUM	200.0	223.98	112.0
THALLIUM	0.2	0.21	105.0

2C

PQL STANDARD FOR AA AND ICP

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Concentration Units: ug/L

SAMPLE: PQL

File: LOI24A Sep 24, 2021 09:24

Analyte	TRUE	FOUND	% R
ALUMINUM	20.0	19.68	98.4
CALCIUM	20.0	21.00	105.0
COPPER	0.6	0.68	113.3
IRON	20.0	23.54	117.7
MAGNESIUM	20.0	19.60	98.0
MOLYBDENUM	1.0	1.02	102.0
POTASSIUM	200.0	214.45	107.2
SILVER	0.2	0.23	115.0
SODIUM	200.0	219.25	109.6
ZINC	2.0	2.03	101.5

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Concentration Units: ug/L

SAMPLE: ICB

File: HOG29A Jul 29, 2021 14:49

Analyte	Result	C
MERCURY	0.016	U

SAMPLE: CCB

File: HOG29A Jul 29, 2021 14:56

Analyte	Result	C
MERCURY	0.028	J

SAMPLE: CCB

File: HOG29A Jul 29, 2021 15:19

Analyte	Result	C
MERCURY	-0.023	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Concentration Units: ug/L

SAMPLE: CCB

File: HOG29A Jul 29, 2021 15:44

Analyte	Result	C
MERCURY	0.016	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Concentration Units: ug/L

SAMPLE: ICB

File: LOH27A Aug 27, 2021 17:30

Analyte	Result	C
ALUMINUM	0.330	U
ANTIMONY	0.061	U
ARSENIC	0.250	U
BERYLLIUM	0.031	J
CADMIUM	0.025	U
CALCIUM	6.800	U
CHROMIUM	0.130	U
IRON	6.400	U
LEAD	0.029	J
MAGNESIUM	2.068	J
MANGANESE	0.027	J
MOLYBDENUM	0.036	J
NICKEL	0.024	J
POTASSIUM	12.000	U
SELENIUM	0.160	U
SODIUM	6.600	U
THALLIUM	0.023	J

SAMPLE: CCB

File: LOH27A Aug 27, 2021 17:56

Analyte	Result	C
ALUMINUM	9.490	J
ANTIMONY	0.061	U
ARSENIC	0.250	U
BERYLLIUM	0.030	J
CADMIUM	0.034	J
CALCIUM	11.087	B
CHROMIUM	0.130	U
IRON	10.633	B
LEAD	0.059	J
MAGNESIUM	11.138	B
MANGANESE	0.061	J
MOLYBDENUM	0.227	J
NICKEL	0.022	J
POTASSIUM	21.827	J
SELENIUM	0.160	U
SODIUM	35.177	J
THALLIUM	0.030	J

SAMPLE: CCB

File: LOH27A Aug 27, 2021 18:25

Analyte	Result	C
ALUMINUM	1.482	J
ANTIMONY	0.061	U
ARSENIC	0.250	U
BERYLLIUM	0.034	J
CADMIUM	0.025	U
CALCIUM	6.800	U
CHROMIUM	0.130	U
IRON	6.400	U
LEAD	0.037	J
MAGNESIUM	2.767	J
MANGANESE	0.051	J
MOLYBDENUM	0.090	J
NICKEL	0.017	J
POTASSIUM	12.000	U
SELENIUM	0.160	U
SODIUM	15.331	J
THALLIUM	0.037	J

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Concentration Units: ug/L

SAMPLE: CCB
File: LOH27A Aug 27, 2021 18:55

Analyte	Result	C
ALUMINUM	1.106	J
ANTIMONY	0.061	U
ARSENIC	0.250	U
BERYLLIUM	0.039	J
CADMIUM	0.025	U
CALCIUM	8.345	J
CHROMIUM	0.505	B
IRON	6.400	U
LEAD	0.043	J
MAGNESIUM	4.673	J
MANGANESE	0.105	J
MOLYBDENUM	0.068	J
NICKEL	0.163	J
POTASSIUM	72.646	J
SELENIUM	0.160	U
SODIUM	2791.640	B
THALLIUM	0.029	J

SAMPLE: CCB
File: LOH27A Aug 27, 2021 19:25

Analyte	Result	C
ALUMINUM	0.330	U
ANTIMONY	0.061	U
ARSENIC	0.250	U
BERYLLIUM	0.029	J
CADMIUM	0.025	U
CALCIUM	16.954	B
CHROMIUM	0.130	U
IRON	6.400	U
LEAD	0.019	J
MAGNESIUM	17.224	B
MANGANESE	0.269	B
MOLYBDENUM	0.045	J
NICKEL	0.211	B
POTASSIUM	35.115	J
SELENIUM	0.160	U
SODIUM	708.068	B
THALLIUM	0.025	J

SAMPLE: CCB
File: LOH27A Aug 27, 2021 19:55

Analyte	Result	C
ALUMINUM	0.330	U
ANTIMONY	0.061	U
ARSENIC	0.250	U
BERYLLIUM	0.025	J
CADMIUM	0.025	U
CALCIUM	9.542	J
CHROMIUM	0.130	U
IRON	6.400	U
LEAD	0.016	J
MAGNESIUM	11.892	B
MANGANESE	0.166	J
MOLYBDENUM	0.054	J
NICKEL	0.163	J
POTASSIUM	24.657	J
SELENIUM	0.160	U
SODIUM	305.516	B
THALLIUM	0.022	J

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Concentration Units: ug/L

SAMPLE: CCB
File: LOH27A Aug 27, 2021 20:26

Analyte	Result	C
ALUMINUM	1.664	J
ANTIMONY	0.061	U
ARSENIC	0.250	U
BERYLLIUM	0.071	J
CADMIUM	0.025	U
CALCIUM	6.800	U
CHROMIUM	0.130	U
IRON	8.439	J
LEAD	0.056	J
MAGNESIUM	4.924	J
MANGANESE	0.128	J
MOLYBDENUM	0.054	J
NICKEL	0.114	J
POTASSIUM	14.758	J
SELENIUM	0.160	U
SODIUM	155.098	B
THALLIUM	0.047	J

SAMPLE: CCB
File: LOH27A Aug 27, 2021 20:56

Analyte	Result	C
ALUMINUM	0.561	J
ANTIMONY	0.061	U
ARSENIC	0.250	U
BERYLLIUM	0.027	J
CADMIUM	0.025	U
CALCIUM	6.800	U
CHROMIUM	0.130	U
IRON	6.400	U
LEAD	0.019	J
MAGNESIUM	3.272	J
MANGANESE	0.069	J
MOLYBDENUM	0.042	J
NICKEL	0.075	J
POTASSIUM	12.000	U
SELENIUM	0.160	U
SODIUM	102.643	B
THALLIUM	0.025	J

SAMPLE: CCB
File: LOH27A Aug 27, 2021 21:26

Analyte	Result	C
ALUMINUM	0.330	U
ANTIMONY	0.061	U
ARSENIC	0.250	U
BERYLLIUM	0.032	J
CADMIUM	0.025	U
CALCIUM	6.800	U
CHROMIUM	0.130	U
IRON	6.400	U
LEAD	0.025	J
MAGNESIUM	2.362	J
MANGANESE	0.042	J
MOLYBDENUM	0.035	J
NICKEL	0.060	J
POTASSIUM	12.000	U
SELENIUM	0.160	U
SODIUM	75.573	J
THALLIUM	0.030	J

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Concentration Units: ug/L

SAMPLE: CCB

File: LOH27A Aug 27, 2021 21:56

Analyte	Result	C
ALUMINUM	0.330	U
ANTIMONY	0.061	U
ARSENIC	0.250	U
BERYLLIUM	0.033	J
CADMIUM	0.025	U
CALCIUM	6.800	U
CHROMIUM	0.130	U
IRON	6.400	U
LEAD	0.020	J
MAGNESIUM	2.464	J
MANGANESE	0.026	J
MOLYBDENUM	0.044	J
NICKEL	0.049	J
POTASSIUM	12.000	U
SELENIUM	0.160	U
SODIUM	65.229	J
THALLIUM	0.029	J

SAMPLE: CCB

File: LOH27A Aug 27, 2021 22:26

Analyte	Result	C
ALUMINUM	0.330	U
ANTIMONY	0.061	U
ARSENIC	0.250	U
BERYLLIUM	0.025	J
CADMIUM	0.025	U
CALCIUM	6.800	U
CHROMIUM	0.130	U
IRON	6.400	U
LEAD	0.019	J
MAGNESIUM	2.859	J
MANGANESE	0.020	J
MOLYBDENUM	0.043	J
NICKEL	0.037	J
POTASSIUM	12.000	U
SELENIUM	0.160	U
SODIUM	55.387	J
THALLIUM	0.025	J

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Concentration Units: ug/L

SAMPLE: ICB

File: LOI24A Sep 24, 2021 09:19

Analyte	Result	C
ALUMINUM	0.330	U
CALCIUM	6.800	U
COPPER	0.087	U
IRON	6.400	U
MAGNESIUM	0.350	U
MOLYBDENUM	0.020	U
POTASSIUM	12.000	U
SILVER	0.011	U
SODIUM	6.600	U
ZINC	0.220	U

SAMPLE: CCB

File: LOI24A Sep 24, 2021 09:45

Analyte	Result	C
ALUMINUM	2.756	J
CALCIUM	6.800	U
COPPER	0.169	J
IRON	6.400	U
MAGNESIUM	4.917	J
MOLYBDENUM	0.121	J
POTASSIUM	12.000	U
SILVER	0.012	J
SODIUM	8.639	J
ZINC	0.220	U

SAMPLE: CCB

File: LOI24A Sep 24, 2021 10:16

Analyte	Result	C
ALUMINUM	0.432	J
CALCIUM	6.800	U
COPPER	0.117	J
IRON	6.400	U
MAGNESIUM	1.749	J
MOLYBDENUM	0.069	J
POTASSIUM	12.000	U
SILVER	0.011	U
SODIUM	-7.720	U
ZINC	0.220	U

INITIAL AND CONTINUING CALIBRATION BLANKS

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Concentration Units: ug/L

SAMPLE: CCB
File: LOI24A Sep 24, 2021 10:47

Analyte	Result	C
ALUMINUM	0.375	J
CALCIUM	6.800	U
COPPER	0.128	J
IRON	6.400	U
MAGNESIUM	0.737	J
MOLYBDENUM	0.047	J
POTASSIUM	12.000	U
SILVER	0.011	U
SODIUM	-8.517	U
ZINC	0.220	U

SAMPLE: CCB
File: LOI24A Sep 24, 2021 11:19

Analyte	Result	C
ALUMINUM	0.529	J
CALCIUM	6.800	U
COPPER	0.087	U
IRON	6.400	U
MAGNESIUM	2.294	J
MOLYBDENUM	0.054	J
POTASSIUM	12.000	U
SILVER	0.015	J
SODIUM	-9.121	U
ZINC	0.220	U

SAMPLE: CCB
File: LOI24A Sep 24, 2021 11:50

Analyte	Result	C
ALUMINUM	0.330	U
CALCIUM	6.800	U
COPPER	0.087	U
IRON	6.400	U
MAGNESIUM	0.484	J
MOLYBDENUM	0.041	J
POTASSIUM	12.000	U
SILVER	0.011	U
SODIUM	-16.999	U
ZINC	0.220	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWOG29HGW2

Matrix: WATER **SDG Name:** SO4724

QC Batch ID: OG29HGW2

Concentration Units : ug/L

Analyte	RESULT	C
MERCURY	0.10	U

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWOG29IMW2

Matrix: WATER **SDG Name:** SO4724

QC Batch ID: OG29IMW2

Concentration Units : ug/L

Analyte	RESULT	C
ANTIMONY	0.090	J
ARSENIC	4.0	U
BERYLLIUM	0.070	J
CADMIUM	0.20	U
CALCIUM	39	J
CHROMIUM	1.7	J
LEAD	0.10	J
MANGANESE	0.69	J
NICKEL	0.60	J
SELENIUM	3.0	U
THALLIUM	0.40	U

3P

PREPARATION BLANKS

Lab Name: Katahdin Analytical Services **Sample ID:** PBWOI23IMW2

Matrix: WATER **SDG Name:** SO4724

QC Batch ID: OI23IMW2

Concentration Units : ug/L

Analyte	RESULT	C
COPPER	2.89	B
SILVER	0.40	U
ZINC	8.0	U

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Concentration Units: ug/L

SAMPLE: ICSA

File: LOH27A Aug 27, 2021 17:38

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	99573.88	99.6
ANTIMONY	0	0.07	
ARSENIC	0	0.03	
BERYLLIUM	0	0.02	
CADMIUM	0.40	0.39	
CALCIUM	100000.00	100027.68	100.0
CHROMIUM	2.30	2.14	
IRON	100000.00	99340.30	99.3
LEAD	0	0.09	
MAGNESIUM	100000.00	95620.82	95.6
MANGANESE	0.63	0.82	
MOLYBDENUM	2000.00	1995.28	99.8
NICKEL	0.30	0.27	
POTASSIUM	100000.00	97440.47	97.4
SELENIUM	0	0.18	
SODIUM	100000.00	96716.11	96.7
THALLIUM	0	0.01	

SAMPLE: ICSAB

File: LOH27A Aug 27, 2021 17:41

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	98765.82	98.8
ANTIMONY	20.00	20.43	100.0
ARSENIC	20.00	20.71	105.0
BERYLLIUM	20.00	20.53	105.0
CADMIUM	20.40	19.09	95.0
CALCIUM	100000.00	99419.61	99.4
CHROMIUM	22.30	22.27	100.0
IRON	100000.00	99196.45	99.2
LEAD	20.00	20.42	100.0
MAGNESIUM	100000.00	94444.73	94.4
MANGANESE	20.63	20.82	100.0
MOLYBDENUM	2000.00	1993.56	99.7
NICKEL	20.30	20.20	100.0
POTASSIUM	100000.00	97999.14	98.0
SELENIUM	20.00	20.44	100.0
SODIUM	100000.00	96147.50	96.1
THALLIUM	20.00	20.24	100.0

ICP INTERFERENCE CHECK SAMPLE

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Concentration Units: ug/L

SAMPLE: ICSA

File: LOI24A Sep 24, 2021 09:27

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	99043.80	99.0
CALCIUM	100000.00	100493.46	100.5
COPPER	0.16	0.52	•
IRON	100000.00	99011.40	99.0
MAGNESIUM	100000.00	96860.83	96.9
MOLYBDENUM	2000.00	1969.43	98.5
POTASSIUM	100000.00	97618.23	97.6
SILVER	0.29	0.28	
SODIUM	100000.00	100008.55	100.0
ZINC	0.28	0.67	

SAMPLE: ICSAB

File: LOI24A Sep 24, 2021 09:29

Analyte	TRUE	FOUND	% R
ALUMINUM	100000.00	97815.86	97.8
CALCIUM	100000.00	102966.95	103.0
COPPER	20.16	19.53	100.0
IRON	100000.00	99897.64	99.9
MAGNESIUM	100000.00	95835.28	95.8
MOLYBDENUM	2000.00	1980.92	99.1
POTASSIUM	100000.00	97492.03	97.5
SILVER	20.29	18.32	90.0
SODIUM	100000.00	99036.23	99.0
ZINC	20.28	20.15	100.0

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services **Client Field ID:** DW-01-INF-SUMMER2021P

Matrix: WATER **SDG Name:** SO4724

Percent Solids: 0.00 **Lab Sample ID:** SO4724-002P

Concentration Units : ug/L

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
ANTIMONY, TOTAL	105		0.063	J	100	105.4		85	117	MS
ARSENIC, TOTAL	107		4.0	U	100	106.8		84	116	MS
BERYLLIUM, TOTAL	49.4		0.20	U	50	98.9		83	121	MS
CADMIUM, TOTAL	260		0.20	U	250	104.1		87	115	MS
CALCIUM, TOTAL	92000		88500		2500	141.2	N	87	118	MS
CHROMIUM, TOTAL	205		1.3	J	200	101.9		85	116	MS
COPPER, TOTAL	259		7.84		250	100.6		85	118	MS
LEAD, TOTAL	104		0.34	J	100	103.7		88	115	MS
MANGANESE, TOTAL	499		0.81	J	500	99.7		87	115	MS
MERCURY, TOTAL	0.914		0.10	U	1	91.4		82	119	CV
NICKEL, TOTAL	512		1.2	J	500	102.2		85	117	MS
SELENIUM, TOTAL	102		3.0	U	100	102.2		80	120	MS
SILVER, TOTAL	51.8		0.40	U	50	103.7		85	116	MS
THALLIUM, TOTAL	102		0.40	U	100	102.4		82	116	MS
ZINC, TOTAL	508		6.0	J	500	100.4		83	119	MS

Comments:

5A

SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services **Client Field ID:** DW-01-INF-SUMMER2021S

Matrix: WATER **SDG Name:** SO4724

Percent Solids: 0.00 **Lab Sample ID:** SO4724-002S

Concentration Units : ug/L

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
ANTIMONY, TOTAL	108		0.063	J	100	108.4		85	117	MS
ARSENIC, TOTAL	108		4.0	U	100	107.8		84	116	MS
BERYLLIUM, TOTAL	52.2		0.20	U	50	104.5		83	121	MS
CADMIUM, TOTAL	261		0.20	U	250	104.3		87	115	MS
CALCIUM, TOTAL	94300		88500		2500	233.2	N	87	118	MS
CHROMIUM, TOTAL	216		1.3	J	200	107.5		85	116	MS
COPPER, TOTAL	264		7.84		250	102.6		85	118	MS
LEAD, TOTAL	107		0.34	J	100	106.7		88	115	MS
MANGANESE, TOTAL	533		0.81	J	500	106.4		87	115	MS
MERCURY, TOTAL	0.942		0.10	U	1	94.2		82	119	CV
NICKEL, TOTAL	543		1.2	J	500	108.4		85	117	MS
SELENIUM, TOTAL	102		3.0	U	100	102.0		80	120	MS
SILVER, TOTAL	52.6		0.40	U	50	105.3		85	116	MS
THALLIUM, TOTAL	106		0.40	U	100	105.8		82	116	MS
ZINC, TOTAL	507		6.0	J	500	100.3		83	119	MS

Comments:

5B

POST DIGEST SPIKE SAMPLE RECOVERY

Lab Name: Katahdin Analytical Services **Client Field ID:** DW-01-INF-SUMMER2021A

Matrix: WATER **SDG Name:** SO4724

Percent Solids: 0.00 **Lab Sample ID:** SO4724-002A

Concentration Units : ug/L

Analyte	Spiked Sample Result	C	Sample Result	C	Spike Added	%R	Q	Control Limits (%R) Low	High	M
ANTIMONY, TOTAL	1.99		0.013	J	2	98.8		80	120	MS
ARSENIC, TOTAL	10.5		0.45	U	10	104.6		80	120	MS
BERYLLIUM, TOTAL	2.04		0.0068	U	2	101.8		80	120	MS
CADMIUM, TOTAL	1.94		0.0059	U	2	96.9		80	120	MS
CALCIUM, TOTAL	18700		17700		200	496.4	A	80	120	MS
CHROMIUM, TOTAL	10.7		0.26	J	10	104.9		80	120	MS
COPPER, TOTAL	8.14		1.57		6	109.4		80	120	MS
LEAD, TOTAL	2.04		0.067	J	2	98.4		80	120	MS
MANGANESE, TOTAL	4.10		0.16	J	4	98.6		80	120	MS
MERCURY, TOTAL	1.08		0.013	U	1	108.0		80	120	CV
NICKEL, TOTAL	4.35		0.24	J	4	102.7		80	120	MS
SELENIUM, TOTAL	9.71		0.037	U	10	97.1		80	120	MS
SILVER, TOTAL	1.76		0.010	U	2	87.8		80	120	MS
THALLIUM, TOTAL	2.00		0.012	U	2	100.3		80	120	MS
ZINC, TOTAL	21.8		1.2	J	20	103.0		80	120	MS

Comments:

5D

SPIKE DUPLICATES

Lab Name: Katahdin Analytical Services **Client Field ID:** DW-01-INF-SUMMER2021

Matrix: WATER **SDG Name:** SO4724

Percent Solids: 0.00 **Lab Sample ID:** SO4724-002

Concentration Units : ug/L

Analyte	Control Limits	Spike Result	C	Spike Dup. Result	C	RPD	Q	M
ANTIMONY, TOTAL		108		105		2.8		MS
ARSENIC, TOTAL		108		107		1.0		MS
BERYLLIUM, TOTAL		52.2		49.4		5.5		MS
CADMIUM, TOTAL		261		260		0.2		MS
CALCIUM, TOTAL		94300		92000		2.5		MS
CHROMIUM, TOTAL		216		205		5.4		MS
COPPER, TOTAL		264		259		1.9		MS
LEAD, TOTAL		107		104		2.8		MS
MANGANESE, TOTAL		533		499		6.5		MS
MERCURY, TOTAL		0.942		0.914		3.0		CV
NICKEL, TOTAL		543		512		5.8		MS
SELENIUM, TOTAL		102		102		0.1		MS
SILVER, TOTAL		52.6		51.8		1.5		MS
THALLIUM, TOTAL		106		102		3.3		MS
ZINC, TOTAL		507		508		0.1		MS

Comments:

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWOG29HGW2

Matrix: WATER **SDG Name:** SO4724

QC Batch ID: OG29HGW2

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
MERCURY	5.00	5.27	105.4	82	119

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWOG29IMW2

Matrix: WATER **SDG Name:** SO4724

QC Batch ID: OG29IMW2

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
ANTIMONY	100	104	103.9	85	117
ARSENIC	100	102	101.7	84	116
BERYLLIUM	50.0	49.7	99.5	83	121
CADMIUM	250	246	98.5	87	115
CALCIUM	2500	2720	108.7	87	118
CHROMIUM	200	205	102.5	85	116
LEAD	100	103	102.8	88	115
MANGANESE	500	504	100.9	87	115
NICKEL	500	522	104.4	85	117
SELENIUM	100	98.6	98.6	80	120
THALLIUM	100	100	100.5	82	116

LABORATORY CONTROL SAMPLES

Lab Name: Katahdin Analytical Services **Sample ID:** LCSWOI23IMW2

Matrix: WATER **SDG Name:** SO4724

QC Batch ID: OI23IMW2

Concentration Units : ug/L

Analyte	TRUE	FOUND	% R	LIMITS (%)	
COPPER	250	270	108.2	85	118
SILVER	50.0	53.2	106.3	85	116
ZINC	500	518	103.5	83	119

ICP SERIAL DILUTION

Lab Name: Katahdin Analytical Services **Client Field ID:** DW-01-INF-SUMMER2021L

Matrix: WATER **SDG Name:** SO4724

Lab Sample ID: SO4724-002L

Concentration Units: ug/L

Analyte	Sample Result	C	Dilution Result	C	% Difference	Q	M
ANTIMONY, TOTAL	0.013	J	0.055	U	100.0		MS
ARSENIC, TOTAL	0.45	U	2.3	U			MS
BERYLLIUM, TOTAL	0.0068	J	0.056	J	723.5		MS
CADMIUM, TOTAL	0.0059	U	0.029	U			MS
CALCIUM, TOTAL	17700		17800		0.6		MS
CHROMIUM, TOTAL	0.26	J	0.22	U	100.0		MS
COPPER, TOTAL	1.57		1.87	J	19.1		MS
LEAD, TOTAL	0.067	J	0.12	J	79.1		MS
MANGANESE, TOTAL	0.16	J	0.55	J	243.8		MS
MERCURY, TOTAL	0.013	U	0.065	U			CV
NICKEL, TOTAL	0.24	J	0.52	J	116.7		MS
SELENIUM, TOTAL	0.037	U	0.19	U			MS
SILVER, TOTAL	0.010	U	0.050	U			MS
THALLIUM, TOTAL	0.012	U	0.060	U			MS
ZINC, TOTAL	1.2	J	3.9	U	100.0		MS

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** H

Instrument Name: CETAC M6100 **Date:** 01/17/2019

Concentration Units: ug/L

Analyte	PQL/LOQ	IDL	M
MERCURY	0.20	0.016	CV

INSTRUMENT DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** L

Instrument Name: AGILENT 7800 ICP-MS **Date:** 06/11/2018

Concentration Units: ug/L

Analyte	PQL/LOQ	IDL	M
ALUMINUM	20	0.33	MS
ANTIMONY	0.20	0.061	MS
ARSENIC	1.0	0.25	MS
BERYLLIUM	0.20	0.0077	MS
CADMIUM	0.20	0.025	MS
CALCIUM	20	6.8	MS
CHROMIUM	1.0	0.13	MS
COPPER	0.60	0.087	MS
IRON	20	6.4	MS
LEAD	0.20	0.0049	MS
MAGNESIUM	20	0.35	MS
MANGANESE	0.40	0.013	MS
MOLYBDENUM	1.0	0.020	MS
NICKEL	0.40	0.014	MS
POTASSIUM	200	12	MS
SELENIUM	1.0	0.16	MS
SILVER	0.20	0.011	MS
SODIUM	200	6.6	MS
THALLIUM	0.20	0.0031	MS
ZINC	2.0	0.22	MS

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** H

Instrument Name: CETAC M6100 **Date:** 06/11/2010

Analyte	LOD	Units	M	EPA Prep./Anal. Method
MERCURY	0.10	ug/L	CV	SW846 7470A / SW846 7470A

LIMITS of DETECTION

Lab Name: Katahdin Analytical Services **Instrument Code:** L

Instrument Name: AGILENT 7800 ICP-MS **Date:** 06/11/2010

Analyte	LOD	Units	M	EPA Prep./Anal. Method
ANTIMONY	0.10	ug/L	MS	SW846 3010A / SW846 6020A
ARSENIC	0.80	ug/L	MS	SW846 3010A / SW846 6020A
BERYLLIUM	0.040	ug/L	MS	SW846 3010A / SW846 6020A
CADMIUM	0.040	ug/L	MS	SW846 3010A / SW846 6020A
CALCIUM	16	ug/L	MS	SW846 3010A / SW846 6020A
CHROMIUM	0.80	ug/L	MS	SW846 3010A / SW846 6020A
COPPER	0.40	ug/L	MS	SW846 3010A / SW846 6020A
LEAD	0.10	ug/L	MS	SW846 3010A / SW846 6020A
MANGANESE	0.20	ug/L	MS	SW846 3010A / SW846 6020A
NICKEL	0.24	ug/L	MS	SW846 3010A / SW846 6020A
SELENIUM	0.60	ug/L	MS	SW846 3010A / SW846 6020A
SILVER	0.080	ug/L	MS	SW846 3010A / SW846 6020A
THALLIUM	0.080	ug/L	MS	SW846 3010A / SW846 6020A
ZINC	1.6	ug/L	MS	SW846 3010A / SW846 6020A

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** H

Instrument Name: CETAC M6100 **Date:** 02/09/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
MERCURY	0.013	ug/L	CV	SW846 7470A / SW846 7470A

FORM X - IN

METHOD DETECTION LIMITS

Lab Name: Katahdin Analytical Services **Instrument Code:** L

Instrument Name: AGILENT 7800 ICP-MS **Date:** 01/25/2011

Analyte	MDL	Units	M	EPA Prep./Anal. Method
ANTIMONY	0.011	ug/L	MS	SW846 3010A / SW846 6020A
ARSENIC	0.45	ug/L	MS	SW846 3010A / SW846 6020A
BERYLLIUM	0.0067	ug/L	MS	SW846 3010A / SW846 6020A
CADMIUM	0.0059	ug/L	MS	SW846 3010A / SW846 6020A
CALCIUM	4.1	ug/L	MS	SW846 3010A / SW846 6020A
CHROMIUM	0.044	ug/L	MS	SW846 3010A / SW846 6020A
COPPER	0.037	ug/L	MS	SW846 3010A / SW846 6020A
LEAD	0.015	ug/L	MS	SW846 3010A / SW846 6020A
MANGANESE	0.070	ug/L	MS	SW846 3010A / SW846 6020A
NICKEL	0.030	ug/L	MS	SW846 3010A / SW846 6020A
SELENIUM	0.037	ug/L	MS	SW846 3010A / SW846 6020A
SILVER	0.010	ug/L	MS	SW846 3010A / SW846 6020A
THALLIUM	0.012	ug/L	MS	SW846 3010A / SW846 6020A
ZINC	0.78	ug/L	MS	SW846 3010A / SW846 6020A

ICP LINEAR RANGES

Lab Name: Katahdin Analytical Services **Instrument Code:** L

Instrument Name: AGILENT 7800 ICP-MS **Date:** 12/05/2020

Concentration Units: ug/L

Analyte	Integration Time (sec)	Linear Range	M
ALUMINUM	0.01	200000	MS
ANTIMONY	0.10	1000	MS
ARSENIC	0.30	1000	MS
BERYLLIUM	0.30	100	MS
CADMIUM	0.10	1000	MS
CALCIUM	0.03	200000	MS
CHROMIUM	0.10	2000	MS
COPPER	0.10	2000	MS
IRON	0.03	100000	MS
LEAD	0.10	2000	MS
MAGNESIUM	0.05	200000	MS
MANGANESE	0.10	2000	MS
MOLYBDENUM	0.10	1000	MS
NICKEL	0.10	1000	MS
POTASSIUM	0.01	200000	MS
SELENIUM	0.30	1000	MS
SILVER	0.10	100	MS
SODIUM	0.01	200000	MS
THALLIUM	0.10	1000	MS
ZINC	0.10	2000	MS

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** OG29HGW2

Matrix: WATER **SDG Name:** SO4724

Method: CV **Prep Date:** 07/29/2021

Client ID	Lab Sample ID	Initial (L)	Final (L)	Bottle ID
LCSWOG29HGW2	LCSWOG29HGW2	0.025	0.025	
PBWOG29HGW2	PBWOG29HGW2	0.025	0.025	
DW-01-EFF-SUMMER2021	SO4724-001	0.025	0.025	F
DW-01-INF-SUMMER2021	SO4724-002	0.025	0.025	P
DW-01-INF-SUMMER2021P	SO4724-002P	0.025	0.025	P
DW-01-INF-SUMMER2021S	SO4724-002S	0.025	0.025	P
DW-01-MID-SUMMER2021	SO4724-003	0.025	0.025	F
DW-02R-EFF-SUMMER2021	SO4724-004	0.025	0.025	F
DW-02R-INF-SUMMER2021	SO4724-005	0.025	0.025	F
DW-FD-SUMMER2021	SO4724-006	0.025	0.025	F

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** OG29IMW2

Matrix: WATER **SDG Name:** SO4724

Method: MS **Prep Date:** 07/29/2021

Client ID	Lab Sample ID	Initial (L)	Final (L)	Bottle ID
LCSWOG29IMW2	LCSWOG29IMW2	0.05	0.05	
PBWOG29IMW2	PBWOG29IMW2	0.05	0.05	
DW-01-EFF-SUMMER2021	SO4724-001	0.05	0.05	F
DW-01-INF-SUMMER2021	SO4724-002	0.05	0.05	P
DW-01-INF-SUMMER2021P	SO4724-002P	0.05	0.05	P
DW-01-INF-SUMMER2021S	SO4724-002S	0.05	0.05	P
DW-01-MID-SUMMER2021	SO4724-003	0.05	0.05	F
DW-02R-EFF-SUMMER2021	SO4724-004	0.05	0.05	F
DW-02R-INF-SUMMER2021	SO4724-005	0.05	0.05	F
DW-FD-SUMMER2021	SO4724-006	0.05	0.05	F

PREPARATION LOG

Lab Name: Katahdin Analytical Services **QC Batch ID:** OI23IMW2

Matrix: WATER **SDG Name:** SO4724

Method: MS **Prep Date:** 09/23/2021

Client ID	Lab Sample ID	Initial (L)	Final (L)	Bottle ID
LCSWOI23IMW2	LCSWOI23IMW2	0.05	0.05	
PBWOI23IMW2	PBWOI23IMW2	0.05	0.05	
DW-01-EFF-SUMMER2021	SO4724-001R	0.05	0.05	F
DW-01-INF-SUMMER2021	SO4724-002R	0.05	0.05	Q
DW-01-INF-SUMMER2021P	SO4724-002RP	0.05	0.05	Q
DW-01-INF-SUMMER2021S	SO4724-002RS	0.05	0.05	Q
DW-01-MID-SUMMER2021	SO4724-003R	0.05	0.05	F
DW-02R-EFF-SUMMER2021	SO4724-004R	0.05	0.05	F
DW-02R-INF-SUMMER2021	SO4724-005R	0.05	0.05	F
DW-FD-SUMMER2021	SO4724-006R	0.05	0.05	F

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Instrument ID: CETAC M6100 **File Name:** HOG29A

Date: 07/29/2021 **Method:** CV

Lab Sample ID	Client ID	D.F.	Time	Elements
Calibration Blank		1	14:35	Hg
Standard #1 (0.2 ppb		1	14:37	Hg
Standard #2 (0.5 ppb		1	14:39	Hg
Standard #3 (1.0 ppb		1	14:41	Hg
Standard #4 (5.0 ppb		1	14:43	Hg
Standard #5 (10.0 pp		1	14:45	Hg
ICV		1	14:47	HG
ICB		1	14:49	HG
PQL		1	14:51	HG
CCV		1	14:54	HG
CCB		1	14:56	HG
ZZZZZZ		1	14:58	
LCSWOG29HGW2		1	15:00	HG
ZZZZZZ		1	15:02	
PBWOG29HGW2		1	15:04	HG
ZZZZZZ		1	15:06	
ZZZZZZ		1	15:08	
SO4724-001	DW-01-EFF-SUMMER2021	1	15:10	HG
SO4724-002	DW-01-INF-SUMMER2021	1	15:13	HG
SO4724-002L	DW-01-INF-SUMMER2021L	5	15:15	HG
CCV		1	15:17	HG
CCB		1	15:19	HG
SO4724-002A	DW-01-INF-SUMMER2021A	1	15:21	HG
SO4724-002P	DW-01-INF-SUMMER2021P	1	15:23	HG
SO4724-002S	DW-01-INF-SUMMER2021S	1	15:25	HG
SO4724-003	DW-01-MID-SUMMER2021	1	15:27	HG
SO4724-004	DW-02R-EFF-SUMMER2021	1	15:30	HG

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Instrument ID: CETAC M6100 **File Name:** HOG29A

Date: 07/29/2021 **Method:** CV

Lab Sample ID	Client ID	D.F.	Time	Elements
SO4724-005	DW-02R-INF-SUMMER2021	1	15:32	HG
SO4724-006	DW-FD-SUMMER2021	1	15:34	HG
ZZZZZZ		1	15:36	
ZZZZZZ		1	15:38	
ZZZZZZ		1	15:40	
CCV		1	15:42	HG
CCB		1	15:44	HG

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Instrument ID: AGILENT 7800 ICP-MS **File Name:** LOH27A

Date: 08/27/2021 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements
CalBlank		1	17:19	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
CalStd		1	17:23	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
ICV		1	17:25	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
ZZZZZZ		1	17:28	
ICB		1	17:30	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
ZZZZZZ		1	17:33	
PQL		1	17:36	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
ICSA		1	17:38	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
ICSAB		1	17:41	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
ZZZZZZ		1	17:43	
ZZZZZZ		1	17:45	
ZZZZZZ		1	17:48	
ZZZZZZ		1	17:51	
CCV		1	17:53	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
CCB		1	17:56	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
ZZZZZZ		1	17:58	
ZZZZZZ		1	18:01	
ZZZZZZ		1	18:03	
ZZZZZZ		1	18:06	
ZZZZZZ		5	18:08	
ZZZZZZ		1	18:11	
ZZZZZZ		1	18:13	
ZZZZZZ		1	18:16	
ZZZZZZ		1	18:18	
ZZZZZZ		1	18:20	
CCV		1	18:23	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
CCB		1	18:25	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Instrument ID: AGILENT 7800 ICP-MS **File Name:** LOH27A

Date: 08/27/2021 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements
ZZZZZZ		1	18:28	
ZZZZZZ		1	18:30	
ZZZZZZ		1	18:33	
ZZZZZZ		1	18:35	
ZZZZZZ		1	18:38	
ZZZZZZ		1	18:41	
ZZZZZZ		1	18:43	
ZZZZZZ		1	18:46	
ZZZZZZ		1	18:48	
ZZZZZZ		1	18:50	
CCV		1	18:53	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
CCB		1	18:55	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
ZZZZZZ		1	18:58	
ZZZZZZ		1	19:00	
ZZZZZZ		5	19:03	
ZZZZZZ		5	19:05	
ZZZZZZ		5	19:08	
ZZZZZZ		5	19:10	
ZZZZZZ		5	19:13	
ZZZZZZ		5	19:15	
ZZZZZZ		1	19:18	
ZZZZZZ		25	19:20	
CCV		1	19:23	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
CCB		1	19:25	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
ZZZZZZ		5	19:28	
ZZZZZZ		5	19:30	
ZZZZZZ		5	19:33	

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Instrument ID: AGILENT 7800 ICP-MS **File Name:** LOH27A

Date: 08/27/2021 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements
ZZZZZZ		1	19:35	
ZZZZZZ		5	19:38	
ZZZZZZ		5	19:40	
ZZZZZZ		5	19:43	
ZZZZZZ		1	19:45	
ZZZZZZ		5	19:48	
ZZZZZZ		1	19:50	
CCV		1	19:53	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
CCB		1	19:55	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
ZZZZZZ		5	19:58	
ZZZZZZ		5	20:01	
ZZZZZZ		5	20:03	
ZZZZZZ		5	20:05	
ZZZZZZ		1	20:08	
ZZZZZZ		5	20:11	
ZZZZZZ		5	20:13	
ZZZZZZ		25	20:16	
ZZZZZZ		5	20:18	
ZZZZZZ		1	20:21	
CCV		1	20:23	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
CCB		1	20:26	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
ZZZZZZ		5	20:28	
ZZZZZZ		5	20:31	
ZZZZZZ		5	20:33	
ZZZZZZ		5	20:36	
ZZZZZZ		1	20:38	
ZZZZZZ		5	20:41	

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Instrument ID: AGILENT 7800 ICP-MS **File Name:** LOH27A

Date: 08/27/2021 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements
ZZZZZZ		5	20:43	
ZZZZZZ		5	20:46	
ZZZZZZ		5	20:48	
ZZZZZZ		1	20:51	
CCV		1	20:53	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
CCB		1	20:56	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
PBWOG29IMW2		5	20:58	Sb As Be Cd Ca Cr Pb Mn Ni Se Tl
LCSWOG29IMW2		5	21:01	Sb As Be Cd Ca Cr Pb Mn Ni Se Tl
ZZZZZZ		5	21:03	
ZZZZZZ		5	21:06	
ZZZZZZ		25	21:08	
ZZZZZZ		1	21:11	
ZZZZZZ		5	21:13	
ZZZZZZ		5	21:16	
ZZZZZZ		5	21:18	
ZZZZZZ		1	21:21	
CCV		1	21:24	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
CCB		1	21:26	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
ZZZZZZ		5	21:29	
ZZZZZZ		5	21:31	
ZZZZZZ		5	21:34	
ZZZZZZ		5	21:36	
ZZZZZZ		1	21:39	
ZZZZZZ		5	21:41	
SO4724-001	DW-01-EFF-SUMMER2021	5	21:44	Sb As Be Cd Ca Cr Pb Mn Ni Se Tl
SO4724-002	DW-01-INF-SUMMER2021	5	21:46	Sb As Be Cd Ca Cr Pb Mn Ni Se Tl
SO4724-002A	DW-01-INF-SUMMER2021A	5	21:49	Sb As Be Cd Ca Cr Pb Mn Ni Se Tl

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Instrument ID: AGILENT 7800 ICP-MS **File Name:** LOH27A

Date: 08/27/2021 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements
ZZZZZZ		1	21:51	
CCV		1	21:54	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
CCB		1	21:56	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
SO4724-002L	DW-01-INF-SUMMER2021L	25	21:59	Sb As Be Cd Ca Cr Pb Mn Ni Se Tl
SO4724-002P	DW-01-INF-SUMMER2021P	5	22:01	Sb As Be Cd Ca Cr Pb Mn Ni Se Tl
SO4724-002S	DW-01-INF-SUMMER2021S	5	22:04	Sb As Be Cd Ca Cr Pb Mn Ni Se Tl
SO4724-003	DW-01-MID-SUMMER2021	5	22:06	Sb As Be Cd Ca Cr Pb Mn Ni Se Tl
ZZZZZZ		1	22:09	
SO4724-004	DW-02R-EFF-SUMMER2021	5	22:11	Sb As Be Cd Ca Cr Pb Mn Ni Se Tl
SO4724-005	DW-02R-INF-SUMMER2021	5	22:14	Sb As Be Cd Ca Cr Pb Mn Ni Se Tl
SO4724-006	DW-FD-SUMMER2021	5	22:16	Sb As Be Cd Ca Cr Pb Mn Ni Se Tl
ZZZZZZ		1	22:19	
ZZZZZZ		1	22:21	
CCV		1	22:24	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl
CCB		1	22:26	Al Sb As Be Cd Ca Cr Fe Pb Mg Mn Mo Ni K Se Na Tl

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Instrument ID: AGILENT 7800 ICP-MS **File Name:** LOI24A

Date: 09/24/2021 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements								
CalBlank		1	09:07	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn
CalStd		1	09:11	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn
ICV		1	09:14	Al	Ca	Cu	Fe	Mg	Mo	K		Na	Zn
ICV		1	09:16								Ag		
ICB		1	09:19	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn
ZZZZZZ		1	09:21										
PQL		1	09:24	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn
ICSA		1	09:27	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn
ICSAB		1	09:29	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn
ZZZZZZ		1	09:32										
ZZZZZZ		1	09:34										
ZZZZZZ		1	09:37										
ZZZZZZ		1	09:40										
CCV		1	09:42	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn
CCB		1	09:45	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn
PBWOI23IMW2		5	09:48								Ag		Zn
LCSWOI23IMW2		5	09:50			Cu					Ag		Zn
ZZZZZZ		5	09:53										
ZZZZZZ		5	09:55										
ZZZZZZ		25	09:58										
ZZZZZZ		1	10:01										
ZZZZZZ		5	10:03										
ZZZZZZ		5	10:06										
ZZZZZZ		5	10:08										
ZZZZZZ		1	10:11										
CCV		1	10:14	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn
CCB		1	10:16	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Instrument ID: AGILENT 7800 ICP-MS **File Name:** LOI24A

Date: 09/24/2021 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements								
ZZZZZZ		5	10:19									
ZZZZZZ		5	10:21									
ZZZZZZ		5	10:24									
ZZZZZZ		5	10:26									
ZZZZZZ		5	10:29									
ZZZZZZ		1	10:32									
SO4724-001R	DW-01-EFF-SUMMER2021	5	10:34			Cu					Ag	Zn
SO4724-002R	DW-01-INF-SUMMER2021	5	10:37			Cu					Ag	Zn
SO4724-002RA	DW-01-INF-SUMMER2021A	5	10:40			Cu					Ag	Zn
ZZZZZZ		1	10:42									
CCV		1	10:45	Al	Ca	Cu	Fe	Mg	Mo	K	Ag Na	Zn
CCB		1	10:47	Al	Ca	Cu	Fe	Mg	Mo	K	Ag Na	Zn
SO4724-002RL	DW-01-INF-SUMMER2021L	25	10:50			Cu					Ag	Zn
SO4724-002RP	DW-01-INF-SUMMER2021P	5	10:53			Cu					Ag	Zn
SO4724-002RS	DW-01-INF-SUMMER2021S	5	10:55			Cu					Ag	Zn
ZZZZZZ		1	10:58									
SO4724-003R	DW-01-MID-SUMMER2021	5	11:00			Cu					Ag	Zn
SO4724-004R	DW-02R-EFF-SUMMER2021	5	11:03			Cu					Ag	Zn
SO4724-005R	DW-02R-INF-SUMMER2021	5	11:06			Cu					Ag	Zn
SO4724-006R	DW-FD-SUMMER2021	5	11:08			Cu					Ag	Zn
ZZZZZZ		1	11:11									
ZZZZZZ		1	11:13									
CCV		1	11:16	Al	Ca	Cu	Fe	Mg	Mo	K	Ag Na	Zn
CCB		1	11:19	Al	Ca	Cu	Fe	Mg	Mo	K	Ag Na	Zn
ZZZZZZ		5	11:21									
ZZZZZZ		5	11:24									
ZZZZZZ		5	11:26									

ANALYSIS RUN LOG

Lab Name: Katahdin Analytical Services **SDG Name:** SO4724

Instrument ID: AGILENT 7800 ICP-MS **File Name:** LOI24A

Date: 09/24/2021 **Method:** MS

Lab Sample ID	Client ID	D.F.	Time	Elements									
ZZZZZZ		5	11:29										
ZZZZZZ		1	11:32										
ZZZZZZ		1	11:34										
PBWOI23IMW2		5	11:37			Cu							
ZZZZZZ		5	11:39										
ZZZZZZ		1	11:42										
ZZZZZZ		1	11:45										
CCV		1	11:47	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn
CCB		1	11:50	Al	Ca	Cu	Fe	Mg	Mo	K	Ag	Na	Zn

Raw Data Section

KATAHDIN ANALYTICAL SERVICES, LLC
METALS ANALYSIS RUN INFORMATION SHEET

INSTR. ID: Cetac M6100 (H) **ANALYST**: CD **ANALYSIS DATE**: 07/29/2021

FILE NAME: HOG29A **METHOD**: **CVAA**

Analyte : Mercury

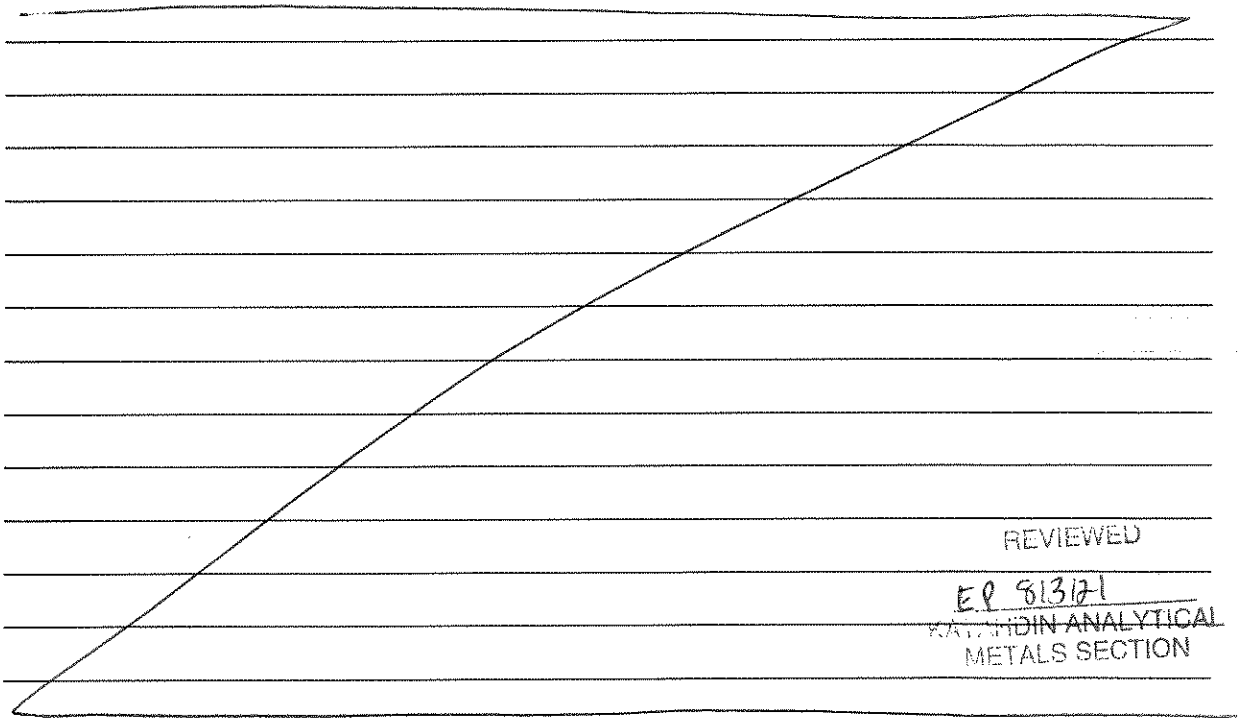
$SnCl_2$ Lot : MR3041

~~1/2π~~ 245.1
~~1/2π~~ 7470
1/2π 7471
1/2π DoD
1/2π _____

STANDARDS USED:

Standard Name	Prep. Date 07/29/2021	Expiration Date	Standard Conc.
al. Blank / ICB / CB	07/29/2021	07/29/2021	0.00 ug/L
andard #1 / PQL	07/29/2021	07/29/2021	0.20 ug/L
andard #2	07/29/2021	07/29/2021	0.50 ug/L
andard #3	07/29/2021	07/29/2021	1.00 ug/L
andard #4 / CCV	07/29/2021	07/29/2021	5.00 ug/L
andard #5	07/29/2021	07/29/2021	10.00 ug/L
V	07/29/2021	07/29/2021	6.00 ug/L

Additional Comments and Notes:



Dilutions:

5x Diln.: 6.4 mL (pipet M26) of Cal. Blank + 1.6mL (pipet M26) of sample

Post Spike (7470/245.1): 0.005 mL MW20321 (pipet M17) + 8.0mL (pipet M26) of sample

Katahdin Analytical Services 4000069

INSTRUMENT RUNLOG

Instrument: CETAC M6100

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
Calibration Blank	1.0000	HOG29A	07/29/2021	14:35	CD
Standard #1 (0.2 ppb)	1.0000	HOG29A	07/29/2021	14:37	CD
Standard #2 (0.5 ppb)	1.0000	HOG29A	07/29/2021	14:39	CD
Standard #3 (1.0 ppb)	1.0000	HOG29A	07/29/2021	14:41	CD
Standard #4 (5.0 ppb)	1.0000	HOG29A	07/29/2021	14:43	CD
Standard #5 (10.0 ppb)	1.0000	HOG29A	07/29/2021	14:45	CD
ICV	1.0000	HOG29A	07/29/2021	14:47	CD
ICB	1.0000	HOG29A	07/29/2021	14:49	CD
PQL	1.0000	HOG29A	07/29/2021	14:51	CD
CCV	1.0000	HOG29A	07/29/2021	14:54	CD
CCB	1.0000	HOG29A	07/29/2021	14:56	CD
LCSWOG29HGW1	1.0000	HOG29A	07/29/2021	14:58	CD
LCSWOG29HGW2	1.0000	HOG29A	07/29/2021	15:00	CD
PBWOG29HGW1	1.0000	HOG29A	07/29/2021	15:02	CD
PBWOG29HGW2	1.0000	HOG29A	07/29/2021	15:04	CD
SO4787-002	1.0000	HOG29A	07/29/2021	15:06	CD
SO4818-001	1.0000	HOG29A	07/29/2021	15:08	CD
SO4724-001	1.0000	HOG29A	07/29/2021	15:10	CD
SO4724-002	1.0000	HOG29A	07/29/2021	15:13	CD
SO4724-002L	5.0000	HOG29A	07/29/2021	15:15	CD
CCV	1.0000	HOG29A	07/29/2021	15:17	CD
CCB	1.0000	HOG29A	07/29/2021	15:19	CD
SO4724-002A	1.0000	HOG29A	07/29/2021	15:21	CD
SO4724-002P	1.0000	HOG29A	07/29/2021	15:23	CD
SO4724-002S	1.0000	HOG29A	07/29/2021	15:25	CD
SO4724-003	1.0000	HOG29A	07/29/2021	15:27	CD
SO4724-004	1.0000	HOG29A	07/29/2021	15:30	CD
SO4724-005	1.0000	HOG29A	07/29/2021	15:32	CD
SO4724-006	1.0000	HOG29A	07/29/2021	15:34	CD
SO4726-002	1.0000	HOG29A	07/29/2021	15:36	CD
SO4726-003	1.0000	HOG29A	07/29/2021	15:38	CD
SO4726-004	1.0000	HOG29A	07/29/2021	15:40	CD
CCV	1.0000	HOG29A	07/29/2021	15:42	CD
CCB	1.0000	HOG29A	07/29/2021	15:44	CD
SO4728-001	1.0000	HOG29A	07/29/2021	15:47	CD
SO4728-002	1.0000	HOG29A	07/29/2021	15:49	CD
SO4728-003	1.0000	HOG29A	07/29/2021	15:51	CD
SO4728-004	1.0000	HOG29A	07/29/2021	15:53	CD
CCV	1.0000	HOG29A	07/29/2021	15:55	CD
CCB	1.0000	HOG29A	07/29/2021	15:57	CD

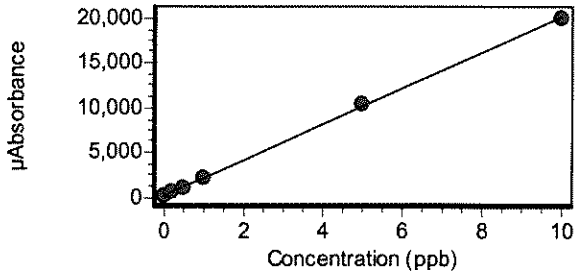
Report Generated By CETAC QuickTrace
Analyst: kasgc
Worksheet file: C:\Program Files\QuickTrace\Worksheets\HOG29A.wsz
Date Started: 7/29/2021 2:19:01 PM
Comment:

Results

Sample Name					Type	Conc (ppb)	µAbs	%RSD	Flags	DF
Calibration Blank					STD	0.000	189	3.05		1.00
Replicates	181.5	189.7	189.9	195.5						
Standard #1 (0.2 ppb)					STD	0.200	572	7.23		1.00
Replicates	586.2	575.0	611.6	514.1						
Standard #2 (0.5 ppb)					STD	0.500	1155	1.59		1.00
Replicates	1132.4	1155.3	1155.1	1177.5						
Standard #3 (1.0 ppb)					STD	1.000	2176	0.88		1.00
Replicates	2149.2	2187.6	2177.3	2191.5						
Standard #4 (5.0 ppb)					STD	5.000	10483	0.50		1.00
Replicates	10453.0	10428.8	10500.9	10547.4						
Standard #5 (10.0 ppb)					STD	10.000	20057	0.50		1.00
Replicates	19990.9	19985.2	20050.9	20202.2						

Calibration

Equation: A = 210.793 + 1998.052C
R2: 0.99968
SEE: 160.6182
Flags:



ICV					ICV	6.020	12246	0.17		1.00
Replicates	12221.5	12251.6	12240.1	12271.1						
% Recovery	100.39									
ICB					ICB	-0.008	194	4.23		1.00
Replicates	193.7	206.1	188.4	188.9						

Sample Name					Type	Conc (ppb)	µAbs	%RSD	Flags	DF
PQL					CRDL	0.210	631	2.34		1.00
	Replicates	627.7	651.8	617.1	626.6					
	% Recovery	105.10								
CCV					CCV	5.050	10307	0.75		1.00
	Replicates	10255.9	10265.2	10284.3	10421.0					
	% Recovery	101.06								
CCB					CCB	0.028	267	11.40		1.00
	Replicates	254.5	272.0	235.5	307.2					
LCSWOG29HGW1					LCS	5.390	10978	0.44		1.00
	Replicates	10974.3	10947.9	10941.3	11047.3					
	% Recovery	107.77								
LCSWOG29HGW2					LCS	5.270	10743	0.59		1.00
	Replicates	10664.3	10759.3	10733.5	10816.8					
	% Recovery	105.43								
PBWOG29HGW1					PBK	-0.086	39	60.92		1.00
	Replicates	73.0	36.0	23.4	22.7					
PBWOG29HGW2					PBK	-0.078	55	25.93		1.00
	Replicates	57.0	72.2	37.7	52.4					
SO4787-002					UNK	0.027	265	8.66		1.00
	Replicates	238.5	286.9	253.6	281.4					
SO4818-001					UNK	0.454	1118	3.32		1.00
	Replicates	1083.9	1093.4	1164.8	1131.3					
SO4724-001					UNK	-0.097	16	95.98		1.00
	Replicates	13.9	5.1	7.3	39.5					
SO4724-002					UNK	-0.104	4	404.44		1.00
	Replicates	-8.2	10.3	22.3	-9.3					
SO4724-002L					UNK	-0.150	151	12.50		5.00
	Replicates	148.9	159.3	125.8	170.0					

Sample Name				Type	Conc (ppb)	µAbs	%RSD	Flags	DF
CCV				CCV	5.200	10599	0.12		1.00
Replicates	10602.0	10610.7	10580.2	10604.2					
% Recovery	103.99								
CCB				CCB	-0.023	165	9.92		1.00
Replicates	185.8	165.1	164.5	145.6					
SO4724-002A				UNK	1.080	2366	1.39		1.00
Replicates	2334.8	2411.7	2363.7	2352.7					
SO4724-002P				UNK	0.914	2037	1.02		1.00
Replicates	2057.3	2053.5	2022.5	2016.7					
SO4724-002S				UNK	0.942	2093	0.51		1.00
Replicates	2087.0	2100.0	2104.9	2082.0					
SO4724-003				UNK	-0.102	6	271.47		1.00
Replicates	10.0	-4.0	-9.8	29.7					
SO4724-004				UNK	-0.076	59	57.90		1.00
Replicates	67.3	45.7	21.2	101.7					
SO4724-005				UNK	-0.082	46	40.83		1.00
Replicates	32.0	41.7	37.2	73.9					
SO4724-006				UNK	-0.093	26	56.54		1.00
Replicates	18.2	36.6	9.1	39.4					
SO4726-002				UNK	-0.074	63	31.92		1.00
Replicates	71.9	72.6	32.8	74.1					
SO4726-003				UNK	0.020	250	9.49		1.00
Replicates	256.3	215.3	268.8	259.7					
SO4726-004				UNK	0.034	278	9.84		1.00
Replicates	299.6	299.8	242.5	271.2					

Katahdin Analytical Services 4000073

Sample Name					Type	Conc (ppb)	µAbs	%RSD	Flags	DF
CCV					CCV	5.190	10580	0.50		1.00
	Replicates	10572.8	10530.0	10563.1	10655.5					
	% Recovery	103.80								
CCB					CCB	0.013	237	7.52		1.00
	Replicates	242.8	213.9	256.7	236.5					
SO4728-001					UNK	0.025	262	6.08		1.00
	Replicates	262.5	278.1	265.6	240.0					
SO4728-002					UNK	0.025	262	7.09		1.00
	Replicates	243.2	284.3	250.5	268.8					
SO4728-003					UNK	0.025	261	11.13		1.00
	Replicates	267.5	296.8	227.3	252.4					
SO4728-004					UNK	0.009	229	10.24		1.00
	Replicates	194.3	242.2	236.3	243.8					
CCV					CCV	5.150	10509	0.18		1.00
	Replicates	10522.3	10481.0	10520.0	10514.3					
	% Recovery	103.09								
CCB					CCB	-0.001	209	10.84		1.00
	Replicates	229.3	176.5	217.0	211.2					

Katahdin Analytical Services 4000074

KATAHDIN ANALYTICAL SERVICES, LLC
METALS ANALYSIS RUN INFORMATION SHEET

INSTR. ID: L (Agilent 7800) **ANALYST**: NWA REVIEWED **ANALYSIS DATE**: 08/27/21

METHOD: **ICP-MS**
- ☑ 200.8
- ☑ 6020
- ☐ DOD

EQ 9/2/21
KATAHDIN ANALYTICAL METALS SECTION

FILE NAME: LOH27A

The pHs of all samples that were tested by direct analysis in this analytical run were checked just prior to analysis and confirmed to be <2. The time of preservation of these samples was checked in the "Measured Turbidity and Preservation of Incoming Samples" logbook to verify that they had been preserved at least 16 hours prior to analysis. These verifications were performed by _____ (initials) on _____ (date).

STANDARDS USED:

tandard Name	Standard ID	Prep Date	Expiration Date	Standard Conc.
. Blk/ICB/CCB	MW20423 70	08/10/21	08/10/22	0 ug/L
Standard 1	MW20479	08/27/21	09/15/21	Varies by Element
ICV	MW20477	08/27/21	11/27/21	Varies by Element
PQL	MW20456	08/18/21	09/15/21	Varies by Element
LRS1	MW20460	08/19/21	09/15/21	Varies by Element
LRS2	MW20458	08/19/21	09/15/21	Varies by Element
ICSA	MW20476	08/27/21	09/03/21	Varies by Element
ICSAB	MW20480	08/27/21	09/03/21	Varies by Element
CCV	MW20481	08/27/21	09/15/21	Varies by Element
l Standard (ISTD)	MW20375	07/29/21	10/27/21	0.4 mg/L (Li,Sc,Ge/Y,Tb,Bi)

Additional Comments and Notes:

All Run QC and Batch QC Failed High for Cu due to a hardware issue.

ICV (17:43) Failed Low for Ag (14.620 ug/L). Ag specific ICV failed.

PQL (17:36) Failed High DoD for Fe (25.735 ug/L); PQL (23:27) Failed High for Fe (29.433 ug/L), Low for Ni (0.015 ug/L) and Low DoD for Mn (0.144 ug/L) and Ag (0.159 ug/L). Fe specific opening and closing PQL failed.

ICSA (17:38) Fails High DoD for Zn (1.544 ug/L).

EQ 9/2/21

Dilutions: Some samples were diluted based on history or due to interfering element concentrations.

Dilution preparations are as follows:

5x, 25x, 50x diln.: 2.0 mL of sample, 5x dilute sample, or 10x dilute sample (pipet M25) + 8.0 mL of MW19528 (pipet M22)

Post Spike: 0.10 mL of MW19464 (pipet M27) into 10 mL final volume of appropriately diluted sample (pipet M22)

INSTRUMENT RUNLOG

Instrument: AGILENT 7800

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
CalBlank	1	LOH27A	08/27/2021	17:19	NWA
CalStd	1	LOH27A	08/27/2021	17:23	NWA
ICV	1	LOH27A	08/27/2021	17:25	NWA
SILVER ICV	1	LOH27A	08/27/2021	17:28	NWA
ICB	1	LOH27A	08/27/2021	17:30	NWA
IRON PQL	1	LOH27A	08/27/2021	17:33	NWA
PQL	1	LOH27A	08/27/2021	17:36	NWA
ICSA	1	LOH27A	08/27/2021	17:38	NWA
ICSAB	1	LOH27A	08/27/2021	17:41	NWA
LRS1	1	LOH27A	08/27/2021	17:43	NWA
LRS2	1	LOH27A	08/27/2021	17:45	NWA
RINSE	1	LOH27A	08/27/2021	17:48	NWA
RINSE	1	LOH27A	08/27/2021	17:51	NWA
CCV	1	LOH27A	08/27/2021	17:53	NWA
CCB	1	LOH27A	08/27/2021	17:56	NWA
PBWOG29IMW1	1	LOH27A	08/27/2021	17:58	NWA
LCSWOG29IMW1	1	LOH27A	08/27/2021	18:01	NWA
SO4787-001	1	LOH27A	08/27/2021	18:03	NWA
SO4787-001A	1	LOH27A	08/27/2021	18:06	NWA
SO4787-001L	5	LOH27A	08/27/2021	18:08	NWA
RINSE	1	LOH27A	08/27/2021	18:11	NWA
SO4787-001P	1	LOH27A	08/27/2021	18:13	NWA
SO4787-001S	1	LOH27A	08/27/2021	18:16	NWA
SO4787-002	1	LOH27A	08/27/2021	18:18	NWA
RINSE	1	LOH27A	08/27/2021	18:20	NWA
CCV	1	LOH27A	08/27/2021	18:23	NWA
CCB	1	LOH27A	08/27/2021	18:25	NWA
SO4788-001	1	LOH27A	08/27/2021	18:28	NWA
SO4790-001	1	LOH27A	08/27/2021	18:30	NWA
SO4792-001	1	LOH27A	08/27/2021	18:33	NWA
RINSE	1	LOH27A	08/27/2021	18:35	NWA
SO4818-001	1	LOH27A	08/27/2021	18:38	NWA
SO4839-001	1	LOH27A	08/27/2021	18:41	NWA
SO4839-002	1	LOH27A	08/27/2021	18:43	NWA
SO4857-001	1	LOH27A	08/27/2021	18:46	NWA
SO4857-002	1	LOH27A	08/27/2021	18:48	NWA
RINSE	1	LOH27A	08/27/2021	18:50	NWA
CCV	1	LOH27A	08/27/2021	18:53	NWA
CCB	1	LOH27A	08/27/2021	18:55	NWA
SO4857-003	1	LOH27A	08/27/2021	18:58	NWA
RINSE	1	LOH27A	08/27/2021	19:00	NWA
PBWOG16IMW2	5	LOH27A	08/27/2021	19:03	NWA
LCSWOG16IMW2	5	LOH27A	08/27/2021	19:05	NWA
SO4465-001	5	LOH27A	08/27/2021	19:08	NWA

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
SO4465-002	5	LOH27A	08/27/2021	19:10	NWA
SO4465-003	5	LOH27A	08/27/2021	19:13	NWA
SO4465-003A	5	LOH27A	08/27/2021	19:15	NWA
RINSE	1	LOH27A	08/27/2021	19:18	NWA
SO4465-003L	25	LOH27A	08/27/2021	19:20	NWA
CCV	1	LOH27A	08/27/2021	19:23	NWA
CCB	1	LOH27A	08/27/2021	19:25	NWA
SO4465-003P	5	LOH27A	08/27/2021	19:28	NWA
SO4465-003S	5	LOH27A	08/27/2021	19:30	NWA
SO4465-004	5	LOH27A	08/27/2021	19:33	NWA
RINSE	1	LOH27A	08/27/2021	19:35	NWA
SO4465-005	5	LOH27A	08/27/2021	19:38	NWA
SO4468-001	5	LOH27A	08/27/2021	19:40	NWA
SO4468-002	5	LOH27A	08/27/2021	19:43	NWA
RINSE	1	LOH27A	08/27/2021	19:45	NWA
PBWOG19IMW1	5	LOH27A	08/27/2021	19:48	NWA
RINSE	1	LOH27A	08/27/2021	19:50	NWA
CCV	1	LOH27A	08/27/2021	19:53	NWA
CCB	1	LOH27A	08/27/2021	19:55	NWA
LCSWOG19IMW1	5	LOH27A	08/27/2021	19:58	NWA
SO4968-003	5	LOH27A	08/27/2021	20:01	NWA
SO4968-005	5	LOH27A	08/27/2021	20:03	NWA
SO4968-007	5	LOH27A	08/27/2021	20:05	NWA
RINSE	1	LOH27A	08/27/2021	20:08	NWA
SO4519-005	5	LOH27A	08/27/2021	20:11	NWA
SO4519-005A	5	LOH27A	08/27/2021	20:13	NWA
SO4519-005L	25	LOH27A	08/27/2021	20:16	NWA
SO4519-005P	5	LOH27A	08/27/2021	20:18	NWA
RINSE	1	LOH27A	08/27/2021	20:21	NWA
CCV	1	LOH27A	08/27/2021	20:23	NWA
CCB	1	LOH27A	08/27/2021	20:26	NWA
SO4519-005S	5	LOH27A	08/27/2021	20:28	NWA
SO4519-008	5	LOH27A	08/27/2021	20:31	NWA
SO4519-010	5	LOH27A	08/27/2021	20:33	NWA
SO4519-012	5	LOH27A	08/27/2021	20:36	NWA
RINSE	1	LOH27A	08/27/2021	20:38	NWA
PBWOG19IMW2	5	LOH27A	08/27/2021	20:41	NWA
LCSWOG19IMW2	5	LOH27A	08/27/2021	20:43	NWA
SO4519-001	5	LOH27A	08/27/2021	20:46	NWA
SO4519-007	5	LOH27A	08/27/2021	20:48	NWA
RINSE	1	LOH27A	08/27/2021	20:51	NWA
CCV	1	LOH27A	08/27/2021	20:53	NWA
CCB	1	LOH27A	08/27/2021	20:56	NWA
PBWOG29IMW2	5	LOH27A	08/27/2021	20:58	NWA
LCSWOG29IMW2	5	LOH27A	08/27/2021	21:01	NWA
SO4723-001	5	LOH27A	08/27/2021	21:03	NWA
SO4723-001A	5	LOH27A	08/27/2021	21:06	NWA

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
SO4723-001L	25	LOH27A	08/27/2021	21:08	NWA
RINSE	1	LOH27A	08/27/2021	21:11	NWA
SO4723-001P	5	LOH27A	08/27/2021	21:13	NWA
SO4723-001S	5	LOH27A	08/27/2021	21:16	NWA
SO4723-002	5	LOH27A	08/27/2021	21:18	NWA
RINSE	1	LOH27A	08/27/2021	21:21	NWA
CCV	1	LOH27A	08/27/2021	21:24	NWA
CCB	1	LOH27A	08/27/2021	21:26	NWA
SO4723-003	5	LOH27A	08/27/2021	21:29	NWA
SO4723-004	5	LOH27A	08/27/2021	21:31	NWA
SO4723-005	5	LOH27A	08/27/2021	21:34	NWA
SO4723-006	5	LOH27A	08/27/2021	21:36	NWA
RINSE	1	LOH27A	08/27/2021	21:39	NWA
SO4723-008	5	LOH27A	08/27/2021	21:41	NWA
SO4724-001	5	LOH27A	08/27/2021	21:44	NWA
SO4724-002	5	LOH27A	08/27/2021	21:46	NWA
SO4724-002A	5	LOH27A	08/27/2021	21:49	NWA
RINSE	1	LOH27A	08/27/2021	21:51	NWA
CCV	1	LOH27A	08/27/2021	21:54	NWA
CCB	1	LOH27A	08/27/2021	21:56	NWA
SO4724-002L	25	LOH27A	08/27/2021	21:59	NWA
SO4724-002P	5	LOH27A	08/27/2021	22:01	NWA
SO4724-002S	5	LOH27A	08/27/2021	22:04	NWA
SO4724-003	5	LOH27A	08/27/2021	22:06	NWA
RINSE	1	LOH27A	08/27/2021	22:09	NWA
SO4724-004	5	LOH27A	08/27/2021	22:11	NWA
SO4724-005	5	LOH27A	08/27/2021	22:14	NWA
SO4724-006	5	LOH27A	08/27/2021	22:16	NWA
RINSE	1	LOH27A	08/27/2021	22:19	NWA
RINSE	1	LOH27A	08/27/2021	22:21	NWA
CCV	1	LOH27A	08/27/2021	22:24	NWA
CCB	1	LOH27A	08/27/2021	22:26	NWA
PBSOG26IMS1	5	LOH27A	08/27/2021	22:29	NWA
LCSOOG26IMS1	5	LOH27A	08/27/2021	22:31	NWA
SO4364-001	5	LOH27A	08/27/2021	22:34	NWA
SO4364-002	5	LOH27A	08/27/2021	22:36	NWA
RINSE	1	LOH27A	08/27/2021	22:39	NWA
SO4364-003	5	LOH27A	08/27/2021	22:42	NWA
SO4467-001	5	LOH27A	08/27/2021	22:44	NWA
SO4467-001A	5	LOH27A	08/27/2021	22:47	NWA
SO4467-001L	25	LOH27A	08/27/2021	22:49	NWA
RINSE	1	LOH27A	08/27/2021	22:52	NWA
CCV	1	LOH27A	08/27/2021	22:54	NWA
CCB	1	LOH27A	08/27/2021	22:57	NWA
SO4467-001P	5	LOH27A	08/27/2021	22:59	NWA
SO4467-001S	5	LOH27A	08/27/2021	23:02	NWA
SO4467-002	5	LOH27A	08/27/2021	23:04	NWA

US EPA Tune Check Report

Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq. Date-Time	8/27/2021 13:29:20
Report Comment	---
Instrument Name	G8421A SG18503526

[No Gas]

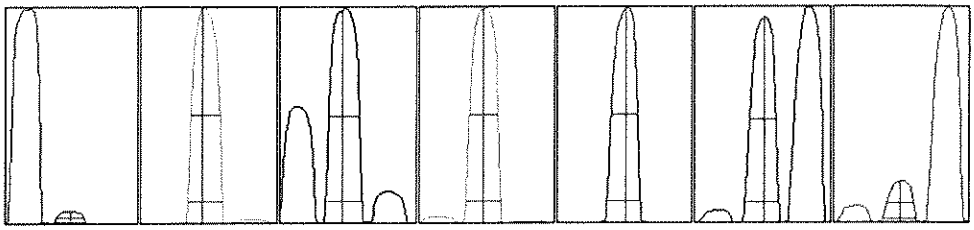
Sensitivity

Mass	Count	CPS	RSD%	RSD% (Required)	RSD% (Flag)
7	4772	47716.36	0.201	5.000	
9	2370	23699.83	1.075	5.000	
24	65737	657371.45	0.722	5.000	
59	12588	125877.04	0.486	5.000	
115	173787	1737874.76	0.456	5.000	
205	11839	118388.90	1.044	5.000	
208	26144	261438.32	0.894	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	4773	4763	4782	4761	4780
9	2329	2394	2376	2387	2365
24	65368	65366	65561	65899	66492
59	12552	12527	12679	12618	12562
115	173563	173906	173237	173135	175097
205	11676	11824	11834	11836	12024
208	25913	25885	26205	26325	26391

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	7839.19	7.00	6.90 - 7.10	
9	3833.30	8.90	8.90 - 9.10	
24	100174.71	23.90	23.90 - 24.10	
59	20346.32	58.95	58.90 - 59.10	
115	299595.16	115.05	114.90 - 115.10	
205	20751.14	205.05	204.90 - 205.10	
208	45650.59	208.00	207.90 - 208.10	

US EPA Tune Check Report

Mass	W-50%	W-10%	W-10% (Required)	W-10% (Flag)
7	0.62	0.719	0.900	
9	0.65	0.769	0.900	
24	0.67	0.805	0.900	
59	0.64	0.770	0.900	
115	0.61	0.752	0.900	
205	0.59	0.754	0.900	
208	0.59	0.733	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	247
Y Axis	Linear

US EPA Tune Check Report

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	0.99 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.20 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	7.4 V	Deflect	13.2 V
Extract 2	-155.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-75 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.5 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	150 V		

QP Parameters

Mass Gain	122	Axis Gain	0.9988	QP Bias	-2.5 V
Mass Offset	125	Axis Offset	0.03		

Hardware Settings

Torch

Torch H	-0.1 mm	Torch V	0.0 mm

EM

Discriminator	3.2 mV	Analog HV	2729 V	Pulse HV	1389 V

[H2]

Sensitivity

Mass	Count	CPS	RSD%	RSD% (Required)	RSD% (Flag)
59	828	8283.23	0.867	5.000	
89	96200	962004.70	0.963	5.000	
205	10841	108412.44	0.458	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
59	832	830	820	822	838
89	94830	95986	96409	96380	97398
205	10773	10908	10827	10863	10834

Integration Time [sec] 0.1

US EPA Tune Check Report

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	0.99 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.20 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	7.4 V	Deflect	1.4 V
Extract 2	-155.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-75 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.5 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	122	Axis Gain	0.9990	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	-0.03		

Hardware Settings

Torch

Torch H	-0.1 mm	Torch V	0.0 mm

EM

Discriminator	3.2 mV	Analog HV	2729 V	Pulse HV	1389 V

[He]

Sensitivity

Mass	Count	CPS	RSD%	RSD% (Required)	RSD% (Flag)
59	2777	27770.91	0.964	5.000	
89	25092	250915.89	1.532	5.000	
205	6147	61469.49	0.276	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
59	2735	2780	2779	2782	2810
89	24465	24987	25259	25356	25391
205	6119	6146	6149	6157	6164

Integration Time [sec] 0.1

US EPA Tune Check Report

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	0.99 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.20 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	7.4 V	Deflect	0.4 V
Extract 2	-155.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-75 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	4.5 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	122	Axis Gain	0.9990	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	-0.03		

Hardware Settings

Torch

Torch H	-0.1 mm	Torch V	0.0 mm

EM

Discriminator	3.2 mV	Analog HV	2729 V	Pulse HV	1389 V

Calibration Blank Report

Sample Name	CalBlank
File Name	006CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 17:19:56
Sample Type	CalBlk
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	CPS	RSD
9	Be	6	No Gas	8.89	43.3
11	B	6	No Gas	5599.07	0.8
23	Na	45	He	7824.20	3.6
24	Mg	45	He	140.01	4.8
27	Al	45	He	31.11	40.6
28	Si	45	H2	8411.89	3.0
39	K	45	He	14882.72	1.4
40	Ca	45	H2	2040.23	5.4
51	V	89	He	110.00	19.9
52	Cr	89	He	411.93	8.0
55	Mn	89	He	32.66	15.4
56	Fe	89	H2	2035.76	4.0
59	Co	89	He	48.89	41.7
60	Ni	89	He	72.22	9.6
63	Cu	89	He	35374.62	1.0
66	Zn	89	He	344.46	5.3
75	As	89	He	215.36	9.6
78	Se	89	H2	0.67	114.6
88	Sr	89	He	33.33	30.0
95	Mo	89	He	14.45	93.3
107	Ag	89	He	30.00	29.4
111	Cd	89	He	0.37	173.2
118	Sn	159	He	106.67	19.0
121	Sb	159	No Gas	33.37	96.4
137	Ba	159	No Gas	347.06	9.3
182	W	159	No Gas	33.37	45.8
205	Tl	209	No Gas	40.05	43.3
208	Pb	209	No Gas	160.18	16.5
232	Th	209	No Gas	70.08	0.0
238	U	209	No Gas	6.67	86.6

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD
Li	6	No Gas	2459183.84	0.6
Sc	45	No Gas	4376311.73	1.2
Sc	45	H2	563225.15	2.1
Sc	45	He	146730.33	0.5
Ge	72	No Gas	936426.06	2.5
Ge	72	H2	183420.15	1.0
Ge	72	He	97408.84	0.3
Y	89	H2	2733952.55	1.1
Y	89	He	791301.87	0.3
Tb	159	No Gas	9359761.39	0.3
Tb	159	He	3741562.06	0.6
Bi	209	No Gas	4534931.80	1.2

Calibration Standard Report

Sample Name	CalStd
File Name	007CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 17:23:00
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	CPS	RSD
9	Be	6	No Gas	145360.63	1.5
11	B	6	No Gas	100858.52	1.1
23	Na	45	He	2237640.53	1.4
24	Mg	45	He	1343283.40	0.7
27	Al	45	He	49843.36	1.9
28	Si	45	H2	81734.32	1.8
39	K	45	He	1067932.90	1.0
40	Ca	45	H2	6860040.04	2.2
51	V	89	He	85637.29	1.0
52	Cr	89	He	108802.13	0.4
55	Mn	89	He	51007.67	0.7
56	Fe	89	H2	23076801.20	1.5
59	Co	89	He	169209.92	0.5
60	Ni	89	He	45802.52	0.8
63	Cu	89	He	189325.20	2.6
66	Zn	89	He	19412.95	1.9
75	As	89	He	15354.13	1.9
78	Se	89	H2	6309.98	0.8
88	Sr	89	He	64740.84	1.0
95	Mo	89	He	71425.62	1.7
107	Ag	89	He	234389.62	0.4
111	Cd	89	He	31611.32	0.6
118	Sn	159	He	63302.42	1.4
121	Sb	159	No Gas	478653.98	1.1
137	Ba	159	No Gas	171066.95	1.4
182	W	159	No Gas	397961.89	0.6
205	Tl	209	No Gas	796119.73	0.8
208	Pb	209	No Gas	1092365.23	0.7
232	Th	209	No Gas	1037594.10	0.9
238	U	209	No Gas	990078.20	0.4

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2436004.77	1.2	2459183.84	99.06	29.5	120.4	
Sc	45	No Gas	4413869.08	1.9	4376311.73	100.86	29.5	120.4	
Sc	45	H2	569172.62	2.0	563225.15	101.06	29.5	120.4	
Sc	45	He	148717.41	1.3	146730.33	101.35	29.5	120.4	
Ge	72	No Gas	973206.44	4.0	936426.06	103.93	29.5	120.4	
Ge	72	H2	184156.92	1.3	183420.15	100.4	29.5	120.4	
Ge	72	He	98606.43	1.0	97408.84	101.23	29.5	120.4	
Y	89	H2	2742241.34	1.8	2733952.55	100.3	29.5	120.4	
Y	89	He	797401.43	1.0	791301.87	100.77	29.5	120.4	
Tb	159	No Gas	9398393.96	1.7	9359761.39	100.41	29.5	120.4	
Tb	159	He	3746547.06	1.0	3741562.06	100.13	29.5	120.4	
Bi	209	No Gas	4517022.07	2.1	4534931.8	99.61	29.5	120.4	

Initial Calibration Verification (ICV) Report

Sample Name	ICV
File Name	008_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 17:25:57
Sample Type	ICV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	19.572	ppb	2.0	57601.94	20	97.86	89.6	110.4	
11	B	6	No Gas	20.234	ppb	1.8	44656.31	20	101.17	89.6	110.4	
23	Na	45	He	4093.120	ppb	0.3	906994.62	4000	102.33	89.6	110.4	
24	Mg	45	He	3937.037	ppb	0.3	521140.05	4000	98.43	89.6	110.4	
27	Al	45	He	397.253	ppb	1.0	19525.01	400	99.31	89.6	110.4	
28	Si	45	H2	501.209	ppb	2.1	44970.72	400	125.3	89.6	110.4	> +/- 10%
39	K	45	He	4326.338	ppb	0.6	463629.96	4000	108.16	89.6	110.4	
40	Ca	45	H2	4000.866	ppb	0.2	2731282.74	4000	100.02	89.6	110.4	
51	V	89	He	19.646	ppb	0.7	33408.24	20	98.23	89.6	110.4	
52	Cr	89	He	20.113	ppb	1.1	43617.68	20	100.56	89.6	110.4	
55	Mn	89	He	20.493	ppb	0.4	20734.80	20	102.46	89.6	110.4	
56	Fe	89	H2	3960.967	ppb	1.2	9178588.68	4000	99.02	89.6	110.4	
59	Co	89	He	20.169	ppb	0.9	67666.82	20	100.85	89.6	110.4	
60	Ni	89	He	20.394	ppb	0.8	18556.22	20	101.97	89.6	110.4	
63	Cu	89	He	29.397	ppb	1.8	124841.89	20	146.98	89.6	110.4	> +/- 10%
66	Zn	89	He	20.518	ppb	0.3	8095.98	20	102.59	89.6	110.4	
75	As	89	He	19.787	ppb	3.2	6150.03	20	98.94	89.6	110.4	
78	Se	89	H2	20.009	ppb	3.1	2535.28	20	100.04	89.6	110.4	
88	Sr	89	He	21.063	ppb	1.6	27042.97	20	105.32	89.6	110.4	
95	Mo	89	He	39.906	ppb	0.7	56489.31	40	99.76	89.6	110.4	
107	Ag	89	He	14.512	ppb	0.5	67436.96	20	72.56	89.6	110.4	> +/- 10%
111	Cd	89	He	20.188	ppb	0.9	12648.24	20	100.94	89.6	110.4	
118	Sn	159	He	19.491	ppb	0.8	24617.64	20	97.46	89.6	110.4	
121	Sb	159	No Gas	19.937	ppb	3.3	192957.27	20	99.68	89.6	110.4	
137	Ba	159	No Gas	19.860	ppb	4.3	68901.95	20	99.3	89.6	110.4	
182	W	159	No Gas	19.249	ppb	3.4	154898.58	20	96.24	89.6	110.4	
205	Tl	209	No Gas	20.255	ppb	0.9	329640.03	20	101.28	89.6	110.4	
208	Pb	209	No Gas	19.878	ppb	1.5	443929.34	20	99.39	89.6	110.4	
232	Th	209	No Gas	21.074	ppb	3.0	446940.31	20	105.37	89.6	110.4	
238	U	209	No Gas	20.991	ppb	2.4	424753.02	20	104.96	89.6	110.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2465493.82	0.6	2459183.84	100.26	29.5	120.4	
Sc	45	No Gas	4421786.94	1.2	4376311.73	101.04	29.5	120.4	
Sc	45	H2	566157.00	1.4	563225.15	100.52	29.5	120.4	
Sc	45	He	146517.31	0.4	146730.33	99.85	29.5	120.4	
Ge	72	No Gas	940913.09	2.1	936426.06	100.48	29.5	120.4	
Ge	72	H2	182875.14	2.6	183420.15	99.7	29.5	120.4	
Ge	72	He	97234.91	0.2	97408.84	99.82	29.5	120.4	
Y	89	H2	2753570.19	2.1	2733952.55	100.72	29.5	120.4	
Y	89	He	790122.75	0.3	791301.87	99.85	29.5	120.4	
Tb	159	No Gas	9500283.40	1.1	9359761.39	101.5	29.5	120.4	
Tb	159	He	3727686.37	0.5	3741562.06	99.63	29.5	120.4	
Bi	209	No Gas	4614742.49	0.2	4534931.8	101.76	29.5	120.4	

Initial Calibration Verification (ICV) Report

Sample Name	SILVER ICV
File Name	009_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 17:28:28
Sample Type	ICV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	20.539	ppb	9.5	58717.66	20	102.7	89.6	110.4	
11	B	6	No Gas	0.380	ppb	66.9	6175.98	20	1.9	89.6	110.4	> +/- 10%
23	Na	45	He	3.327	ppb	36.7	8485.24	4000	0.08	89.6	110.4	> +/- 10%
24	Mg	45	He	0.941	ppb	40.2	262.24	4000	0.02	89.6	110.4	> +/- 10%
27	Al	45	He	20.975	ppb	1.0	1053.41	400	5.24	89.6	110.4	> +/- 10%
28	Si	45	H2	21.181	ppb	31.6	9797.62	400	5.3	89.6	110.4	> +/- 10%
39	K	45	He	1.403	ppb	88.3	14907.72	4000	0.04	89.6	110.4	> +/- 10%
40	Ca	45	H2	1.221	ppb	11.1	2827.05	4000	0.03	89.6	110.4	> +/- 10%
51	V	89	He	19.609	ppb	1.9	33280.12	20	98.04	89.6	110.4	
52	Cr	89	He	19.781	ppb	2.1	42814.05	20	98.9	89.6	110.4	
55	Mn	89	He	20.161	ppb	1.7	20360.29	20	100.8	89.6	110.4	
56	Fe	89	H2	1.459	ppb	8.6	5343.62	4000	0.04	89.6	110.4	> +/- 10%
59	Co	89	He	20.483	ppb	1.5	68584.24	20	102.42	89.6	110.4	
60	Ni	89	He	20.933	ppb	3.6	19002.39	20	104.66	89.6	110.4	
63	Cu	89	He	31.585	ppb	2.5	131229.76	20	157.93	89.6	110.4	> +/- 10%
66	Zn	89	He	20.186	ppb	2.1	7958.15	20	100.93	89.6	110.4	
75	As	89	He	19.619	ppb	1.9	6087.66	20	98.1	89.6	110.4	
78	Se	89	H2	19.842	ppb	1.2	2475.28	20	99.21	89.6	110.4	
88	Sr	89	He	0.011	ppb	48.5	47.78	20	0.05	89.6	110.4	> +/- 10%
95	Mo	89	He	0.086	ppb	24.8	136.67	40	0.22	89.6	110.4	> +/- 10%
107	Ag	89	He	14.589	ppb	2.7	67645.81	20	72.95	89.6	110.4	> +/- 10%
111	Cd	89	He	20.376	ppb	1.3	12740.55	20	101.88	89.6	110.4	
118	Sn	159	He	0.050	ppb	42.4	168.90	20	0.25	89.6	110.4	> +/- 10%
121	Sb	159	No Gas	21.020	ppb	7.8	191817.59	20	105.1	89.6	110.4	
137	Ba	159	No Gas	21.445	ppb	9.1	70079.19	20	107.22	89.6	110.4	
182	W	159	No Gas	0.088	ppb	34.6	690.79	20	0.44	89.6	110.4	> +/- 10%
205	Tl	209	No Gas	21.244	ppb	9.2	333381.91	20	106.22	89.6	110.4	
208	Pb	209	No Gas	21.223	ppb	8.6	457168.09	20	106.12	89.6	110.4	
232	Th	209	No Gas	0.047	ppb	7.5	1031.20	20	0.24	89.6	110.4	> +/- 10%
238	U	209	No Gas	0.012	ppb	42.9	246.95	20	0.06	89.6	110.4	> +/- 10%

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2408343.89	8.9	2459183.84	97.93	29.5	120.4	
Sc	45	No Gas	4217420.84	7.3	4376311.73	96.37	29.5	120.4	
Sc	45	H2	554754.58	1.8	563225.15	98.5	29.5	120.4	
Sc	45	He	145566.44	1.8	146730.33	99.21	29.5	120.4	
Ge	72	No Gas	884916.22	11.2	936426.06	94.5	29.5	120.4	
Ge	72	H2	180014.84	0.8	183420.15	98.14	29.5	120.4	
Ge	72	He	96708.59	1.6	97408.84	99.28	29.5	120.4	
Y	89	H2	2709803.41	0.6	2733952.55	99.12	29.5	120.4	
Y	89	He	788680.99	2.1	791301.87	99.67	29.5	120.4	
Tb	159	No Gas	8991896.81	7.9	9359761.39	96.07	29.5	120.4	
Tb	159	He	3727005.95	2.1	3741562.06	99.61	29.5	120.4	
Bi	209	No Gas	4472421.48	8.3	4534931.8	98.62	29.5	120.4	

Initial Calibration Blank (ICB) Report

Sample Name	ICB
File Name	010_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 17:30:58
Sample Type	ICB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.031	ppb	15.5	100.00	0.2	
11	B	6	No Gas	0.050	ppb	79.0	5778.01	4	
23	Na	45	He	4.136	ppb	4.5	8642.31	200	
24	Mg	45	He	2.068	ppb	50.8	408.93	20	
27	Al	45	He	0.097	ppb	399.1	35.56	20	
28	Si	45	H2	2.606	ppb	254.4	8532.06	100	
39	K	45	He	1.742	ppb	266.4	14902.76	200	
40	Ca	45	H2	-0.028	ppb	N/A	2005.77	20	
51	V	89	He	0.003	ppb	236.8	114.45	1	
52	Cr	89	He	0.013	ppb	165.6	437.93	1	
55	Mn	89	He	0.027	ppb	83.9	59.32	0.4	
56	Fe	89	H2	0.192	ppb	63.8	2446.28	20	
59	Co	89	He	0.014	ppb	95.9	95.56	0.2	
60	Ni	89	He	0.024	ppb	85.9	93.34	0.4	
63	Cu	89	He	13.102	ppb	1.8	75011.44	0.6	Fail All Methods□ Fail 6020/DoD
66	Zn	89	He	-0.117	ppb	N/A	298.90	2	
75	As	89	He	0.042	ppb	58.8	227.03	1	
78	Se	89	H2	0.044	ppb	37.9	6.17	1	
88	Sr	89	He	0.015	ppb	114.0	52.23	1	
95	Mo	89	He	0.036	ppb	25.5	65.56	1	
107	Ag	89	He	0.020	ppb	31.2	121.12	0.2	
111	Cd	89	He	0.018	ppb	36.1	11.48	0.2	
118	Sn	159	He	0.012	ppb	302.0	121.11	1	
121	Sb	159	No Gas	0.027	ppb	30.5	293.66	0.2	
137	Ba	159	No Gas	0.013	ppb	221.0	390.45	0.4	
182	W	159	No Gas	0.020	ppb	18.4	193.55	1	
205	Tl	209	No Gas	0.023	ppb	28.6	420.48	0.2	
208	Pb	209	No Gas	0.029	ppb	27.5	814.26	0.2	
232	Th	209	No Gas	0.002	ppb	54.4	123.47	1	
238	U	209	No Gas	0.001	ppb	60.4	26.69	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2494897.10	1.5	2459183.84	101.45	29.5	120.4	
Sc	45	No Gas	4379304.20	1.7	4376311.73	100.07	29.5	120.4	
Sc	45	H2	558225.41	1.1	563225.15	99.11	29.5	120.4	
Sc	45	He	145195.39	1.0	146730.33	98.95	29.5	120.4	
Ge	72	No Gas	921699.42	0.2	936426.06	98.43	29.5	120.4	
Ge	72	H2	180251.18	1.0	183420.15	98.27	29.5	120.4	
Ge	72	He	96346.31	0.6	97408.84	98.91	29.5	120.4	
Y	89	H2	2698582.60	0.4	2733952.55	98.71	29.5	120.4	
Y	89	He	787955.84	1.3	791301.87	99.58	29.5	120.4	
Tb	159	No Gas	9350263.12	1.8	9359761.39	99.9	29.5	120.4	
Tb	159	He	3716591.51	0.4	3741562.06	99.33	29.5	120.4	
Bi	209	No Gas	4618396.20	2.2	4534931.8	101.84	29.5	120.4	

Low Level Initial Calibration Verification (LLICV) Report

Sample Name	IRON PQL
File Name	011LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 17:33:30
Sample Type	LLICV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High
9	Be	6	No Gas	0.018	ppb	25.1	62.23	0.2	9	79.5	120.4
11	B	6	No Gas	-0.024	ppb	N/A	5672.43	4	-0.6	79.5	120.4
23	Na	45	He	2.433	ppb	29.1	8238.13	200	1.22	79.5	120.4
24	Mg	45	He	0.986	ppb	18.6	266.69	20	4.93	79.5	120.4
27	Al	45	He	-0.060	ppb	N/A	27.78	20	-0.3	79.5	120.4
28	Si	45	H2	1.558	ppb	338.3	8355.10	100	1.56	79.5	120.4
39	K	45	He	2.056	ppb	97.9	14877.80	200	1.03	79.5	120.4
40	Ca	45	H2	1.786	ppb	8.8	3188.25	20	8.93	79.5	120.4
51	V	89	He	-0.004	ppb	N/A	102.23	1	-0.4	79.5	120.4
52	Cr	89	He	0.019	ppb	85.6	447.26	1	1.9	79.5	120.4
55	Mn	89	He	0.020	ppb	37.0	51.99	0.4	5	79.5	120.4
56	Fe	89	H2	24.735	ppb	2.7	58181.94	20	123.68	79.5	120.4
59	Co	89	He	0.012	ppb	33.8	88.90	0.2	6	79.5	120.4
60	Ni	89	He	0.009	ppb	305.6	78.89	0.4	2.25	79.5	120.4
63	Cu	89	He	10.935	ppb	1.7	67729.83	0.6	1822.5	79.5	120.4
66	Zn	89	He	0.037	ppb	158.3	353.35	2	1.85	79.5	120.4
75	As	89	He	-0.001	ppb	N/A	212.02	1	-0.1	79.5	120.4
78	Se	89	H2	0.026	ppb	24.4	3.83	1	2.6	79.5	120.4
88	Sr	89	He	0.004	ppb	305.0	37.78	1	0.4	79.5	120.4
95	Mo	89	He	0.013	ppb	55.9	32.22	1	1.3	79.5	120.4
107	Ag	89	He	0.012	ppb	25.6	86.67	0.2	6	79.5	120.4
111	Cd	89	He	0.009	ppb	49.9	5.93	0.2	4.5	79.5	120.4
118	Sn	159	He	0.021	ppb	67.6	132.23	1	2.1	79.5	120.4
121	Sb	159	No Gas	0.014	ppb	27.4	173.53	0.2	7	79.5	120.4
137	Ba	159	No Gas	0.007	ppb	125.1	373.76	0.4	1.75	79.5	120.4
182	W	159	No Gas	0.019	ppb	14.0	183.54	1	1.9	79.5	120.4
205	Tl	209	No Gas	0.014	ppb	17.5	270.31	0.2	7	79.5	120.4
208	Pb	209	No Gas	0.016	ppb	16.8	513.91	0.2	8	79.5	120.4
232	Th	209	No Gas	0.008	ppb	26.5	246.95	0.2	4	79.5	120.4
238	U	209	No Gas	0.010	ppb	12.3	206.90	0.2	5	79.5	120.4

QC Flag
Failed DoD □ Failed 6020/EPA
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Low Level Initial Calibration Verification (LLICV) Report

QC Flag
Failed DoD □ Failed 6020/EPA
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Failed DoD □ Failed 6020/EPA

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2512302.58	1.1	2459183.84	102.16	29.5	120.4	
Sc	45	No Gas	4406008.62	1.3	4376311.73	100.68	29.5	120.4	
Sc	45	H2	551831.57	0.5	563225.15	97.98	29.5	120.4	
Sc	45	He	144614.81	0.6	146730.33	98.56	29.5	120.4	
Ge	72	No Gas	953755.87	4.4	936426.06	101.85	29.5	120.4	
Ge	72	H2	179304.56	0.6	183420.15	97.76	29.5	120.4	
Ge	72	He	95944.39	0.8	97408.84	98.5	29.5	120.4	
Y	89	H2	2698989.26	0.7	2733952.55	98.72	29.5	120.4	
Y	89	He	779874.42	0.4	791301.87	98.56	29.5	120.4	
Tb	159	No Gas	9467922.01	1.2	9359761.39	101.16	29.5	120.4	
Tb	159	He	3694233.90	1.1	3741562.06	98.74	29.5	120.4	
Bi	209	No Gas	4631927.86	2.3	4534931.8	102.14	29.5	120.4	

Low Level Initial Calibration Verification (LLICV) Report

Sample Name	PQL
File Name	012LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 17:36:03
Sample Type	LLICV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High
9	Be	6	No Gas	0.209	ppb	3.4	617.81	0.2	104.5	79.5	120.4
11	B	6	No Gas	3.509	ppb	10.1	12271.15	4	87.72	79.5	120.4
23	Na	45	He	223.979	ppb	1.4	56543.55	200	111.99	79.5	120.4
24	Mg	45	He	21.978	ppb	5.7	3022.78	20	109.89	79.5	120.4
27	Al	45	He	19.898	ppb	5.2	998.96	20	99.49	79.5	120.4
28	Si	45	H2	87.731	ppb	5.3	14747.38	100	87.73	79.5	120.4
39	K	45	He	227.096	ppb	1.3	38098.51	200	113.55	79.5	120.4
40	Ca	45	H2	21.643	ppb	1.4	16698.17	20	108.21	79.5	120.4
51	V	89	He	1.048	ppb	2.5	1877.97	1	104.8	79.5	120.4
52	Cr	89	He	1.084	ppb	2.3	2728.44	1	108.4	79.5	120.4
55	Mn	89	He	0.423	ppb	9.3	457.93	0.4	105.75	79.5	120.4
56	Fe	89	H2	24.681	ppb	1.1	57984.53	20	123.41	79.5	120.4
59	Co	89	He	0.203	ppb	6.1	726.74	0.2	101.5	79.5	120.4
60	Ni	89	He	0.435	ppb	6.9	464.47	0.4	108.75	79.5	120.4
63	Cu	89	He	11.995	ppb	2.9	71515.07	0.6	1999.17	79.5	120.4
66	Zn	89	He	2.174	ppb	4.4	1160.10	2	108.7	79.5	120.4
75	As	89	He	1.076	ppb	3.6	535.40	1	107.6	79.5	120.4
78	Se	89	H2	1.087	ppb	1.6	135.49	1	108.7	79.5	120.4
88	Sr	89	He	1.068	ppb	8.0	1396.79	1	106.8	79.5	120.4
95	Mo	89	He	1.077	ppb	5.6	1532.37	1	107.7	79.5	120.4
107	Ag	89	He	0.163	ppb	4.1	785.61	0.2	81.5	79.5	120.4
111	Cd	89	He	0.214	ppb	0.4	134.08	0.2	107	79.5	120.4
118	Sn	159	He	1.080	ppb	6.1	1449.02	1	108	79.5	120.4
121	Sb	159	No Gas	0.206	ppb	5.5	1972.35	0.2	103	79.5	120.4
137	Ba	159	No Gas	0.385	ppb	7.8	1635.26	0.4	96.25	79.5	120.4
182	W	159	No Gas	1.033	ppb	3.4	8125.03	1	103.3	79.5	120.4
205	Tl	209	No Gas	0.211	ppb	6.7	3437.64	0.2	105.5	79.5	120.4
208	Pb	209	No Gas	0.220	ppb	1.6	5016.03	0.2	110	79.5	120.4
232	Th	209	No Gas	0.201	ppb	2.3	4288.89	0.2	100.5	79.5	120.4
238	U	209	No Gas	0.220	ppb	8.8	4402.39	0.2	110	79.5	120.4

QC Flag
Failed DoD

Low Level Initial Calibration Verification (LLICV) Report

QC Flag
Failed DoD □ Failed 6020/EPA

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2444376.63	1.7	2459183.84	99.4	29.5	120.4	
Sc	45	No Gas	4275986.57	2.0	4376311.73	97.71	29.5	120.4	
Sc	45	H2	562139.19	1.2	563225.15	99.81	29.5	120.4	
Sc	45	He	145303.42	0.6	146730.33	99.03	29.5	120.4	
Ge	72	No Gas	958785.68	6.5	936426.06	102.39	29.5	120.4	
Ge	72	H2	178386.65	1.8	183420.15	97.26	29.5	120.4	
Ge	72	He	96451.93	0.4	97408.84	99.02	29.5	120.4	
Y	89	H2	2695185.51	0.9	2733952.55	98.58	29.5	120.4	
Y	89	He	786518.41	0.8	791301.87	99.4	29.5	120.4	
Tb	159	No Gas	9243363.47	1.9	9359761.39	98.76	29.5	120.4	
Tb	159	He	3689459.39	0.3	3741562.06	98.61	29.5	120.4	
Bi	209	No Gas	4557639.25	1.5	4534931.8	100.5	29.5	120.4	

Interference Check Solution A (ICS-A) Report

Sample Name	ICSA
File Name	013ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 17:38:33
Sample Type	ICSA
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Low	%High	QC Flag
Be	9	6	No Gas	0.018	ppb	31.8	57.78	-0.1	100	100	
B	11	6	No Gas	0.249	ppb	24.4	5749.15	-2	100	100	
Na	23	45	He	96716.109	ppb	0.1	22387075.46	100000	80	120	
Mg	24	45	He	95620.825	ppb	0.4	13328359.38	100000	80	120	
Al	27	45	He	99573.880	ppb	1.5	5147034.47	100000	80	120	
Si	28	45	H2	2.512	ppb	41.6	8835.94	-50	100	100	
K	39	45	He	97440.470	ppb	1.3	10662091.89	100000	80	120	
Ca	40	45	H2	100027.678	ppb	0.6	69761853.96	100000	80	120	
V	51	89	He	0.035	ppb	6.7	175.56	-0.5	100	100	
Cr	52	89	He	2.138	ppb	0.9	5181.36	1.8	100	100	
Mn	55	89	He	0.821	ppb	10.2	893.20	0.55211	100	100	
Fe	56	89	H2	99340.298	ppb	0.8	228745425.70	100000	80	120	
Co	59	89	He	0.108	ppb	8.1	426.70	0.04	100	100	
Ni	60	89	He	0.271	ppb	18.5	328.90	0.02	100	100	
Cu	63	89	He	-5.728	ppb	N/A	18517.30	0.184875	100	100	DoD□ 6020/EPA
Zn	66	89	He	1.544	ppb	5.3	960.07	-0.72	100	100	DoD
As	75	89	He	0.033	ppb	115.9	233.03	-0.5	100	100	
Se	78	89	H2	0.180	ppb	19.2	23.33	-0.5	100	100	
Sr	88	89	He	1.059	ppb	3.5	1440.13	0.41	100	100	
Mo	95	89	He	1995.284	ppb	0.2	2923976.52	2000	80	120	
Ag	107	89	He	0.293	ppb	3.2	1439.01	0.2	100	100	
Cd	111	89	He	0.394	ppb	1.4	256.30	0.2743	100	100	
Sn	118	159	He	0.045	ppb	44.3	161.12	-0.5	100	100	
Sb	121	159	No Gas	0.071	ppb	2.5	677.45	-0.1	100	100	
Ba	137	159	No Gas	0.331	ppb	11.3	1404.97	0.1	100	100	
W	182	159	No Gas	0.157	ppb	14.9	1218.09	-0.3	100	100	
Tl	205	209	No Gas	0.010	ppb	40.3	190.22	-0.1	100	100	
Pb	208	209	No Gas	0.093	ppb	5.9	2052.38	-0.1	100	100	
Th	232	209	No Gas	0.023	ppb	39.5	510.60	-0.1	100	100	
U	238	209	No Gas	0.007	ppb	23.1	136.82	-0.1	100	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2325842.22	0.4	2459183.84	94.58	29.5	120.4	
Sc	45	No Gas	4299266.93	2.4	4376311.73	98.24	29.5	120.4	
Sc	45	H2	578790.19	1.3	563225.15	102.76	29.5	120.4	
Sc	45	He	154325.24	0.6	146730.33	105.18	29.5	120.4	
Ge	72	No Gas	956590.43	5.7	936426.06	102.15	29.5	120.4	
Ge	72	H2	182003.28	1.5	183420.15	99.23	29.5	120.4	
Ge	72	He	101241.17	1.2	97408.84	103.93	29.5	120.4	
Y	89	H2	2736183.80	1.1	2733952.55	100.08	29.5	120.4	
Y	89	He	818169.81	0.5	791301.87	103.4	29.5	120.4	
Tb	159	No Gas	8935492.85	3.1	9359761.39	95.47	29.5	120.4	
Tb	159	He	3697668.10	0.4	3741562.06	98.83	29.5	120.4	
Bi	209	No Gas	4209241.70	0.3	4534931.8	92.82	29.5	120.4	

Interference Check Solution AB (ICS-AB) Report

Sample Name	ICSAB
File Name	014ICSB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 17:41:03
Sample Type	ICSB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Low	%High	QC Flag
9	Be	6	No Gas	20.529	ppb	4.3	59485.19	20	79.5	120.4	
11	B	6	No Gas	20.035	ppb	2.1	43596.86	20	79.5	120.4	
23	Na	45	He	96147.501	ppb	0.9	23926545.08	100000	79.5	120.4	
24	Mg	45	He	94444.726	ppb	0.4	14153636.32	100000	79.5	120.4	
27	Al	45	He	98765.818	ppb	0.4	5488604.50	100000	79.5	120.4	
28	Si	45	H2	508.845	ppb	1.6	50940.60	500	79.5	120.4	
39	K	45	He	97999.137	ppb	0.4	11528521.22	100000	79.5	120.4	
40	Ca	45	H2	99419.614	ppb	1.2	75886451.65	100000	79.5	120.4	
51	V	89	He	20.729	ppb	2.1	38520.25	20	79.5	120.4	
52	Cr	89	He	22.275	ppb	1.3	52745.52	20	79.5	120.4	
55	Mn	89	He	20.817	ppb	0.7	23022.60	20	79.5	120.4	
56	Fe	89	H2	99196.453	ppb	0.5	249202346.90	100000	79.5	120.4	
59	Co	89	He	19.861	ppb	1.1	72830.35	20	79.5	120.4	
60	Ni	89	He	20.200	ppb	1.8	20087.28	20	79.5	120.4	
63	Cu	89	He	11.798	ppb	2.2	77883.99	20	79.5	120.4	> +/- 10%
66	Zn	89	He	21.279	ppb	3.9	9164.46	20	79.5	120.4	
75	As	89	He	20.705	ppb	1.5	7023.55	20	79.5	120.4	
78	Se	89	H2	20.441	ppb	2.1	2809.16	20	79.5	120.4	
88	Sr	89	He	20.485	ppb	2.4	28741.95	20	79.5	120.4	
95	Mo	89	He	1993.563	ppb	0.5	3083718.11	2000	79.5	120.4	
107	Ag	89	He	18.486	ppb	1.1	93875.11	20	79.5	120.4	
111	Cd	89	He	19.093	ppb	2.1	13071.96	20	79.5	120.4	
118	Sn	159	He	20.395	ppb	2.2	26211.82	20	79.5	120.4	
121	Sb	159	No Gas	20.431	ppb	1.9	192320.76	20	79.5	120.4	
137	Ba	159	No Gas	20.866	ppb	0.8	70393.90	20	79.5	120.4	
182	W	159	No Gas	19.813	ppb	1.3	155065.62	20	79.5	120.4	
205	Tl	209	No Gas	20.245	ppb	1.0	299157.79	20	79.5	120.4	
208	Pb	209	No Gas	20.416	ppb	0.6	414015.79	20	79.5	120.4	
232	Th	209	No Gas	21.837	ppb	2.1	420498.03	20	79.5	120.4	
238	U	209	No Gas	21.883	ppb	2.9	402012.27	20	79.5	120.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2428225.66	1.2	2459183.84	98.74	29.5	120.4	
Sc	45	No Gas	4689855.00	0.4	4376311.73	107.16	29.5	120.4	
Sc	45	H2	633505.99	1.4	563225.15	112.48	29.5	120.4	
Sc	45	He	165924.78	1.4	146730.33	113.08	29.5	120.4	
Ge	72	No Gas	967681.13	0.7	936426.06	103.34	29.5	120.4	
Ge	72	H2	197110.42	0.7	183420.15	107.46	29.5	120.4	
Ge	72	He	107540.31	1.7	97408.84	110.4	29.5	120.4	
Y	89	H2	2985437.23	0.9	2733952.55	109.2	29.5	120.4	
Y	89	He	863636.26	1.5	791301.87	109.14	29.5	120.4	
Tb	159	No Gas	9238393.68	0.5	9359761.39	98.7	29.5	120.4	
Tb	159	He	3793540.91	0.6	3741562.06	101.39	29.5	120.4	
Bi	209	No Gas	4190362.98	0.9	4534931.8	92.4	29.5	120.4	

Linear Range Sample (LRS) Report

Sample Name	LRS1
File Name	015_LRS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 17:43:35
Sample Type	LRS
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High	QC Flag
9	Be	6	No Gas	98.975	ppb	1.5	306253.66	100	98.98	89.5	110.4	
11	B	6	No Gas	493.186	ppb	2.1	1006475.65	500	98.64	89.5	110.4	
51	V	89	He	1024.243	ppb	0.7	1864224.55	1000	102.42	89.5	110.4	
52	Cr	89	He	1914.296	ppb	1.4	4416022.11	2000	95.71	89.5	110.4	
55	Mn	89	He	1935.842	ppb	1.1	2099962.31	2000	96.79	89.5	110.4	
59	Co	89	He	1029.209	ppb	0.9	3705252.27	1000	102.92	89.5	110.4	
60	Ni	89	He	1006.218	ppb	0.5	979388.26	1000	100.62	89.5	110.4	
63	Cu	89	He	1628.076	ppb	0.7	5361403.88	2000	81.4	89.5	110.4	> +/- 10%
66	Zn	89	He	1953.134	ppb	1.0	792741.14	2000	97.66	89.5	110.4	
75	As	89	He	1002.941	ppb	1.1	323268.37	1000	100.29	89.5	110.4	
78	Se	89	H2	991.898	ppb	0.6	135205.16	1000	99.19	89.5	110.4	
88	Sr	89	He	1971.680	ppb	1.4	2714923.46	2000	98.58	89.5	110.4	
95	Mo	89	He	1004.649	ppb	0.7	1526705.00	1000	100.46	89.5	110.4	
107	Ag	89	He	94.755	ppb	1.2	472620.82	100	94.76	89.5	110.4	
111	Cd	89	He	987.788	ppb	1.1	664502.16	1000	98.78	89.5	110.4	
118	Sn	159	He	1041.506	ppb	1.8	1348372.02	1000	104.15	89.5	110.4	
121	Sb	159	No Gas	902.632	ppb	2.0	8891098.60	1000	90.26	89.5	110.4	
137	Ba	159	No Gas	1817.726	ppb	2.3	6387124.56	2000	90.89	89.5	110.4	
182	W	159	No Gas	901.166	ppb	2.9	7379589.95	1000	90.12	89.5	110.4	
205	Tl	209	No Gas	906.262	ppb	2.0	14936500.77	1000	90.63	89.5	110.4	
208	Pb	209	No Gas	1795.031	ppb	1.9	40590066.45	2000	89.75	89.5	110.4	
232	Th	209	No Gas	939.742	ppb	2.4	20184887.72	1000	93.97	89.5	110.4	
238	U	209	No Gas	925.355	ppb	3.2	18964338.25	1000	92.54	89.5	110.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2592807.82	1.5	2459183.84	105.43	29.5	120.4	
Sc	45	No Gas	4863689.98	2.1	4376311.73	111.14	29.5	120.4	
Ge	72	No Gas	1000942.94	1.2	936426.06	106.89	29.5	120.4	
Tb	159	No Gas	9670920.06	2.0	9359761.39	103.32	29.5	120.4	
Bi	209	No Gas	4675082.78	1.7	4534931.8	103.09	29.5	120.4	
Sc	45	H2	620055.89	1.4	563225.15	110.09	29.5	120.4	
Ge	72	H2	196450.84	2.1	183420.15	107.1	29.5	120.4	
Y	89	H2	2961841.84	0.7	2733952.55	108.34	29.5	120.4	
Sc	45	He	158968.68	1.1	146730.33	108.34	29.5	120.4	
Ge	72	He	105755.77	0.4	97408.84	108.57	29.5	120.4	
Y	89	He	848447.59	0.6	791301.87	107.22	29.5	120.4	
Tb	159	He	3837913.41	2.1	3741562.06	102.58	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	019_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 17:53:34
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	25.123	ppb	3.9	76379.41	25	100.49	89.8	110.2	
11	B	6	No Gas	25.069	ppb	4.8	55763.94	25	100.28	89.8	110.2	
23	Na	45	He	5134.015	ppb	1.6	1226033.14	5000	102.68	89.8	110.2	
24	Mg	45	He	4982.760	ppb	1.6	712008.88	5000	99.66	89.8	110.2	
27	Al	45	He	515.120	ppb	1.4	27325.86	500	103.02	89.8	110.2	
28	Si	45	H2	498.187	ppb	2.0	48093.79	500	99.64	89.8	110.2	
39	K	45	He	5555.283	ppb	0.6	638225.39	5000	111.11	89.8	110.2	> +/- 10%
40	Ca	45	H2	5096.020	ppb	1.9	3738056.89	5000	101.92	89.8	110.2	
51	V	89	He	25.952	ppb	1.2	46671.56	25	103.81	89.8	110.2	
52	Cr	89	He	26.035	ppb	0.4	59631.44	25	104.14	89.8	110.2	
55	Mn	89	He	25.931	ppb	1.6	27758.82	25	103.72	89.8	110.2	
56	Fe	89	H2	5035.021	ppb	0.4	12405353.04	5000	100.7	89.8	110.2	
59	Co	89	He	26.217	ppb	2.4	93080.02	25	104.87	89.8	110.2	
60	Ni	89	He	26.385	ppb	1.4	25385.98	25	105.54	89.8	110.2	
63	Cu	89	He	49.214	ppb	1.4	195996.53	25	196.86	89.8	110.2	> +/- 10%
66	Zn	89	He	25.876	ppb	1.7	10711.14	25	103.5	89.8	110.2	
75	As	89	He	25.505	ppb	3.1	8324.74	25	102.02	89.8	110.2	
78	Se	89	H2	25.252	ppb	1.8	3402.26	25	101.01	89.8	110.2	
88	Sr	89	He	25.367	ppb	1.3	34464.30	25	101.47	89.8	110.2	
95	Mo	89	He	25.715	ppb	0.8	38532.95	25	102.86	89.8	110.2	
107	Ag	89	He	25.347	ppb	1.6	124639.00	25	101.39	89.8	110.2	
111	Cd	89	He	25.310	ppb	1.7	16782.73	25	101.24	89.8	110.2	
118	Sn	159	He	25.973	ppb	1.9	33427.94	25	103.89	89.8	110.2	
121	Sb	159	No Gas	25.701	ppb	2.3	251984.95	25	102.8	89.8	110.2	
137	Ba	159	No Gas	25.858	ppb	3.4	90769.81	25	103.43	89.8	110.2	
182	W	159	No Gas	24.558	ppb	2.6	200177.76	25	98.23	89.8	110.2	
205	Tl	209	No Gas	24.894	ppb	3.6	404248.86	25	99.58	89.8	110.2	
208	Pb	209	No Gas	25.276	ppb	2.7	563248.79	25	101.1	89.8	110.2	
232	Th	209	No Gas	26.309	ppb	2.8	556790.97	25	105.24	89.8	110.2	
238	U	209	No Gas	26.225	ppb	3.1	529502.12	25	104.9	89.8	110.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2548294.72	2.2	2459183.84	103.62	29.5	120.4	
Sc	45	No Gas	4706958.25	0.7	4376311.73	107.56	29.5	120.4	
Sc	45	H2	608607.48	2.2	563225.15	108.06	29.5	120.4	
Sc	45	He	158198.95	1.4	146730.33	107.82	29.5	120.4	
Ge	72	No Gas	979136.99	1.4	936426.06	104.56	29.5	120.4	
Ge	72	H2	193781.10	1.7	183420.15	105.65	29.5	120.4	
Ge	72	He	105215.43	0.6	97408.84	108.01	29.5	120.4	
Y	89	H2	2927484.75	1.6	2733952.55	107.08	29.5	120.4	
Y	89	He	836305.93	0.8	791301.87	105.69	29.5	120.4	
Tb	159	No Gas	9623561.38	0.9	9359761.39	102.82	29.5	120.4	
Tb	159	He	3803359.81	1.7	3741562.06	101.65	29.5	120.4	
Bi	209	No Gas	4605689.85	1.1	4534931.8	101.56	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	020_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 17:56:04
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.030	ppb	38.6	101.11	0.2	
11	B	6	No Gas	0.442	ppb	8.0	6705.14	4	
23	Na	45	He	35.177	ppb	4.3	16898.73	200	
24	Mg	45	He	11.138	ppb	12.1	1753.57	20	Failed DoD
27	Al	45	He	9.490	ppb	10.1	540.03	20	
28	Si	45	H2	-0.401	ppb	N/A	9073.00	100	
39	K	45	He	21.827	ppb	6.4	18620.46	200	
40	Ca	45	H2	11.087	ppb	1.0	10349.68	20	Failed DoD
51	V	89	He	0.023	ppb	65.7	160.01	1	
52	Cr	89	He	0.041	ppb	19.6	533.91	1	
55	Mn	89	He	0.061	ppb	18.2	100.65	0.4	
56	Fe	89	H2	10.633	ppb	5.8	28163.09	20	Failed DoD
59	Co	89	He	0.037	ppb	36.8	186.68	0.2	
60	Ni	89	He	0.022	ppb	82.9	98.89	0.4	
63	Cu	89	He	21.893	ppb	1.8	109195.04	0.6	Fail All Methods□ Failed DoD
66	Zn	89	He	-0.024	ppb	N/A	358.91	2	
75	As	89	He	0.031	ppb	74.1	240.36	1	
78	Se	89	H2	0.089	ppb	19.8	12.67	1	
88	Sr	89	He	0.047	ppb	14.6	100.00	1	
95	Mo	89	He	0.227	ppb	11.6	358.91	1	
107	Ag	89	He	0.010	ppb	51.7	81.12	0.2	
111	Cd	89	He	0.034	ppb	34.8	22.96	0.2	
118	Sn	159	He	0.116	ppb	10.7	262.24	1	
121	Sb	159	No Gas	0.047	ppb	6.6	487.22	0.2	
137	Ba	159	No Gas	0.002	ppb	289.6	360.41	0.4	
182	W	159	No Gas	0.148	ppb	11.6	1228.10	1	
205	Tl	209	No Gas	0.030	ppb	18.5	520.59	0.2	
208	Pb	209	No Gas	0.059	ppb	9.0	1485.03	0.2	
232	Th	209	No Gas	0.053	ppb	10.6	1184.72	1	
238	U	209	No Gas	0.025	ppb	28.2	507.25	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2556497.21	1.6	2459183.84	103.96	29.5	120.4	
Sc	45	No Gas	4681895.27	3.1	4376311.73	106.98	29.5	120.4	
Sc	45	H2	609348.24	1.3	563225.15	108.19	29.5	120.4	
Sc	45	He	159308.51	0.9	146730.33	108.57	29.5	120.4	
Ge	72	No Gas	972145.05	1.7	936426.06	103.81	29.5	120.4	
Ge	72	H2	195793.53	1.1	183420.15	106.75	29.5	120.4	
Ge	72	He	105577.99	0.6	97408.84	108.39	29.5	120.4	
Y	89	H2	2907401.96	1.7	2733952.55	106.34	29.5	120.4	
Y	89	He	845959.45	1.1	791301.87	106.91	29.5	120.4	
Tb	159	No Gas	9502297.29	1.0	9359761.39	101.52	29.5	120.4	
Tb	159	He	3869214.35	1.1	3741562.06	103.41	29.5	120.4	
Bi	209	No Gas	4602626.53	1.9	4534931.8	101.49	29.5	120.4	

Prep Blank (PB) Report

Sample Name	PBWOG29IMW1
File Name	021_PBE.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 17:58:36
Sample Type	PB200.8
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	6	No Gas	0.019	ppb	28.5	64.45	0.1	
B	11	6	No Gas	0.793	ppb	28.0	7183.14	2	
Na	23	45	He	46.943	ppb	1.5	19588.50	100	
Mg	24	45	He	17.610	ppb	12.9	2667.12	10	200.8 PB Fails DoD
Al	27	45	He	15.369	ppb	3.6	848.94	10	200.8 PB Fails DoD
Si	28	45	H2	24.970	ppb	18.4	11013.19	50	
K	39	45	He	26.935	ppb	10.1	19079.21	100	
Ca	40	45	H2	19.444	ppb	3.0	16407.87	10	200.8 PB Fails DoD
V	51	89	He	0.039	ppb	47.4	190.01	0.5	
Cr	52	89	He	0.096	ppb	20.4	663.23	0.5	
Mn	55	89	He	0.231	ppb	13.1	285.29	0.2	200.8 PB Fails DoD
Fe	56	89	H2	20.182	ppb	1.6	51860.13	10	200.8 PB Fails DoD□ 200.8 PB Fails non-DoD
Co	59	89	He	0.039	ppb	10.6	193.35	0.1	
Ni	60	89	He	0.055	ppb	7.2	131.12	0.2	
Cu	63	89	He	20.980	ppb	1.3	106518.54	0.3	200.8 PB Fails DoD□ 200.8 PB Fails non-DoD
Zn	66	89	He	0.806	ppb	17.7	696.71	1	
As	75	89	He	0.064	ppb	60.8	251.70	0.5	
Se	78	89	H2	0.065	ppb	0.7	9.50	0.5	
Sr	88	89	He	0.085	ppb	14.5	152.23	0.5	
Mo	95	89	He	0.161	ppb	19.6	261.12	0.5	
Ag	107	89	He	0.011	ppb	43.2	86.67	0.1	
Cd	111	89	He	0.038	ppb	11.2	25.93	0.1	
Sn	118	159	He	0.242	ppb	18.2	422.25	0.5	
Sb	121	159	No Gas	0.052	ppb	19.4	527.27	0.1	
Ba	137	159	No Gas	1.090	ppb	12.5	4055.14	0.2	200.8 PB Fails DoD□ 200.8 PB Fails non-DoD
W	182	159	No Gas	0.077	ppb	21.8	640.73	0.5	
Tl	205	209	No Gas	0.037	ppb	28.8	630.72	0.1	
[Pb]	206	209	No Gas	0.118	ppb	7.3	687.47	0.1	200.8 PB Fails DoD
[Pb]	207	209	No Gas	0.095	ppb	5.0	477.22	0.1	
Pb	208	209	No Gas	0.107	ppb	14.2	2472.89	0.1	200.8 PB Fails DoD
Th	232	209	No Gas	0.036	ppb	30.1	817.61	0.5	
U	238	209	No Gas	0.030	ppb	33.5	587.35	0.1	

QC ISTD Table

Prep Blank (PB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2484914.98	6.2	2459183.84	101.05	29.5	120.4	
Sc	45	No Gas	4559804.23	4.1	4376311.73	104.19	29.5	120.4	
Sc	45	H2	606482.40	1.2	563225.15	107.68	29.5	120.4	
Sc	45	He	158358.69	1.3	146730.33	107.92	29.5	120.4	
Ge	72	No Gas	936244.77	6.9	936426.06	99.98	29.5	120.4	
Ge	72	H2	192858.10	1.3	183420.15	105.15	29.5	120.4	
Ge	72	He	105491.31	1.0	97408.84	108.3	29.5	120.4	
Y	89	H2	2925199.44	0.6	2733952.55	107	29.5	120.4	
Y	89	He	848389.50	1.0	791301.87	107.21	29.5	120.4	
Tb	159	No Gas	9381280.90	3.5	9359761.39	100.23	29.5	120.4	
Tb	159	He	3832733.38	0.8	3741562.06	102.44	29.5	120.4	
Bi	209	No Gas	4501928.02	4.3	4534931.8	99.27	29.5	120.4	

Laboratory Control Sample (LCS) Report

Sample Name	LCSWOG29IMW1
File Name	022_LCS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 18:01:06
Sample Type	LCS
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	6	No Gas	43.582	ppb	1.8	147038.36	50	87.16	79.5	120.4	
B	11	6	No Gas	429.518	ppb	1.5	956582.55	500	85.9	79.5	120.4	
Na	23	45	He	7689.300	ppb	1.3	1846588.89	7500	102.52	79.5	120.4	
Mg	24	45	He	4978.117	ppb	1.5	716984.61	5000	99.56	79.5	120.4	
Al	27	45	He	1954.168	ppb	1.3	104384.07	2000	97.71	79.5	120.4	
Si	28	45	H2	1057.333	ppb	1.2	91114.40	1000	105.73	79.5	120.4	
K	39	45	He	10156.514	ppb	0.5	1162695.18	10000	101.57	79.5	120.4	
Ca	40	45	H2	2584.223	ppb	0.7	1881330.30	2500	103.37	79.5	120.4	
V	51	89	He	494.447	ppb	0.8	898268.45	500	98.89	79.5	120.4	
Cr	52	89	He	197.350	ppb	1.0	454781.12	200	98.68	79.5	120.4	
Mn	55	89	He	493.627	ppb	0.4	534484.97	500	98.73	79.5	120.4	
Fe	56	89	H2	1046.065	ppb	0.2	2533946.88	1000	104.61	79.5	120.4	
Co	59	89	He	506.016	ppb	0.4	1818290.74	500	101.2	79.5	120.4	
Ni	60	89	He	503.186	ppb	1.6	488819.17	500	100.64	79.5	120.4	
Cu	63	89	He	213.414	ppb	1.1	734317.66	250	85.37	79.5	120.4	
Zn	66	89	He	490.423	ppb	1.4	198937.83	500	98.08	79.5	120.4	
As	75	89	He	101.260	ppb	1.0	32782.66	100	101.26	79.5	120.4	
Se	78	89	H2	100.265	ppb	0.4	13272.87	100	100.26	79.5	120.4	
Sr	88	89	He	495.860	ppb	0.9	681503.84	500	99.17	79.5	120.4	
Mo	95	89	He	100.028	ppb	1.1	151724.07	100	100.03	79.5	120.4	
Ag	107	89	He	48.830	ppb	1.5	243092.29	50	97.66	79.5	120.4	
Cd	111	89	He	247.621	ppb	1.5	166251.45	250	99.05	79.5	120.4	
Sn	118	159	He	506.666	ppb	0.7	654799.15	500	101.33	79.5	120.4	
Sb	121	159	No Gas	101.963	ppb	1.2	993121.35	100	101.96	79.5	120.4	
Ba	137	159	No Gas	1774.702	ppb	1.1	6166391.17	2000	88.74	79.5	120.4	
W	182	159	No Gas	98.552	ppb	1.0	798094.50	100	98.55	79.5	120.4	
Tl	205	209	No Gas	93.194	ppb	0.6	1489337.07	100	93.19	79.5	120.4	
Pb	208	209	No Gas	97.797	ppb	0.6	2144419.66	100	97.8	79.5	120.4	
Th	232	209	No Gas	99.900	ppb	1.5	2080733.73	100	99.9	79.5	120.4	
U	238	209	No Gas	98.600	ppb	1.2	1959633.94	100	98.6	79.5	120.4	

QC ISTD Table

Laboratory Control Sample (LCS) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2826548.87	0.5	2459183.84	114.94	29.5	120.4	
Sc	45	No Gas	4694061.19	1.8	4376311.73	107.26	29.5	120.4	
Sc	45	H2	603472.38	1.6	563225.15	107.15	29.5	120.4	
Sc	45	He	159448.99	1.2	146730.33	108.67	29.5	120.4	
Ge	72	No Gas	976014.69	1.4	936426.06	104.23	29.5	120.4	
Ge	72	H2	193061.63	1.5	183420.15	105.26	29.5	120.4	
Ge	72	He	105407.12	0.5	97408.84	108.21	29.5	120.4	
Y	89	H2	2876251.52	1.8	2733952.55	105.2	29.5	120.4	
Y	89	He	846843.33	1.2	791301.87	107.02	29.5	120.4	
Tb	159	No Gas	9560409.86	1.4	9359761.39	102.14	29.5	120.4	
Tb	159	He	3830196.78	0.6	3741562.06	102.37	29.5	120.4	
Bi	209	No Gas	4532116.23	1.5	4534931.8	99.94	29.5	120.4	

Sample Report

Sample Name RINSE

File Name 026SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 18:11:05

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.015	ppb	14.1	54.45	100	
11	B	6	No Gas	0.516	ppb	13.1	6879.64	1000	
23	Na	45	He	22.790	ppb	5.6	13935.55	200000	
24	Mg	45	He	5.376	ppb	11.2	924.55	200000	
27	Al	45	He	3.280	ppb	10.9	208.90	200000	
28	Si	45	H2	-2.529	ppb	N/A	8869.31	10000	
39	K	45	He	11.089	ppb	47.4	17402.70	200000	
40	Ca	45	H2	8.587	ppb	7.8	8477.27	200000	
51	V	89	He	0.012	ppb	77.5	141.12	1000	
52	Cr	89	He	0.006	ppb	132.9	457.26	2000	
55	Mn	89	He	0.054	ppb	22.1	93.98	2000	
56	Fe	89	H2	3.172	ppb	2.6	9937.93	100000	
59	Co	89	He	0.034	ppb	23.3	175.58	1000	
60	Ni	89	He	0.026	ppb	108.8	103.34	1000	
63	Cu	89	He	10.176	ppb	3.6	71539.30	2000	
66	Zn	89	He	-0.122	ppb	N/A	321.13	2000	
75	As	89	He	0.004	ppb	2028.8	233.36	1000	
78	Se	89	H2	0.027	ppb	41.3	4.33	1000	
88	Sr	89	He	0.030	ppb	14.8	77.78	2000	
95	Mo	89	He	0.086	ppb	30.9	146.67	1000	
107	Ag	89	He	0.007	ppb	10.8	68.89	100	
111	Cd	89	He	0.017	ppb	46.9	11.85	1000	
118	Sn	159	He	0.091	ppb	25.4	230.01	1000	
121	Sb	159	No Gas	0.025	ppb	24.1	276.98	1000	
137	Ba	159	No Gas	0.089	ppb	10.0	674.11	2000	
182	W	159	No Gas	0.042	ppb	16.6	383.77	1000	
205	Tl	209	No Gas	0.020	ppb	15.9	377.09	1000	
208	Pb	209	No Gas	0.030	ppb	3.1	864.32	2000	
232	Th	209	No Gas	0.017	ppb	20.3	440.50	1000	
238	U	209	No Gas	0.015	ppb	15.9	317.03	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2566453.42	1.9	2459183.84	104.36	29.5	120.4	
Sc	45	No Gas	4698425.55	1.0	4376311.73	107.36	29.5	120.4	
Sc	45	H2	606766.43	0.3	563225.15	107.73	29.5	120.4	
Sc	45	He	159289.91	1.5	146730.33	108.56	29.5	120.4	
Ge	72	No Gas	980526.88	0.5	936426.06	104.71	29.5	120.4	
Ge	72	H2	194321.39	0.3	183420.15	105.94	29.5	120.4	
Ge	72	He	105240.46	1.0	97408.84	108.04	29.5	120.4	
Y	89	H2	2911403.80	0.8	2733952.55	106.49	29.5	120.4	
Y	89	He	852521.03	1.1	791301.87	107.74	29.5	120.4	
Tb	159	No Gas	9714895.55	1.1	9359761.39	103.79	29.5	120.4	
Tb	159	He	3879235.22	1.2	3741562.06	103.68	29.5	120.4	
Bi	209	No Gas	4732143.43	1.1	4534931.8	104.35	29.5	120.4	

Sample Report

Sample Name SO4787-001P

File Name 027SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 18:13:37

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	45.011	ppb	3.5	149059.29	100	
11	B	6	No Gas	453.388	ppb	2.4	990842.03	1000	
23	Na	45	He	16812.579	ppb	0.1	3991168.11	200000	
24	Mg	45	He	9788.520	ppb	0.4	1397000.62	200000	
27	Al	45	He	1956.833	ppb	1.5	103588.56	200000	
28	Si	45	H2	7000.827	ppb	1.5	554276.76	10000	
39	K	45	He	12327.868	ppb	0.8	1395010.54	200000	
40	Ca	45	H2	34407.816	ppb	1.2	25094824.90	200000	
51	V	89	He	508.138	ppb	1.5	907713.23	1000	
52	Cr	89	He	202.165	ppb	0.6	458065.72	2000	
55	Mn	89	He	511.048	ppb	0.2	544069.06	2000	
56	Fe	89	H2	1038.902	ppb	1.5	2538267.27	100000	
59	Co	89	He	509.125	ppb	1.0	1798719.73	1000	
60	Ni	89	He	503.813	ppb	0.4	481257.68	1000	
63	Cu	89	He	211.000	ppb	0.6	714280.26	2000	
66	Zn	89	He	502.210	ppb	1.0	200306.99	2000	
75	As	89	He	107.214	ppb	0.5	34115.62	1000	
78	Se	89	H2	100.474	ppb	1.3	13414.67	1000	
88	Sr	89	He	564.112	ppb	0.4	762341.25	2000	
95	Mo	89	He	105.104	ppb	0.5	156757.85	1000	
107	Ag	89	He	49.726	ppb	0.9	243424.01	100	
111	Cd	89	He	251.807	ppb	0.3	166239.68	1000	
118	Sn	159	He	513.363	ppb	0.2	663186.09	1000	
121	Sb	159	No Gas	98.887	ppb	2.7	986973.83	1000	
137	Ba	159	No Gas	1788.236	ppb	1.7	6365747.66	2000	
182	W	159	No Gas	99.717	ppb	1.9	827342.46	1000	
205	Tl	209	No Gas	93.536	ppb	1.6	1520683.04	1000	
208	Pb	209	No Gas	97.464	ppb	2.1	2174010.21	2000	
232	Th	209	No Gas	101.189	ppb	2.7	2143754.59	1000	
238	U	209	No Gas	100.084	ppb	2.8	2023207.24	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2775208.68	1.3	2459183.84	112.85	29.5	120.4	
Sc	45	No Gas	4738972.66	0.7	4376311.73	108.29	29.5	120.4	
Sc	45	H2	605335.46	1.6	563225.15	107.48	29.5	120.4	
Sc	45	He	157996.85	0.4	146730.33	107.68	29.5	120.4	
Ge	72	No Gas	985348.27	0.9	936426.06	105.22	29.5	120.4	
Ge	72	H2	191645.38	0.4	183420.15	104.48	29.5	120.4	
Ge	72	He	104612.61	0.2	97408.84	107.4	29.5	120.4	
Y	89	H2	2901014.32	0.8	2733952.55	106.11	29.5	120.4	
Y	89	He	832620.20	0.7	791301.87	105.22	29.5	120.4	
Tb	159	No Gas	9797033.60	2.1	9359761.39	104.67	29.5	120.4	
Tb	159	He	3828581.51	0.5	3741562.06	102.33	29.5	120.4	
Bi	209	No Gas	4610778.12	0.7	4534931.8	101.67	29.5	120.4	

Sample Report

Sample Name SO4787-001S

File Name 028SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 18:16:02

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	44.102	ppb	1.5	146267.36	100	
11	B	6	No Gas	447.505	ppb	1.4	979466.25	1000	
23	Na	45	He	16769.071	ppb	0.6	3995405.84	200000	
24	Mg	45	He	9713.989	ppb	0.4	1391420.14	200000	
27	Al	45	He	1958.833	ppb	1.2	104071.16	200000	
28	Si	45	H2	6906.551	ppb	1.3	546429.95	10000	
39	K	45	He	12283.488	ppb	1.0	1395107.74	200000	
40	Ca	45	H2	34157.771	ppb	0.5	24892480.18	200000	
51	V	89	He	499.656	ppb	1.7	901162.32	1000	
52	Cr	89	He	199.053	ppb	0.6	455381.25	2000	
55	Mn	89	He	503.825	ppb	0.6	541554.15	2000	
56	Fe	89	H2	1039.185	ppb	1.0	2525186.84	100000	
59	Co	89	He	499.018	ppb	0.3	1780168.38	1000	
60	Ni	89	He	498.811	ppb	0.6	481095.06	1000	
63	Cu	89	He	206.683	ppb	0.8	707195.53	2000	
66	Zn	89	He	496.043	ppb	0.5	199766.83	2000	
75	As	89	He	106.050	ppb	0.4	34075.55	1000	
78	Se	89	H2	98.928	ppb	0.5	13137.09	1000	
88	Sr	89	He	559.138	ppb	0.5	762931.30	2000	
95	Mo	89	He	104.135	ppb	0.9	156808.93	1000	
107	Ag	89	He	48.716	ppb	0.7	240781.92	100	
111	Cd	89	He	248.492	ppb	0.4	165638.80	1000	
118	Sn	159	He	514.097	ppb	0.2	668645.35	1000	
121	Sb	159	No Gas	98.537	ppb	4.3	975052.45	1000	
137	Ba	159	No Gas	1778.616	ppb	1.9	6278288.33	2000	
182	W	159	No Gas	99.005	ppb	2.2	814517.25	1000	
205	Tl	209	No Gas	92.381	ppb	1.9	1494987.60	1000	
208	Pb	209	No Gas	95.849	ppb	2.6	2127993.74	2000	
232	Th	209	No Gas	101.398	ppb	3.0	2138102.82	1000	
238	U	209	No Gas	100.084	ppb	3.4	2013672.94	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2778674.13	1.1	2459183.84	112.99	29.5	120.4	
Sc	45	No Gas	4734099.45	0.6	4376311.73	108.18	29.5	120.4	
Sc	45	H2	604801.29	1.2	563225.15	107.38	29.5	120.4	
Sc	45	He	158574.83	0.3	146730.33	108.07	29.5	120.4	
Ge	72	No Gas	987557.38	2.2	936426.06	105.46	29.5	120.4	
Ge	72	H2	193518.22	0.9	183420.15	105.51	29.5	120.4	
Ge	72	He	105654.13	0.7	97408.84	108.46	29.5	120.4	
Y	89	H2	2885332.52	0.8	2733952.55	105.54	29.5	120.4	
Y	89	He	840690.66	1.1	791301.87	106.24	29.5	120.4	
Tb	159	No Gas	9713112.36	1.0	9359761.39	103.78	29.5	120.4	
Tb	159	He	3854590.36	0.8	3741562.06	103.02	29.5	120.4	
Bi	209	No Gas	4590164.90	1.9	4534931.8	101.22	29.5	120.4	

Sample Report

Sample Name SO4787-002

File Name 029SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 18:18:28

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.062	ppb	30.3	198.90	100	
11	B	6	No Gas	16.588	ppb	3.2	39127.12	1000	
23	Na	45	He	9497.086	ppb	1.2	2274590.55	200000	
24	Mg	45	He	4792.028	ppb	1.4	688933.93	200000	
27	Al	45	He	4.681	ppb	17.7	283.35	200000	
28	Si	45	H2	5872.615	ppb	1.1	470244.91	10000	
39	K	45	He	2319.573	ppb	0.9	277497.17	200000	
40	Ca	45	H2	33248.225	ppb	0.8	24450688.25	200000	
51	V	89	He	0.339	ppb	9.1	733.38	1000	
52	Cr	89	He	0.133	ppb	16.6	747.89	2000	
55	Mn	89	He	1.464	ppb	0.6	1621.80	2000	
56	Fe	89	H2	8.093	ppb	0.9	21868.21	100000	
59	Co	89	He	0.121	ppb	1.2	486.71	1000	
60	Ni	89	He	0.189	ppb	11.7	261.12	1000	
63	Cu	89	He	8.296	ppb	2.6	64979.80	2000	
66	Zn	89	He	3.367	ppb	4.0	1733.51	2000	
75	As	89	He	4.071	ppb	1.9	1540.59	1000	
78	Se	89	H2	0.176	ppb	10.1	24.17	1000	
88	Sr	89	He	65.762	ppb	0.7	90485.67	2000	
95	Mo	89	He	1.348	ppb	7.1	2061.35	1000	
107	Ag	89	He	0.015	ppb	18.9	107.78	100	
111	Cd	89	He	0.070	ppb	20.4	47.41	1000	
118	Sn	159	He	0.764	ppb	3.1	1105.64	1000	
121	Sb	159	No Gas	0.168	ppb	11.2	1715.37	1000	
137	Ba	159	No Gas	5.947	ppb	3.0	21558.38	2000	
182	W	159	No Gas	0.339	ppb	0.8	2846.83	1000	
205	Tl	209	No Gas	0.072	ppb	28.1	1251.47	1000	
208	Pb	209	No Gas	0.374	ppb	3.8	8771.00	2000	
232	Th	209	No Gas	0.192	ppb	20.4	4262.21	1000	
238	U	209	No Gas	0.297	ppb	8.4	6191.80	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2564476.13	1.1	2459183.84	104.28	29.5	120.4	
Sc	45	No Gas	4772952.78	1.0	4376311.73	109.06	29.5	120.4	
Sc	45	H2	610306.95	1.2	563225.15	108.36	29.5	120.4	
Sc	45	He	159158.40	1.3	146730.33	108.47	29.5	120.4	
Ge	72	No Gas	986000.57	1.5	936426.06	105.29	29.5	120.4	
Ge	72	H2	194091.28	1.3	183420.15	105.82	29.5	120.4	
Ge	72	He	105859.87	0.8	97408.84	108.68	29.5	120.4	
Y	89	H2	2894359.60	1.4	2733952.55	105.87	29.5	120.4	
Y	89	He	847473.04	0.6	791301.87	107.1	29.5	120.4	
Tb	159	No Gas	9805774.99	0.7	9359761.39	104.77	29.5	120.4	
Tb	159	He	3864141.26	0.7	3741562.06	103.28	29.5	120.4	
Bi	209	No Gas	4751135.76	0.4	4534931.8	104.77	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	031_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 18:23:29
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	24.894	ppb	2.6	76257.66	25	99.58	89.8	110.2	
11	B	6	No Gas	25.455	ppb	2.0	56965.17	25	101.82	89.8	110.2	
23	Na	45	He	5152.408	ppb	1.0	1243729.77	5000	103.05	89.8	110.2	
24	Mg	45	He	4979.856	ppb	0.8	719317.91	5000	99.6	89.8	110.2	
27	Al	45	He	507.132	ppb	0.8	27192.21	500	101.43	89.8	110.2	
28	Si	45	H2	504.594	ppb	2.5	48496.33	500	100.92	89.8	110.2	
39	K	45	He	5551.259	ppb	1.4	644606.42	5000	111.03	89.8	110.2	> +/- 10%
40	Ca	45	H2	5147.260	ppb	1.4	3768382.62	5000	102.95	89.8	110.2	
51	V	89	He	25.759	ppb	0.3	47123.05	25	103.04	89.8	110.2	
52	Cr	89	He	26.006	ppb	1.3	60586.61	25	104.02	89.8	110.2	
55	Mn	89	He	25.678	ppb	0.5	27963.15	25	102.71	89.8	110.2	
56	Fe	89	H2	5049.476	ppb	0.8	12380015.62	5000	100.99	89.8	110.2	
59	Co	89	He	25.901	ppb	0.9	93544.86	25	103.6	89.8	110.2	
60	Ni	89	He	26.613	ppb	1.0	26047.19	25	106.45	89.8	110.2	
63	Cu	89	He	26.726	ppb	0.9	125648.76	25	106.9	89.8	110.2	
66	Zn	89	He	25.628	ppb	3.6	10794.57	25	102.51	89.8	110.2	
75	As	89	He	25.151	ppb	1.3	8354.10	25	100.6	89.8	110.2	
78	Se	89	H2	25.462	ppb	1.4	3414.43	25	101.85	89.8	110.2	
88	Sr	89	He	25.274	ppb	2.9	34925.37	25	101.1	89.8	110.2	
95	Mo	89	He	25.579	ppb	1.2	38986.37	25	102.32	89.8	110.2	
107	Ag	89	He	25.287	ppb	1.0	126480.02	25	101.15	89.8	110.2	
111	Cd	89	He	25.007	ppb	1.3	16866.90	25	100.03	89.8	110.2	
118	Sn	159	He	25.748	ppb	1.0	33990.45	25	102.99	89.8	110.2	
121	Sb	159	No Gas	25.235	ppb	1.0	256234.92	25	100.94	89.8	110.2	
137	Ba	159	No Gas	25.639	ppb	2.0	93216.31	25	102.56	89.8	110.2	
182	W	159	No Gas	24.564	ppb	0.8	207361.21	25	98.26	89.8	110.2	
205	Tl	209	No Gas	24.950	ppb	1.8	422738.77	25	99.8	89.8	110.2	
208	Pb	209	No Gas	25.219	ppb	2.2	586329.80	25	100.88	89.8	110.2	
232	Th	209	No Gas	26.309	ppb	2.4	580880.74	25	105.24	89.8	110.2	
238	U	209	No Gas	26.359	ppb	2.4	555245.52	25	105.44	89.8	110.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2566383.35	0.6	2459183.84	104.36	29.5	120.4	
Sc	45	No Gas	4824457.41	2.2	4376311.73	110.24	29.5	120.4	
Sc	45	H2	607308.56	1.1	563225.15	107.83	29.5	120.4	
Sc	45	He	159896.17	0.5	146730.33	108.97	29.5	120.4	
Ge	72	No Gas	1007252.81	1.3	936426.06	107.56	29.5	120.4	
Ge	72	H2	191938.29	2.0	183420.15	104.64	29.5	120.4	
Ge	72	He	106145.94	0.1	97408.84	108.97	29.5	120.4	
Y	89	H2	2913099.40	1.0	2733952.55	106.55	29.5	120.4	
Y	89	He	850684.54	0.9	791301.87	107.5	29.5	120.4	
Tb	159	No Gas	9965753.11	1.6	9359761.39	106.47	29.5	120.4	
Tb	159	He	3900048.73	0.3	3741562.06	104.24	29.5	120.4	
Bi	209	No Gas	4805021.05	1.6	4534931.8	105.96	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	032_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 18:25:58
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.034	ppb	22.4	113.34	0.2	
11	B	6	No Gas	0.739	ppb	21.0	7358.77	4	
23	Na	45	He	15.331	ppb	5.7	12332.47	200	
24	Mg	45	He	2.767	ppb	20.2	557.83	20	
27	Al	45	He	1.482	ppb	17.2	114.45	20	
28	Si	45	H2	3.425	ppb	86.6	9426.97	100	
39	K	45	He	5.054	ppb	79.6	16970.93	200	
40	Ca	45	H2	6.317	ppb	9.6	6881.92	20	
51	V	89	He	0.014	ppb	97.0	144.45	1	
52	Cr	89	He	-0.005	ppb	N/A	434.60	1	
55	Mn	89	He	0.051	ppb	19.3	91.32	0.4	
56	Fe	89	H2	3.048	ppb	20.2	9650.83	20	
59	Co	89	He	0.037	ppb	9.0	186.68	0.2	
60	Ni	89	He	0.017	ppb	152.3	94.45	0.4	
63	Cu	89	He	4.460	ppb	1.5	52971.37	0.6	Fail All Methods□ Failed DoD
66	Zn	89	He	-0.023	ppb	N/A	363.35	2	
75	As	89	He	-0.032	ppb	N/A	222.36	1	
78	Se	89	H2	0.065	ppb	40.2	9.50	1	
88	Sr	89	He	0.022	ppb	67.0	66.67	1	
95	Mo	89	He	0.090	ppb	15.6	153.34	1	
107	Ag	89	He	0.009	ppb	18.6	76.67	0.2	
111	Cd	89	He	0.022	ppb	19.8	15.56	0.2	
118	Sn	159	He	0.132	ppb	12.6	283.35	1	
121	Sb	159	No Gas	0.041	ppb	21.3	447.18	0.2	
137	Ba	159	No Gas	0.129	ppb	12.7	830.96	0.4	
182	W	159	No Gas	0.122	ppb	16.7	1054.56	1	
205	Tl	209	No Gas	0.037	ppb	8.3	664.11	0.2	
208	Pb	209	No Gas	0.037	ppb	13.2	1021.17	0.2	
232	Th	209	No Gas	0.070	ppb	17.8	1605.23	1	
238	U	209	No Gas	0.029	ppb	35.0	607.37	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2577581.69	1.6	2459183.84	104.81	29.5	120.4	
Sc	45	No Gas	4820349.35	0.3	4376311.73	110.15	29.5	120.4	
Sc	45	H2	612686.68	1.5	563225.15	108.78	29.5	120.4	
Sc	45	He	161627.61	0.9	146730.33	110.15	29.5	120.4	
Ge	72	No Gas	996705.02	2.3	936426.06	106.44	29.5	120.4	
Ge	72	H2	193731.90	0.5	183420.15	105.62	29.5	120.4	
Ge	72	He	106498.86	0.8	97408.84	109.33	29.5	120.4	
Y	89	H2	2918013.54	1.5	2733952.55	106.73	29.5	120.4	
Y	89	He	855836.45	0.9	791301.87	108.16	29.5	120.4	
Tb	159	No Gas	9896466.03	0.9	9359761.39	105.73	29.5	120.4	
Tb	159	He	3875799.35	1.0	3741562.06	103.59	29.5	120.4	
Bi	209	No Gas	4773155.17	0.9	4534931.8	105.25	29.5	120.4	

Sample Report

Sample Name SO4839-001

File Name 038SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 18:41:05

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Fail

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.023	ppb	15.8	98.89	100	
11	B	6	No Gas	20.442	ppb	4.4	59016.47	1000	
23	Na	45	He	34202.953	ppb	3.0	10531328.04	200000	
24	Mg	45	He	735.273	ppb	0.7	136471.33	200000	
27	Al	45	He	307.581	ppb	1.6	21185.41	200000	
28	Si	45	H2	747.714	ppb	4.6	84827.36	10000	
39	K	45	He	1185.956	ppb	1.9	193080.55	200000	
40	Ca	45	H2	3052.162	ppb	2.2	2809536.31	200000	
51	V	89	He	1.379	ppb	2.6	3191.59	1000	
52	Cr	89	He	2.351	ppb	4.2	7117.86	2000	
55	Mn	89	He	25.888	ppb	1.9	34140.33	2000	
56	Fe	89	H2	528.086	ppb	0.9	1522825.89	100000	
59	Co	89	He	0.493	ppb	8.5	2215.90	1000	
60	Ni	89	He	40.428	ppb	0.7	47872.95	1000	
63	Cu	89	He	26.653	ppb	2.1	151873.98	2000	
66	Zn	89	He	68.561	ppb	1.2	34223.90	2000	
75	As	89	He	1.492	ppb	6.5	863.46	1000	
78	Se	89	H2	0.150	ppb	7.0	24.50	1000	
88	Sr	89	He	15.718	ppb	1.4	26324.79	2000	
95	Mo	89	He	14.396	ppb	1.1	26583.22	1000	
107	Ag	89	He	0.028	ppb	1.9	206.68	100	
111	Cd	89	He	0.084	ppb	6.7	68.89	1000	
118	Sn	159	He	0.368	ppb	8.9	614.48	1000	
121	Sb	159	No Gas	0.766	ppb	2.4	7513.83	1000	
137	Ba	159	No Gas	9.862	ppb	2.0	34694.13	2000	
182	W	159	No Gas	0.625	ppb	4.5	5106.77	1000	
205	Tl	209	No Gas	0.019	ppb	28.1	330.37	1000	
208	Pb	209	No Gas	0.989	ppb	1.7	20563.00	2000	
232	Th	209	No Gas	0.117	ppb	10.5	2369.59	1000	
238	U	209	No Gas	0.113	ppb	9.8	2125.89	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3231929.57	3.1	2459183.84	131.42	29.5	120.4	6020/DoD□ EPA
Sc	45	No Gas	5741822.30	1.1	4376311.73	131.2	29.5	120.4	6020/DoD□ EPA
Sc	45	H2	763242.68	1.2	563225.15	135.51	29.5	120.4	6020/DoD□ EPA
Sc	45	He	205208.66	1.5	146730.33	139.85	29.5	120.4	6020/DoD□ EPA
Ge	72	No Gas	1147614.03	2.2	936426.06	122.55	29.5	120.4	6020/DoD
Ge	72	H2	242343.67	0.5	183420.15	132.12	29.5	120.4	6020/DoD□ EPA
Ge	72	He	131573.08	0.8	97408.84	135.07	29.5	120.4	6020/DoD□ EPA
Y	89	H2	3421400.16	1.4	2733952.55	125.14	29.5	120.4	6020/DoD
Y	89	He	1030351.94	1.8	791301.87	130.21	29.5	120.4	6020/DoD□ EPA
Tb	159	No Gas	9584002.64	2.6	9359761.39	102.4	29.5	120.4	
Tb	159	He	4025648.06	1.1	3741562.06	107.59	29.5	120.4	
Bi	209	No Gas	4268024.28	0.8	4534931.8	94.11	29.5	120.4	

Sample Report

Sample Name SO4839-002

File Name 039SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 18:43:34

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Fail

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.022	ppb	29.7	90.00	100	
11	B	6	No Gas	12.567	ppb	3.1	36440.10	1000	
23	Na	45	He	317242.055	ppb	1.3	95703298.26	200000	>LDR
24	Mg	45	He	10815.941	ppb	0.8	1965449.46	200000	
27	Al	45	He	216.514	ppb	2.5	14631.61	200000	
28	Si	45	H2	4162.841	ppb	0.7	412000.31	10000	
39	K	45	He	4528.871	ppb	0.2	665433.03	200000	
40	Ca	45	H2	59891.369	ppb	0.7	54006623.08	200000	
51	V	89	He	0.611	ppb	2.2	1415.68	1000	
52	Cr	89	He	1.722	ppb	4.6	5079.34	2000	
55	Mn	89	He	369.922	ppb	1.9	461691.09	2000	
56	Fe	89	H2	2780.450	ppb	2.3	7770338.56	100000	
59	Co	89	He	2.571	ppb	2.6	10709.34	1000	
60	Ni	89	He	15.991	ppb	2.2	17992.13	1000	
63	Cu	89	He	-8.870	ppb	N/A	10266.35	2000	
66	Zn	89	He	14.008	ppb	5.4	6959.77	2000	
75	As	89	He	4.953	ppb	1.6	2101.06	1000	
78	Se	89	H2	0.137	ppb	19.0	21.83	1000	
88	Sr	89	He	655.605	ppb	2.0	1038641.68	2000	
95	Mo	89	He	1.183	ppb	5.8	2084.68	1000	
107	Ag	89	He	0.015	ppb	20.0	123.34	100	
111	Cd	89	He	0.055	ppb	7.8	42.96	1000	
118	Sn	159	He	0.129	ppb	25.4	275.57	1000	
121	Sb	159	No Gas	0.147	ppb	8.3	1374.94	1000	
137	Ba	159	No Gas	42.357	ppb	2.6	138024.82	2000	
182	W	159	No Gas	0.169	ppb	11.1	1308.21	1000	
205	Tl	209	No Gas	0.036	ppb	21.5	530.60	1000	
208	Pb	209	No Gas	0.369	ppb	5.3	7138.76	2000	
232	Th	209	No Gas	0.080	ppb	11.3	1505.11	1000	
238	U	209	No Gas	0.125	ppb	12.7	2155.95	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3009368.72	2.5	2459183.84	122.37	29.5	120.4	6020/DoD
Sc	45	No Gas	5584298.06	2.3	4376311.73	127.6	29.5	120.4	6020/DoD□ EPA
Sc	45	H2	748339.76	1.0	563225.15	132.87	29.5	120.4	6020/DoD□ EPA
Sc	45	He	201172.15	0.7	146730.33	137.1	29.5	120.4	6020/DoD□ EPA
Ge	72	No Gas	1086187.63	2.3	936426.06	115.99	29.5	120.4	
Ge	72	H2	227430.96	0.3	183420.15	123.99	29.5	120.4	6020/DoD
Ge	72	He	126022.45	0.9	97408.84	129.37	29.5	120.4	6020/DoD□ EPA
Y	89	H2	3320707.23	1.5	2733952.55	121.46	29.5	120.4	6020/DoD
Y	89	He	976300.64	2.0	791301.87	123.38	29.5	120.4	6020/DoD
Tb	159	No Gas	8948796.81	2.4	9359761.39	95.61	29.5	120.4	
Tb	159	He	3826216.29	1.4	3741562.06	102.26	29.5	120.4	
Bi	209	No Gas	3929602.67	2.7	4534931.8	86.65	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	043_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 18:53:30
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Fail
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	23.786	ppb	2.6	87631.86	25	95.14	89.8	110.2	
11	B	6	No Gas	24.428	ppb	2.3	66033.77	25	97.71	89.8	110.2	
23	Na	45	He	8079.565	ppb	1.4	2559634.99	5000	161.59	89.8	110.2	> +/- 10%
24	Mg	45	He	5049.989	ppb	0.7	959737.69	5000	101	89.8	110.2	
27	Al	45	He	506.763	ppb	1.2	35750.17	500	101.35	89.8	110.2	
28	Si	45	H2	509.918	ppb	2.2	60522.03	500	101.98	89.8	110.2	
39	K	45	He	5362.252	ppb	1.8	820032.40	5000	107.25	89.8	110.2	
40	Ca	45	H2	5181.505	ppb	0.7	4694052.36	5000	103.63	89.8	110.2	
51	V	89	He	27.276	ppb	0.7	59934.99	25	109.1	89.8	110.2	
52	Cr	89	He	27.442	ppb	1.3	76775.00	25	109.77	89.8	110.2	
55	Mn	89	He	27.048	ppb	0.1	35383.76	25	108.19	89.8	110.2	
56	Fe	89	H2	5439.232	ppb	0.8	15302703.73	5000	108.78	89.8	110.2	
59	Co	89	He	25.965	ppb	1.5	112646.98	25	103.86	89.8	110.2	
60	Ni	89	He	26.550	ppb	1.2	31215.56	25	106.2	89.8	110.2	
63	Cu	89	He	13.023	ppb	1.1	96974.16	25	52.09	89.8	110.2	> +/- 10%
66	Zn	89	He	25.354	ppb	2.1	12833.03	25	101.42	89.8	110.2	
75	As	89	He	25.844	ppb	1.0	10304.62	25	103.38	89.8	110.2	
78	Se	89	H2	25.664	ppb	0.6	3949.05	25	102.66	89.8	110.2	
88	Sr	89	He	25.388	ppb	0.9	42149.88	25	101.55	89.8	110.2	
95	Mo	89	He	23.979	ppb	1.9	43905.83	25	95.92	89.8	110.2	
107	Ag	89	He	23.143	ppb	0.7	139065.81	25	92.57	89.8	110.2	
111	Cd	89	He	22.989	ppb	0.5	18628.45	25	91.96	89.8	110.2	
118	Sn	159	He	28.366	ppb	0.9	37820.59	25	113.46	89.8	110.2	> +/- 10%
121	Sb	159	No Gas	27.485	ppb	1.2	257849.85	25	109.94	89.8	110.2	
137	Ba	159	No Gas	27.219	ppb	2.1	91412.01	25	108.88	89.8	110.2	
182	W	159	No Gas	23.503	ppb	2.2	183333.58	25	94.01	89.8	110.2	
205	Tl	209	No Gas	25.348	ppb	2.9	366633.08	25	101.39	89.8	110.2	
208	Pb	209	No Gas	25.463	ppb	2.9	505386.06	25	101.85	89.8	110.2	
232	Th	209	No Gas	25.811	ppb	3.2	486513.83	25	103.24	89.8	110.2	
238	U	209	No Gas	25.576	ppb	3.1	459966.45	25	102.3	89.8	110.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3086909.74	1.0	2459183.84	125.53	29.5	120.4	6020/DoD□ EPA
Sc	45	No Gas	5804532.87	0.9	4376311.73	132.64	29.5	120.4	6020/DoD□ EPA
Sc	45	H2	751474.21	1.4	563225.15	133.42	29.5	120.4	6020/DoD□ EPA
Sc	45	He	210375.91	0.6	146730.33	143.38	29.5	120.4	6020/DoD□ EPA
Ge	72	No Gas	1123745.40	0.7	936426.06	120	29.5	120.4	
Ge	72	H2	224649.30	0.3	183420.15	122.48	29.5	120.4	6020/DoD
Ge	72	He	131686.57	0.4	97408.84	135.19	29.5	120.4	6020/DoD□ EPA
Y	89	H2	3342859.20	1.1	2733952.55	122.27	29.5	120.4	6020/DoD
Y	89	He	1021950.00	1.0	791301.87	129.15	29.5	120.4	6020/DoD□ EPA
Tb	159	No Gas	9207248.82	0.6	9359761.39	98.37	29.5	120.4	
Tb	159	He	3940349.14	0.1	3741562.06	105.31	29.5	120.4	
Bi	209	No Gas	4102582.23	1.3	4534931.8	90.47	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	044_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 18:55:59
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Fail
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.039	ppb	8.8	157.78	0.2	
11	B	6	No Gas	0.505	ppb	11.7	8344.90	4	
23	Na	45	He	2791.640	ppb	7.7	881238.70	200	Fail All Methods□ Failed DoD
24	Mg	45	He	4.673	ppb	19.9	1075.67	20	
27	Al	45	He	1.106	ppb	8.5	121.12	20	
28	Si	45	H2	-0.867	ppb	N/A	11310.45	100	
39	K	45	He	72.646	ppb	4.1	31779.25	200	
40	Ca	45	H2	8.345	ppb	7.9	10430.86	20	
51	V	89	He	0.019	ppb	64.5	182.23	1	
52	Cr	89	He	0.505	ppb	3.7	1915.12	1	Failed DoD
55	Mn	89	He	0.105	ppb	16.9	177.30	0.4	
56	Fe	89	H2	3.113	ppb	10.6	11203.62	20	
59	Co	89	He	0.024	ppb	24.4	164.46	0.2	
60	Ni	89	He	0.163	ppb	26.9	281.13	0.4	
63	Cu	89	He	-7.547	ppb	N/A	15793.87	0.6	Fail All Methods□ Failed DoD
66	Zn	89	He	0.047	ppb	317.4	463.36	2	
75	As	89	He	0.003	ppb	679.9	276.36	1	
78	Se	89	H2	0.048	ppb	14.9	8.17	1	
88	Sr	89	He	0.078	ppb	21.0	171.12	1	
95	Mo	89	He	0.068	ppb	22.5	142.23	1	
107	Ag	89	He	0.013	ppb	13.4	117.78	0.2	
111	Cd	89	He	0.011	ppb	52.4	9.26	0.2	
118	Sn	159	He	0.092	ppb	7.6	231.12	1	
121	Sb	159	No Gas	0.042	ppb	27.8	437.17	0.2	
137	Ba	159	No Gas	0.080	ppb	35.8	620.71	0.4	
182	W	159	No Gas	0.092	ppb	13.4	760.87	1	
205	Tl	209	No Gas	0.029	ppb	18.7	473.88	0.2	
208	Pb	209	No Gas	0.043	ppb	16.7	1037.85	0.2	
232	Th	209	No Gas	0.050	ppb	14.5	1027.86	1	
238	U	209	No Gas	0.028	ppb	3.4	520.60	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3122297.76	2.0	2459183.84	126.96	29.5	120.4	6020/DoD□ EPA
Sc	45	No Gas	5829223.08	2.3	4376311.73	133.2	29.5	120.4	6020/DoD□ EPA
Sc	45	H2	762587.60	1.0	563225.15	135.4	29.5	120.4	6020/DoD□ EPA
Sc	45	He	207909.35	0.5	146730.33	141.69	29.5	120.4	6020/DoD□ EPA
Ge	72	No Gas	1139875.76	2.0	936426.06	121.73	29.5	120.4	6020/DoD
Ge	72	H2	226406.93	0.5	183420.15	123.44	29.5	120.4	6020/DoD
Ge	72	He	131469.60	0.8	97408.84	134.97	29.5	120.4	6020/DoD□ EPA
Y	89	H2	3330672.09	0.7	2733952.55	121.83	29.5	120.4	6020/DoD
Y	89	He	1011169.51	0.6	791301.87	127.79	29.5	120.4	6020/DoD□ EPA
Tb	159	No Gas	9344341.81	2.7	9359761.39	99.84	29.5	120.4	
Tb	159	He	3886843.28	0.5	3741562.06	103.88	29.5	120.4	
Bi	209	No Gas	4219085.13	1.7	4534931.8	93.04	29.5	120.4	

Prep Blank (PB) Report

Sample Name	PBWOG16IMW2
File Name	047_PB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 19:03:30
Sample Type	PB
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Fail
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	6	No Gas	0.073	ppb	10.1	63.34	0.5	
B	11	6	No Gas	1.471	ppb	6.0	7526.68	10	
Na	23	45	He	10696.616	ppb	1.7	655081.24	500	PB 6020 Fails DoD PB 6020 Fails Non-DoD
Mg	24	45	He	31.057	ppb	15.9	1317.93	50	
Al	27	45	He	20.861	ppb	9.8	323.35	50	
Si	28	45	H2	-3.969	ppb	N/A	10809.45	250	
K	39	45	He	264.501	ppb	4.7	27898.00	500	
Ca	40	45	H2	63.492	ppb	3.7	13782.71	50	PB 6020 Fails DoD
V	51	89	He	0.352	ppb	17.3	284.46	2.5	
Cr	52	89	He	2.679	ppb	5.8	1939.12	2.5	PB 6020 Fails DoD
Mn	55	89	He	0.803	ppb	13.3	241.96	1	
Fe	56	89	H2	23.036	ppb	4.6	14984.96	50	
Co	59	89	He	0.074	ppb	34.6	122.23	0.5	
Ni	60	89	He	1.094	ppb	6.2	335.57	1	PB 6020 Fails DoD
Cu	63	89	He	-24.166	ppb	N/A	25570.77	1.5	PB 6020 Fails DoD PB 6020 Fails Non-DoD
Zn	66	89	He	2.902	ppb	10.4	698.94	5	
As	75	89	He	0.051	ppb	205.5	270.70	2.5	
Se	78	89	H2	0.141	ppb	21.0	5.00	2.5	
Sr	88	89	He	0.226	ppb	61.7	113.34	2.5	
Mo	95	89	He	0.161	ppb	18.4	74.45	2.5	
Ag	107	89	He	0.054	ppb	22.3	100.00	0.5	
Cd	111	89	He	0.038	ppb	40.2	6.30	0.5	
Sn	118	159	He	2.196	ppb	12.8	680.04	2.5	
Sb	121	159	No Gas	0.073	ppb	15.8	166.85	0.5	
Ba	137	159	No Gas	0.291	ppb	25.1	523.93	1	
W	182	159	No Gas	0.062	ppb	66.6	126.81	2.5	
Tl	205	209	No Gas	0.057	ppb	30.7	200.23	0.5	
Pb	208	209	No Gas	0.141	ppb	7.2	700.79	0.5	
Th	232	209	No Gas	0.052	ppb	29.8	256.96	2.5	
U	238	209	No Gas	0.022	ppb	40.2	83.43	0.5	

QC ISTD Table

Prep Blank (PB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3002227.59	0.9	2459183.84	122.08	29.5	120.4	6020/DoD
Sc	45	No Gas	5552746.72	1.0	4376311.73	126.88	29.5	120.4	6020/DoD EPA
Sc	45	H2	728502.77	1.9	563225.15	129.34	29.5	120.4	6020/DoD EPA
Sc	45	He	200883.59	0.7	146730.33	136.91	29.5	120.4	6020/DoD EPA
Ge	72	No Gas	1092312.07	0.4	936426.06	116.65	29.5	120.4	
Ge	72	H2	214820.26	1.4	183420.15	117.12	29.5	120.4	
Ge	72	He	126990.66	0.1	97408.84	130.37	29.5	120.4	6020/DoD EPA
Y	89	H2	3243431.18	1.5	2733952.55	118.64	29.5	120.4	
Y	89	He	980491.19	0.5	791301.87	123.91	29.5	120.4	6020/DoD
Tb	159	No Gas	9002409.80	1.3	9359761.39	96.18	29.5	120.4	
Tb	159	He	3850163.66	0.6	3741562.06	102.9	29.5	120.4	
Bi	209	No Gas	4075249.01	1.1	4534931.8	89.86	29.5	120.4	

Laboratory Control Sample (LCS) Report

Sample Name	LCSWOG16IMW2
File Name	048LCSW.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 19:05:59
Sample Type	LCSW
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Fail
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	6	No Gas	47.414	ppb	4.0	34105.48	50	18.97	79.5	120.4	
B	11	6	No Gas	477.030	ppb	1.8	231830.78	500	19.08	79.5	120.4	
Na	23	45	He	16529.517	ppb	0.9	995173.58	7500	44.08	79.5	120.4	6020□ DoD
Mg	24	45	He	5266.738	ppb	0.4	189170.91	5000	21.07	79.5	120.4	
Al	27	45	He	2043.958	ppb	1.0	27240.00	2000	20.44	79.5	120.4	
Si	28	45	H2	977.953	ppb	3.9	28607.30	1000	19.56	0	200	
K	39	45	He	12183.965	ppb	0.2	362842.70	10000	24.37	79.5	120.4	6020□ DoD
Ca	40	45	H2	2702.811	ppb	0.6	467016.15	2500	21.62	79.5	120.4	
V	51	89	He	544.761	ppb	0.9	227901.03	500	21.79	79.5	120.4	
Cr	52	89	He	218.749	ppb	1.5	116417.97	200	21.88	79.5	120.4	
Mn	55	89	He	552.730	ppb	1.4	137773.35	500	22.11	79.5	120.4	
Fe	56	89	H2	1256.351	ppb	0.8	681292.26	1000	25.13	79.5	120.4	6020□ DoD
Co	59	89	He	543.088	ppb	1.3	449197.69	500	21.72	79.5	120.4	
Ni	60	89	He	538.768	ppb	0.8	120546.92	500	21.55	79.5	120.4	
Cu	63	89	He	181.679	ppb	2.2	180025.60	250	14.53	79.5	120.4	6020□ DoD
Zn	66	89	He	515.532	ppb	2.0	48467.44	500	20.62	79.5	120.4	
As	75	89	He	103.743	ppb	1.2	7941.46	100	20.75	79.5	120.4	
Se	78	89	H2	101.529	ppb	2.1	3001.36	100	20.31	79.5	120.4	
Sr	88	89	He	516.656	ppb	1.0	163472.92	500	20.67	79.5	120.4	
Mo	95	89	He	101.399	ppb	2.4	35411.24	100	20.28	79.5	120.4	
Ag	107	89	He	48.295	ppb	1.4	55369.32	50	19.32	79.5	120.4	
Cd	111	89	He	242.407	ppb	0.9	37464.31	250	19.39	79.5	120.4	
Sn	118	159	He	564.971	ppb	1.1	147635.39	500	22.6	79.5	120.4	
Sb	121	159	No Gas	113.690	ppb	3.2	214778.67	100	22.74	79.5	120.4	
Ba	137	159	No Gas	1957.135	ppb	1.5	1319001.22	2000	19.57	79.5	120.4	
W	182	159	No Gas	98.265	ppb	2.5	154345.63	100	19.65	79.5	120.4	
Tl	205	209	No Gas	102.448	ppb	1.2	303458.56	100	20.49	79.5	120.4	
[Pb]	206	209	No Gas	105.046	ppb	2.0	107324.20	100	21.01	79.5	120.4	
[Pb]	207	209	No Gas	104.440	ppb	1.6	93274.60	100	20.89	79.5	120.4	
Pb	208	209	No Gas	105.150	ppb	2.1	427407.98	100	21.03	79.5	120.4	
Th	232	209	No Gas	106.099	ppb	2.2	409560.32	100	21.22	79.5	120.4	
U	238	209	No Gas	103.878	ppb	2.0	382571.86	100	20.78	79.5	120.4	

QC ISTD Table

Laboratory Control Sample (LCS) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3013350.25	1.2	2459183.84	122.53	29.5	120.4	6020/DoD
Sc	45	No Gas	5580059.24	0.6	4376311.73	127.51	29.5	120.4	6020/DoD EPA
Sc	45	H2	713087.52	1.6	563225.15	126.61	29.5	120.4	6020/DoD EPA
Sc	45	He	198641.32	0.4	146730.33	135.38	29.5	120.4	6020/DoD EPA
Ge	72	No Gas	1091534.97	1.7	936426.06	116.56	29.5	120.4	
Ge	72	H2	211652.87	1.5	183420.15	115.39	29.5	120.4	
Ge	72	He	125840.88	0.7	97408.84	129.19	29.5	120.4	6020/DoD EPA
Y	89	H2	3210850.66	1.3	2733952.55	117.44	29.5	120.4	
Y	89	He	974610.58	1.4	791301.87	123.17	29.5	120.4	6020/DoD
Tb	159	No Gas	9270297.15	0.2	9359761.39	99.04	29.5	120.4	
Tb	159	He	3870142.44	0.8	3741562.06	103.44	29.5	120.4	
Bi	209	No Gas	4199706.02	0.3	4534931.8	92.61	29.5	120.4	

Sample Report

Sample Name SO4465-002

File Name 050SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 19:10:59

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Fail

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.062	ppb	23.3	50.00	100	
11	B	6	No Gas	1058.158	ppb	2.1	454649.14	1000	
23	Na	45	He	1620901.572	ppb	1.3	89704238.58	200000	>LDR
24	Mg	45	He	389670.697	ppb	0.9	12989970.78	200000	
27	Al	45	He	14.440	ppb	15.2	217.79	200000	
28	Si	45	H2	5839.437	ppb	0.8	111620.52	10000	
39	K	45	He	17840.870	ppb	1.2	484886.74	200000	
40	Ca	45	H2	520967.698	ppb	1.2	84821851.52	200000	
51	V	89	He	1.121	ppb	6.0	555.59	1000	
52	Cr	89	He	1.762	ppb	10.3	1325.83	2000	
55	Mn	89	He	1104.442	ppb	1.1	253103.87	2000	
56	Fe	89	H2	17.618	ppb	3.5	11150.14	100000	
59	Co	89	He	1.052	ppb	10.8	855.65	1000	
60	Ni	89	He	11.776	ppb	5.3	2502.54	1000	
63	Cu	89	He	-44.642	ppb	N/A	9224.47	2000	
66	Zn	89	He	8.101	ppb	3.5	1084.53	2000	
75	As	89	He	0.166	ppb	223.3	255.36	1000	
78	Se	89	H2	9.396	ppb	5.7	260.66	1000	
88	Sr	89	He	6566.729	ppb	0.5	1910263.76	2000	
95	Mo	89	He	3.501	ppb	3.8	1140.09	1000	
107	Ag	89	He	0.045	ppb	26.9	81.11	100	
111	Cd	89	He	0.158	ppb	39.0	22.96	1000	
118	Sn	159	He	1.375	ppb	7.0	444.47	1000	
121	Sb	159	No Gas	0.244	ppb	13.1	473.87	1000	
137	Ba	159	No Gas	40.069	ppb	2.0	26265.36	2000	
182	W	159	No Gas	0.110	ppb	52.6	196.89	1000	
205	Tl	209	No Gas	0.109	ppb	30.1	337.05	1000	
208	Pb	209	No Gas	0.155	ppb	5.2	730.83	2000	
232	Th	209	No Gas	0.108	ppb	30.5	450.52	1000	
238	U	209	No Gas	127.328	ppb	2.6	439590.27	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2708238.01	1.8	2459183.84	110.13	29.5	120.4	
Sc	45	No Gas	5219802.38	1.5	4376311.73	119.27	29.5	120.4	
Sc	45	H2	675638.98	0.6	563225.15	119.96	29.5	120.4	
Sc	45	He	184549.92	1.0	146730.33	125.77	29.5	120.4	6020/DoD□ EPA
Ge	72	No Gas	1015655.68	1.9	936426.06	108.46	29.5	120.4	
Ge	72	H2	196265.50	0.8	183420.15	107	29.5	120.4	
Ge	72	He	115882.52	0.6	97408.84	118.97	29.5	120.4	
Y	89	H2	3005530.50	0.1	2733952.55	109.93	29.5	120.4	
Y	89	He	896141.93	1.0	791301.87	113.25	29.5	120.4	
Tb	159	No Gas	8906485.91	1.6	9359761.39	95.16	29.5	120.4	
Tb	159	He	3664929.98	1.6	3741562.06	97.95	29.5	120.4	
Bi	209	No Gas	3937122.82	0.6	4534931.8	86.82	29.5	120.4	

Sample Report

Sample Name SO4465-003

File Name 051SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 19:13:27

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Fail

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.065	ppb	14.2	51.11	100	
11	B	6	No Gas	1030.330	ppb	2.9	437858.17	1000	
23	Na	45	He	1650751.318	ppb	0.1	90756700.17	200000	>LDR
24	Mg	45	He	468005.329	ppb	0.7	15498133.10	200000	
27	Al	45	He	14.930	ppb	35.3	222.23	200000	
28	Si	45	H2	5327.806	ppb	1.8	102577.29	10000	
39	K	45	He	67852.740	ppb	0.5	1779875.14	200000	
40	Ca	45	H2	463682.611	ppb	1.2	75388926.65	200000	
51	V	89	He	1.560	ppb	9.4	720.05	1000	
52	Cr	89	He	1.685	ppb	2.3	1279.83	2000	
55	Mn	89	He	10103.713	ppb	0.3	2301619.16	2000	>LDR
56	Fe	89	H2	275.793	ppb	1.7	141608.45	100000	
59	Co	89	He	4.164	ppb	3.8	3202.83	1000	
60	Ni	89	He	11.932	ppb	6.0	2520.32	1000	
63	Cu	89	He	-47.837	ppb	N/A	6978.67	2000	
66	Zn	89	He	8.471	ppb	16.4	1108.97	2000	
75	As	89	He	1.585	ppb	14.6	349.71	1000	
78	Se	89	H2	2.710	ppb	3.8	75.67	1000	
88	Sr	89	He	7319.664	ppb	0.1	2116569.85	2000	
95	Mo	89	He	2.007	ppb	5.2	656.71	1000	
107	Ag	89	He	0.022	ppb	51.7	56.67	100	
111	Cd	89	He	0.089	ppb	13.0	12.96	1000	
118	Sn	159	He	1.414	ppb	5.1	454.47	1000	
121	Sb	159	No Gas	0.172	ppb	33.3	350.40	1000	
137	Ba	159	No Gas	20.901	ppb	4.8	14103.28	2000	
182	W	159	No Gas	0.069	ppb	79.5	136.82	1000	
205	Tl	209	No Gas	0.065	ppb	43.3	216.91	1000	
208	Pb	209	No Gas	0.145	ppb	21.9	700.79	2000	
232	Th	209	No Gas	0.044	ppb	40.9	220.25	1000	
238	U	209	No Gas	42.505	ppb	4.0	148267.27	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2678103.06	1.7	2459183.84	108.9	29.5	120.4	
Sc	45	No Gas	5220431.39	1.6	4376311.73	119.29	29.5	120.4	
Sc	45	H2	674692.85	0.5	563225.15	119.79	29.5	120.4	
Sc	45	He	183324.35	0.5	146730.33	124.94	29.5	120.4	6020/DoD
Ge	72	No Gas	1011814.82	2.2	936426.06	108.05	29.5	120.4	
Ge	72	H2	195883.28	0.6	183420.15	106.79	29.5	120.4	
Ge	72	He	114725.58	1.4	97408.84	117.78	29.5	120.4	
Y	89	H2	3002816.15	0.8	2733952.55	109.83	29.5	120.4	
Y	89	He	890824.23	0.6	791301.87	112.58	29.5	120.4	
Tb	159	No Gas	9066808.41	1.5	9359761.39	96.87	29.5	120.4	
Tb	159	He	3666679.35	0.7	3741562.06	98	29.5	120.4	
Bi	209	No Gas	3979349.86	1.7	4534931.8	87.75	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	055_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 19:23:21
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Fail
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	25.604	ppb	1.9	81364.48	25	102.42	89.8	110.2	
11	B	6	No Gas	26.097	ppb	1.9	60436.99	25	104.39	89.8	110.2	
23	Na	45	He	5898.641	ppb	0.7	1692882.02	5000	117.97	89.8	110.2	> +/- 10%
24	Mg	45	He	5116.039	ppb	1.4	879315.80	5000	102.32	89.8	110.2	
27	Al	45	He	500.621	ppb	1.0	31942.07	500	100.12	89.8	110.2	
28	Si	45	H2	473.808	ppb	2.7	52896.55	500	94.76	89.8	110.2	
39	K	45	He	5637.001	ppb	1.4	778582.94	5000	112.74	89.8	110.2	> +/- 10%
40	Ca	45	H2	5114.878	ppb	2.5	4297182.33	5000	102.3	89.8	110.2	
51	V	89	He	27.025	ppb	0.9	54533.35	25	108.1	89.8	110.2	
52	Cr	89	He	27.070	ppb	1.4	69552.48	25	108.28	89.8	110.2	
55	Mn	89	He	27.134	ppb	0.6	32596.30	25	108.54	89.8	110.2	
56	Fe	89	H2	5175.951	ppb	2.3	13899278.06	5000	103.52	89.8	110.2	
59	Co	89	He	26.526	ppb	1.8	105681.87	25	106.1	89.8	110.2	
60	Ni	89	He	26.362	ppb	2.1	28462.00	25	105.45	89.8	110.2	
63	Cu	89	He	12.975	ppb	0.2	88883.43	25	51.9	89.8	110.2	> +/- 10%
66	Zn	89	He	25.810	ppb	1.9	11989.98	25	103.24	89.8	110.2	
75	As	89	He	25.757	ppb	1.4	9432.23	25	103.03	89.8	110.2	
78	Se	89	H2	25.374	ppb	2.1	3726.83	25	101.5	89.8	110.2	
88	Sr	89	He	25.226	ppb	1.0	38459.15	25	100.9	89.8	110.2	
95	Mo	89	He	24.710	ppb	1.0	41550.61	25	98.84	89.8	110.2	
107	Ag	89	He	24.280	ppb	0.9	133985.18	25	97.12	89.8	110.2	
111	Cd	89	He	23.961	ppb	1.8	17829.26	25	95.84	89.8	110.2	
118	Sn	159	He	27.204	ppb	1.4	35665.87	25	108.82	89.8	110.2	
121	Sb	159	No Gas	27.738	ppb	0.8	263840.08	25	110.95	89.8	110.2	> +/- 10%
137	Ba	159	No Gas	27.069	ppb	2.0	92167.03	25	108.28	89.8	110.2	
182	W	159	No Gas	24.436	ppb	1.9	193218.05	25	97.74	89.8	110.2	
205	Tl	209	No Gas	25.803	ppb	2.5	388015.63	25	103.21	89.8	110.2	
208	Pb	209	No Gas	25.852	ppb	0.8	533651.01	25	103.41	89.8	110.2	
232	Th	209	No Gas	26.364	ppb	0.7	516849.29	25	105.46	89.8	110.2	
238	U	209	No Gas	26.368	ppb	1.1	493166.75	25	105.47	89.8	110.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2663005.67	2.6	2459183.84	108.29	29.5	120.4	
Sc	45	No Gas	5293616.71	1.7	4376311.73	120.96	29.5	120.4	6020/DoD
Sc	45	H2	697269.57	3.8	563225.15	123.8	29.5	120.4	6020/DoD
Sc	45	He	190271.74	0.9	146730.33	129.67	29.5	120.4	6020/DoD EPA
Ge	72	No Gas	1054584.82	1.7	936426.06	112.62	29.5	120.4	
Ge	72	H2	205473.88	1.6	183420.15	112.02	29.5	120.4	
Ge	72	He	122038.55	0.5	97408.84	125.28	29.5	120.4	6020/DoD
Y	89	H2	3191950.33	2.7	2733952.55	116.75	29.5	120.4	
Y	89	He	938463.73	0.6	791301.87	118.6	29.5	120.4	
Tb	159	No Gas	9336621.74	2.9	9359761.39	99.75	29.5	120.4	
Tb	159	He	3874126.36	1.0	3741562.06	103.54	29.5	120.4	
Bi	209	No Gas	4266089.43	2.8	4534931.8	94.07	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	056_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 19:25:52
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Fail
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.029	ppb	10.9	105.56	0.2	
11	B	6	No Gas	0.827	ppb	10.7	8084.76	4	
23	Na	45	He	708.068	ppb	1.2	211123.26	200	Fail All Methods□ Failed DoD
24	Mg	45	He	17.224	ppb	8.0	3125.02	20	Failed DoD
27	Al	45	He	0.102	ppb	132.0	46.67	20	
28	Si	45	H2	-5.141	ppb	N/A	9824.28	100	
39	K	45	He	35.115	ppb	7.7	23914.19	200	
40	Ca	45	H2	16.954	ppb	3.5	16544.65	20	Failed DoD
51	V	89	He	0.004	ppb	452.3	137.78	1	
52	Cr	89	He	0.036	ppb	29.5	577.91	1	
55	Mn	89	He	0.269	ppb	3.0	360.61	0.4	Failed DoD
56	Fe	89	H2	2.474	ppb	3.5	8872.76	20	
59	Co	89	He	0.013	ppb	39.8	108.90	0.2	
60	Ni	89	He	0.211	ppb	30.5	312.24	0.4	Failed DoD
63	Cu	89	He	-7.274	ppb	N/A	15602.57	0.6	Fail All Methods□ Failed DoD
66	Zn	89	He	-0.082	ppb	N/A	371.13	2	
75	As	89	He	-0.006	ppb	N/A	252.70	1	
78	Se	89	H2	0.033	ppb	28.8	5.50	1	
88	Sr	89	He	0.202	ppb	4.5	346.68	1	
95	Mo	89	He	0.045	ppb	15.2	93.34	1	
107	Ag	89	He	0.010	ppb	32.5	91.11	0.2	
111	Cd	89	He	0.009	ppb	53.5	7.04	0.2	
118	Sn	159	He	0.025	ppb	52.3	143.34	1	
121	Sb	159	No Gas	0.025	ppb	3.3	280.32	0.2	
137	Ba	159	No Gas	-0.003	ppb	N/A	347.06	0.4	
182	W	159	No Gas	0.087	ppb	5.5	744.19	1	
205	Tl	209	No Gas	0.025	ppb	15.2	427.15	0.2	
208	Pb	209	No Gas	0.019	ppb	7.4	557.30	0.2	
232	Th	209	No Gas	0.060	ppb	9.6	1281.50	1	
238	U	209	No Gas	0.020	ppb	18.4	397.12	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2765648.86	2.3	2459183.84	112.46	29.5	120.4	
Sc	45	No Gas	5422587.24	0.8	4376311.73	123.91	29.5	120.4	6020/DoD
Sc	45	H2	687905.29	0.4	563225.15	122.14	29.5	120.4	6020/DoD
Sc	45	He	189369.09	1.1	146730.33	129.06	29.5	120.4	6020/DoD□ EPA
Ge	72	No Gas	1083422.79	1.5	936426.06	115.7	29.5	120.4	
Ge	72	H2	206218.27	0.9	183420.15	112.43	29.5	120.4	
Ge	72	He	121373.89	1.1	97408.84	124.6	29.5	120.4	6020/DoD
Y	89	H2	3139228.54	1.1	2733952.55	114.82	29.5	120.4	
Y	89	He	935873.93	0.9	791301.87	118.27	29.5	120.4	
Tb	159	No Gas	9644163.05	0.7	9359761.39	103.04	29.5	120.4	
Tb	159	He	3886802.51	1.1	3741562.06	103.88	29.5	120.4	
Bi	209	No Gas	4423807.51	0.9	4534931.8	97.55	29.5	120.4	

Sample Report

Sample Name SO4468-001

File Name 062SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 19:40:47

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Fail

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.053	ppb	43.0	42.22	100	
11	B	6	No Gas	6.747	ppb	14.8	8638.44	1000	
23	Na	45	He	3079.770	ppb	0.5	175102.51	200000	
24	Mg	45	He	105.308	ppb	8.0	3580.72	200000	
27	Al	45	He	16.828	ppb	13.4	240.01	200000	
28	Si	45	H2	-22.607	ppb	N/A	9333.49	10000	
39	K	45	He	148.433	ppb	3.9	21948.70	200000	
40	Ca	45	H2	187.684	ppb	7.3	31743.15	200000	
51	V	89	He	0.586	ppb	20.1	352.24	1000	
52	Cr	89	He	1.199	ppb	5.1	1057.85	2000	
55	Mn	89	He	2.057	ppb	3.2	511.92	2000	
56	Fe	89	H2	23.817	ppb	3.0	14390.22	100000	
59	Co	89	He	0.072	ppb	24.5	111.12	1000	
60	Ni	89	He	1.083	ppb	11.7	306.68	1000	
63	Cu	89	He	-1.697	ppb	N/A	39163.59	2000	
66	Zn	89	He	5.001	ppb	11.7	824.50	2000	
75	As	89	He	0.025	ppb	1911.9	247.36	1000	
78	Se	89	H2	0.045	ppb	40.5	2.00	1000	
88	Sr	89	He	1.243	ppb	8.1	402.24	2000	
95	Mo	89	He	0.118	ppb	43.9	54.45	1000	
107	Ag	89	He	0.016	ppb	81.0	51.11	100	
111	Cd	89	He	0.026	ppb	46.7	4.07	1000	
118	Sn	159	He	1.113	ppb	23.4	393.36	1000	
121	Sb	159	No Gas	0.060	ppb	31.1	150.17	1000	
137	Ba	159	No Gas	0.304	ppb	40.7	563.98	2000	
182	W	159	No Gas	0.039	ppb	41.1	96.77	1000	
205	Tl	209	No Gas	0.011	ppb	61.3	73.42	1000	
208	Pb	209	No Gas	0.073	ppb	26.2	463.86	2000	
232	Th	209	No Gas	0.027	ppb	54.5	176.86	1000	
238	U	209	No Gas	0.054	ppb	28.9	213.57	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2592163.01	2.3	2459183.84	105.41	29.5	120.4	
Sc	45	No Gas	5246819.24	1.1	4376311.73	119.89	29.5	120.4	
Sc	45	H2	650030.48	1.3	563225.15	115.41	29.5	120.4	
Sc	45	He	179254.79	0.4	146730.33	122.17	29.5	120.4	6020/DoD
Ge	72	No Gas	1058689.21	1.4	936426.06	113.06	29.5	120.4	
Ge	72	H2	194921.26	1.3	183420.15	106.27	29.5	120.4	
Ge	72	He	115359.23	0.4	97408.84	118.43	29.5	120.4	
Y	89	H2	3028140.12	1.3	2733952.55	110.76	29.5	120.4	
Y	89	He	902373.10	0.4	791301.87	114.04	29.5	120.4	
Tb	159	No Gas	9532003.33	1.0	9359761.39	101.84	29.5	120.4	
Tb	159	He	3794767.65	0.2	3741562.06	101.42	29.5	120.4	
Bi	209	No Gas	4365830.00	1.0	4534931.8	96.27	29.5	120.4	

Sample Report

Sample Name SO4468-002

File Name 063SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 19:43:17

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.055	ppb	14.5	42.22	100	
11	B	6	No Gas	3.757	ppb	3.8	7232.04	1000	
23	Na	45	He	2719.466	ppb	0.6	152227.17	200000	
24	Mg	45	He	100.470	ppb	4.4	3347.32	200000	
27	Al	45	He	18.893	ppb	2.1	258.90	200000	
28	Si	45	H2	-7.848	ppb	N/A	9370.20	10000	
39	K	45	He	122.473	ppb	17.0	20810.85	200000	
40	Ca	45	H2	132.882	ppb	0.4	22657.72	200000	
51	V	89	He	0.587	ppb	10.5	344.46	1000	
52	Cr	89	He	1.429	ppb	5.9	1143.84	2000	
55	Mn	89	He	2.219	ppb	4.8	536.58	2000	
56	Fe	89	H2	46.247	ppb	2.8	25384.71	100000	
59	Co	89	He	0.064	ppb	52.2	102.23	1000	
60	Ni	89	He	2.442	ppb	3.5	574.48	1000	
63	Cu	89	He	12.606	ppb	8.4	47984.41	2000	
66	Zn	89	He	2.260	ppb	3.2	574.48	2000	
75	As	89	He	-0.124	ppb	N/A	231.70	1000	
78	Se	89	H2	0.083	ppb	58.5	3.00	1000	
88	Sr	89	He	1.024	ppb	14.8	330.02	2000	
95	Mo	89	He	0.129	ppb	36.1	56.67	1000	
107	Ag	89	He	0.017	ppb	97.5	51.11	100	
111	Cd	89	He	0.026	ppb	46.7	4.07	1000	
118	Sn	159	He	1.241	ppb	6.2	425.58	1000	
121	Sb	159	No Gas	0.062	ppb	44.3	153.51	1000	
137	Ba	159	No Gas	0.215	ppb	25.7	503.90	2000	
182	W	159	No Gas	0.045	ppb	57.0	106.79	1000	
205	Tl	209	No Gas	0.007	ppb	172.3	60.07	1000	
208	Pb	209	No Gas	0.091	ppb	11.6	543.95	2000	
232	Th	209	No Gas	0.033	ppb	35.8	200.23	1000	
238	U	209	No Gas	0.020	ppb	26.6	83.43	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2524175.02	1.6	2459183.84	102.64	29.5	120.4	
Sc	45	No Gas	5097847.25	1.5	4376311.73	116.49	29.5	120.4	
Sc	45	H2	635598.07	1.8	563225.15	112.85	29.5	120.4	
Sc	45	He	175213.29	0.3	146730.33	119.41	29.5	120.4	
Ge	72	No Gas	1030006.88	1.8	936426.06	109.99	29.5	120.4	
Ge	72	H2	192612.10	1.9	183420.15	105.01	29.5	120.4	
Ge	72	He	112807.46	0.4	97408.84	115.81	29.5	120.4	
Y	89	H2	2976986.41	1.1	2733952.55	108.89	29.5	120.4	
Y	89	He	881737.83	0.5	791301.87	111.43	29.5	120.4	
Tb	159	No Gas	9554393.26	1.5	9359761.39	102.08	29.5	120.4	
Tb	159	He	3792035.99	0.9	3741562.06	101.35	29.5	120.4	
Bi	209	No Gas	4400951.68	0.8	4534931.8	97.05	29.5	120.4	

Prep Blank (PB) Report

Sample Name	PBWOG19IMW1
File Name	065_PB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 19:48:21
Sample Type	PB
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	6	No Gas	0.053	ppb	1.6	40.00	0.5	
B	11	6	No Gas	2.125	ppb	14.7	6379.41	10	
Na	23	45	He	2452.183	ppb	0.6	132869.83	500	PB 6020 Fails DoD PB 6020 Fails Non-DoD
Mg	24	45	He	91.188	ppb	4.7	2936.06	50	PB 6020 Fails DoD
Al	27	45	He	12.294	ppb	32.7	174.45	50	
Si	28	45	H2	-88.463	ppb	N/A	7824.15	250	
K	39	45	He	170.533	ppb	7.2	21156.23	500	
Ca	40	45	H2	126.303	ppb	2.4	21040.72	50	PB 6020 Fails DoD PB 6020 Fails Non-DoD
V	51	89	He	0.732	ppb	9.6	390.02	2.5	
Cr	52	89	He	1.906	ppb	9.9	1340.49	2.5	
Mn	55	89	He	1.543	ppb	10.2	375.27	1	PB 6020 Fails DoD
Fe	56	89	H2	17.972	ppb	4.7	10973.20	50	
Co	59	89	He	0.101	ppb	41.5	126.68	0.5	
Ni	60	89	He	1.014	ppb	10.9	278.90	1	PB 6020 Fails DoD
Cu	63	89	He	47.341	ppb	2.5	69895.40	1.5	PB 6020 Fails DoD PB 6020 Fails Non-DoD
Zn	66	89	He	1.592	ppb	37.4	505.58	5	
As	75	89	He	0.108	ppb	306.8	241.36	2.5	
Se	78	89	H2	0.042	ppb	130.4	1.83	2.5	
Sr	88	89	He	0.980	ppb	14.8	310.02	2.5	
Mo	95	89	He	0.090	ppb	56.0	43.34	2.5	
Ag	107	89	He	0.022	ppb	47.1	54.45	0.5	
Cd	111	89	He	0.046	ppb	35.7	6.67	0.5	
Sn	118	159	He	50.520	ppb	1.9	12831.02	2.5	PB 6020 Fails DoD PB 6020 Fails Non-DoD
Sb	121	159	No Gas	0.076	ppb	51.1	180.20	0.5	
Ba	137	159	No Gas	0.184	ppb	35.5	480.54	1	
W	182	159	No Gas	0.039	ppb	38.0	96.78	2.5	
Tl	205	209	No Gas	0.020	ppb	33.4	103.45	0.5	
Pb	208	209	No Gas	0.095	ppb	16.6	563.97	0.5	
Th	232	209	No Gas	0.031	ppb	44.7	193.55	2.5	
U	238	209	No Gas	0.023	ppb	70.9	96.78	0.5	

QC ISTD Table

Prep Blank (PB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2444252.47	1.3	2459183.84	99.39	29.5	120.4	
Sc	45	No Gas	4905789.57	2.0	4376311.73	112.1	29.5	120.4	
Sc	45	H2	617723.55	0.0	563225.15	109.68	29.5	120.4	
Sc	45	He	168477.05	0.1	146730.33	114.82	29.5	120.4	
Ge	72	No Gas	1012479.97	1.4	936426.06	108.12	29.5	120.4	
Ge	72	H2	185255.99	0.8	183420.15	101	29.5	120.4	
Ge	72	He	109636.88	0.5	97408.84	112.55	29.5	120.4	
Y	89	H2	2911826.96	1.0	2733952.55	106.51	29.5	120.4	
Y	89	He	860856.44	0.8	791301.87	108.79	29.5	120.4	
Tb	159	No Gas	9524968.89	1.4	9359761.39	101.77	29.5	120.4	
Tb	159	He	3733034.42	0.8	3741562.06	99.77	29.5	120.4	
Bi	209	No Gas	4447638.68	0.8	4534931.8	98.08	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	067_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 19:53:25
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	25.299	ppb	3.4	72919.86	25	101.2	89.8	110.2	
11	B	6	No Gas	24.549	ppb	3.7	51887.39	25	98.2	89.8	110.2	
23	Na	45	He	5520.313	ppb	0.8	1392010.99	5000	110.41	89.8	110.2	> +/- 10%
24	Mg	45	He	4983.418	ppb	0.6	752313.23	5000	99.67	89.8	110.2	
27	Al	45	He	494.182	ppb	2.6	27689.78	500	98.84	89.8	110.2	
28	Si	45	H2	484.054	ppb	0.6	47120.04	500	96.81	89.8	110.2	
39	K	45	He	5592.704	ppb	1.5	678599.51	5000	111.85	89.8	110.2	> +/- 10%
40	Ca	45	H2	5085.039	ppb	1.2	3740498.04	5000	101.7	89.8	110.2	
51	V	89	He	26.713	ppb	0.7	49139.05	25	106.85	89.8	110.2	
52	Cr	89	He	26.497	ppb	0.6	62069.99	25	105.99	89.8	110.2	
55	Mn	89	He	26.228	ppb	0.8	28722.01	25	104.91	89.8	110.2	
56	Fe	89	H2	5143.596	ppb	1.4	12499144.54	5000	102.87	89.8	110.2	
59	Co	89	He	26.849	ppb	0.1	97509.68	25	107.4	89.8	110.2	
60	Ni	89	He	27.085	ppb	2.2	26657.33	25	108.34	89.8	110.2	
63	Cu	89	He	18.808	ppb	1.2	100248.25	25	75.23	89.8	110.2	> +/- 10%
66	Zn	89	He	25.547	ppb	0.6	10822.34	25	102.19	89.8	110.2	
75	As	89	He	25.946	ppb	0.8	8658.98	25	103.78	89.8	110.2	
78	Se	89	H2	25.571	ppb	2.1	3398.43	25	102.28	89.8	110.2	
88	Sr	89	He	24.837	ppb	1.3	34519.69	25	99.35	89.8	110.2	
95	Mo	89	He	25.370	ppb	1.0	38887.38	25	101.48	89.8	110.2	
107	Ag	89	He	25.198	ppb	0.1	126747.01	25	100.79	89.8	110.2	
111	Cd	89	He	24.677	ppb	1.0	16738.61	25	98.71	89.8	110.2	
118	Sn	159	He	26.435	ppb	1.6	33260.68	25	105.74	89.8	110.2	
121	Sb	159	No Gas	26.122	ppb	3.1	254708.38	25	104.49	89.8	110.2	
137	Ba	159	No Gas	25.470	ppb	2.8	88935.52	25	101.88	89.8	110.2	
182	W	159	No Gas	24.106	ppb	3.5	195421.23	25	96.42	89.8	110.2	
205	Tl	209	No Gas	24.711	ppb	4.2	392506.46	25	98.84	89.8	110.2	
208	Pb	209	No Gas	24.879	ppb	2.6	542417.47	25	99.52	89.8	110.2	
232	Th	209	No Gas	25.369	ppb	4.1	525197.27	25	101.48	89.8	110.2	
238	U	209	No Gas	25.578	ppb	3.0	505253.34	25	102.31	89.8	110.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2415918.54	2.6	2459183.84	98.24	29.5	120.4	
Sc	45	No Gas	4905837.80	2.1	4376311.73	112.1	29.5	120.4	
Sc	45	H2	610201.68	1.1	563225.15	108.34	29.5	120.4	
Sc	45	He	167113.88	1.2	146730.33	113.89	29.5	120.4	
Ge	72	No Gas	1013840.55	2.8	936426.06	108.27	29.5	120.4	
Ge	72	H2	188012.83	0.4	183420.15	102.5	29.5	120.4	
Ge	72	He	109068.42	0.5	97408.84	111.97	29.5	120.4	
Y	89	H2	2887395.71	0.6	2733952.55	105.61	29.5	120.4	
Y	89	He	855444.82	0.3	791301.87	108.11	29.5	120.4	
Tb	159	No Gas	9573881.73	2.3	9359761.39	102.29	29.5	120.4	
Tb	159	He	3717584.15	0.8	3741562.06	99.36	29.5	120.4	
Bi	209	No Gas	4507099.86	2.6	4534931.8	99.39	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	068_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 19:55:55
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.025	ppb	24.4	80.00	0.2	
11	B	6	No Gas	0.496	ppb	13.8	6471.68	4	
23	Na	45	He	305.516	ppb	2.1	85867.92	200	Fail All Methods□ Failed DoD
24	Mg	45	He	11.892	ppb	8.0	1964.73	20	Failed DoD
27	Al	45	He	-0.120	ppb	N/A	28.89	20	
28	Si	45	H2	-6.887	ppb	N/A	8588.83	100	
39	K	45	He	24.657	ppb	11.7	19961.58	200	
40	Ca	45	H2	9.542	ppb	3.2	9241.11	20	
51	V	89	He	0.022	ppb	25.4	160.01	1	
52	Cr	89	He	0.017	ppb	90.9	489.26	1	
55	Mn	89	He	0.166	ppb	13.7	217.96	0.4	
56	Fe	89	H2	2.387	ppb	12.8	7914.48	20	
59	Co	89	He	0.020	ppb	30.1	124.46	0.2	
60	Ni	89	He	0.163	ppb	13.6	240.01	0.4	
63	Cu	89	He	-2.621	ppb	N/A	29801.61	0.6	Fail All Methods□ Failed DoD
66	Zn	89	He	-0.053	ppb	N/A	353.35	2	
75	As	89	He	0.000	ppb	N/A	234.36	1	
78	Se	89	H2	0.056	ppb	9.9	8.17	1	
88	Sr	89	He	0.145	ppb	11.6	238.90	1	
95	Mo	89	He	0.054	ppb	13.7	98.89	1	
107	Ag	89	He	0.004	ppb	54.0	52.22	0.2	
111	Cd	89	He	0.006	ppb	39.4	4.81	0.2	
118	Sn	159	He	0.032	ppb	62.5	147.78	1	
121	Sb	159	No Gas	0.026	ppb	17.5	286.99	0.2	
137	Ba	159	No Gas	0.010	ppb	212.3	390.45	0.4	
182	W	159	No Gas	0.084	ppb	7.7	720.82	1	
205	Tl	209	No Gas	0.022	ppb	9.9	393.78	0.2	
208	Pb	209	No Gas	0.016	ppb	27.7	510.57	0.2	
232	Th	209	No Gas	0.073	ppb	6.5	1581.88	1	
238	U	209	No Gas	0.021	ppb	17.2	420.48	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2428624.29	1.3	2459183.84	98.76	29.5	120.4	
Sc	45	No Gas	4935232.50	0.8	4376311.73	112.77	29.5	120.4	
Sc	45	H2	611152.20	1.5	563225.15	108.51	29.5	120.4	
Sc	45	He	167920.18	1.0	146730.33	114.44	29.5	120.4	
Ge	72	No Gas	1016212.48	1.8	936426.06	108.52	29.5	120.4	
Ge	72	H2	187603.64	0.7	183420.15	102.28	29.5	120.4	
Ge	72	He	110291.01	0.9	97408.84	113.22	29.5	120.4	
Y	89	H2	2875387.19	0.7	2733952.55	105.17	29.5	120.4	
Y	89	He	861204.47	1.2	791301.87	108.83	29.5	120.4	
Tb	159	No Gas	9601972.64	1.0	9359761.39	102.59	29.5	120.4	
Tb	159	He	3757913.35	0.6	3741562.06	100.44	29.5	120.4	
Bi	209	No Gas	4528426.34	0.4	4534931.8	99.86	29.5	120.4	

Laboratory Control Sample (LCS) Report

Sample Name	LCSWOG19IMW1
File Name	069LCSW.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 19:58:27
Sample Type	LCSW
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	6	No Gas	47.762	ppb	4.1	27738.41	50	19.1	79.5	120.4	
B	11	6	No Gas	468.259	ppb	3.7	183813.85	500	18.73	79.5	120.4	
Na	23	45	He	10330.532	ppb	0.9	522453.14	7500	27.55	79.5	120.4	6020□ DoD
Mg	24	45	He	5126.641	ppb	1.5	153685.98	5000	20.51	79.5	120.4	
Al	27	45	He	1923.016	ppb	1.2	21391.11	2000	19.23	79.5	120.4	
Si	28	45	H2	865.385	ppb	1.7	22522.80	1000	17.31	0	200	
K	39	45	He	11367.398	ppb	1.5	283663.11	10000	22.73	79.5	120.4	
Ca	40	45	H2	2613.602	ppb	0.9	383429.04	2500	20.91	79.5	120.4	
V	51	89	He	512.911	ppb	0.7	185516.47	500	20.52	79.5	120.4	
Cr	52	89	He	209.481	ppb	1.2	96403.61	200	20.95	79.5	120.4	
Mn	55	89	He	512.257	ppb	0.3	110397.72	500	20.49	79.5	120.4	
Fe	56	89	H2	1169.516	ppb	1.3	568120.91	1000	23.39	79.5	120.4	
Co	59	89	He	527.947	ppb	0.6	377536.34	500	21.12	79.5	120.4	
Ni	60	89	He	527.621	ppb	0.3	102064.70	500	21.1	79.5	120.4	
Cu	63	89	He	264.490	ppb	1.0	209429.83	250	21.16	79.5	120.4	
Zn	66	89	He	495.580	ppb	1.1	40296.89	500	19.82	79.5	120.4	
As	75	89	He	102.905	ppb	1.3	6812.08	100	20.58	79.5	120.4	
Se	78	89	H2	98.009	ppb	0.6	2594.96	100	19.6	79.5	120.4	
Sr	88	89	He	490.511	ppb	0.1	134182.58	500	19.62	79.5	120.4	
Mo	95	89	He	101.649	ppb	0.6	30694.19	100	20.33	79.5	120.4	
Ag	107	89	He	49.653	ppb	1.3	49215.53	50	19.86	79.5	120.4	
Cd	111	89	He	245.749	ppb	0.6	32834.58	250	19.66	79.5	120.4	
Sn	118	159	He	561.777	ppb	1.1	139678.70	500	22.47	79.5	120.4	
Sb	121	159	No Gas	104.146	ppb	4.3	202021.43	100	20.83	79.5	120.4	
Ba	137	159	No Gas	1800.451	ppb	3.7	1246040.95	2000	18	79.5	120.4	
W	182	159	No Gas	95.358	ppb	4.2	153802.13	100	19.07	79.5	120.4	
Tl	205	209	No Gas	98.645	ppb	2.7	308215.22	100	19.73	79.5	120.4	
[Pb]	206	209	No Gas	101.564	ppb	4.9	109430.19	100	20.31	79.5	120.4	
[Pb]	207	209	No Gas	101.633	ppb	3.7	95731.53	100	20.33	79.5	120.4	
Pb	208	209	No Gas	101.411	ppb	4.3	434730.17	100	20.28	79.5	120.4	
Th	232	209	No Gas	102.916	ppb	4.9	418941.24	100	20.58	79.5	120.4	
U	238	209	No Gas	102.500	ppb	5.1	398083.61	100	20.5	79.5	120.4	

QC ISTD Table

Laboratory Control Sample (LCS) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2433423.44	1.9	2459183.84	98.95	29.5	120.4	
Sc	45	No Gas	4833503.96	2.4	4376311.73	110.45	29.5	120.4	
Sc	45	H2	605325.06	1.4	563225.15	107.47	29.5	120.4	
Sc	45	He	165799.68	1.0	146730.33	113	29.5	120.4	
Ge	72	No Gas	991261.64	2.6	936426.06	105.86	29.5	120.4	
Ge	72	H2	182693.63	1.0	183420.15	99.6	29.5	120.4	
Ge	72	He	107316.17	0.4	97408.84	110.17	29.5	120.4	
Y	89	H2	2875840.30	1.4	2733952.55	105.19	29.5	120.4	
Y	89	He	842543.56	0.7	791301.87	106.48	29.5	120.4	
Tb	159	No Gas	9524239.23	2.1	9359761.39	101.76	29.5	120.4	
Tb	159	He	3682389.18	0.8	3741562.06	98.42	29.5	120.4	
Bi	209	No Gas	4431506.09	2.0	4534931.8	97.72	29.5	120.4	

Sample Report

Sample Name SO4519-005

File Name 074SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 20:11:03

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.056	ppb	32.5	41.11	100	
11	B	6	No Gas	1.062	ppb	26.3	5888.05	1000	
23	Na	45	He	1037.766	ppb	4.9	59683.06	200000	
24	Mg	45	He	34.646	ppb	8.5	1182.36	200000	
27	Al	45	He	22.750	ppb	17.7	283.35	200000	
28	Si	45	H2	-48.790	ppb	N/A	8452.12	10000	
39	K	45	He	93.511	ppb	42.5	18773.83	200000	
40	Ca	45	H2	40.147	ppb	2.4	8215.98	200000	
51	V	89	He	0.065	ppb	79.7	142.23	1000	
52	Cr	89	He	0.002	ppb	2032.4	443.93	2000	
55	Mn	89	He	0.807	ppb	4.5	210.63	2000	
56	Fe	89	H2	43.929	ppb	7.0	23937.10	100000	
59	Co	89	He	0.054	ppb	44.6	91.12	1000	
60	Ni	89	He	0.611	ppb	14.6	196.68	1000	
63	Cu	89	He	-18.897	ppb	N/A	25627.51	2000	
66	Zn	89	He	1.232	ppb	48.4	472.25	2000	
75	As	89	He	-0.143	ppb	N/A	222.69	1000	
78	Se	89	H2	0.041	ppb	94.5	1.83	1000	
88	Sr	89	He	0.345	ppb	19.2	131.12	2000	
95	Mo	89	He	0.065	ppb	46.0	35.56	1000	
107	Ag	89	He	0.006	ppb	282.4	37.78	100	
111	Cd	89	He	0.022	ppb	34.9	3.33	1000	
118	Sn	159	He	0.220	ppb	41.1	161.12	1000	
121	Sb	159	No Gas	0.048	ppb	11.8	130.15	1000	
137	Ba	159	No Gas	0.171	ppb	59.0	483.89	2000	
182	W	159	No Gas	0.026	ppb	79.8	76.75	1000	
205	Tl	209	No Gas	0.017	ppb	47.3	96.77	1000	
208	Pb	209	No Gas	0.063	ppb	12.2	453.85	2000	
232	Th	209	No Gas	0.023	ppb	69.7	170.19	1000	
238	U	209	No Gas	0.015	ppb	62.5	70.08	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2410741.15	2.4	2459183.84	98.03	29.5	120.4	
Sc	45	No Gas	4906328.34	2.4	4376311.73	112.11	29.5	120.4	
Sc	45	H2	617646.46	1.5	563225.15	109.66	29.5	120.4	
Sc	45	He	163932.48	4.3	146730.33	111.72	29.5	120.4	
Ge	72	No Gas	1024626.66	2.4	936426.06	109.42	29.5	120.4	
Ge	72	H2	188883.78	2.4	183420.15	102.98	29.5	120.4	
Ge	72	He	108132.06	3.6	97408.84	111.01	29.5	120.4	
Y	89	H2	2941966.16	0.7	2733952.55	107.61	29.5	120.4	
Y	89	He	851411.86	3.9	791301.87	107.6	29.5	120.4	
Tb	159	No Gas	9768676.38	3.2	9359761.39	104.37	29.5	120.4	
Tb	159	He	3709950.64	4.0	3741562.06	99.16	29.5	120.4	
Bi	209	No Gas	4694322.85	1.3	4534931.8	103.51	29.5	120.4	

Sample Report

Sample Name SO4519-005A

File Name 075SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 20:13:36

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	7.234	ppb	7.8	4047.37	100	
11	B	6	No Gas	3.968	ppb	14.1	6781.83	1000	
23	Na	45	He	1725.375	ppb	1.2	96200.42	200000	
24	Mg	45	He	5183.802	ppb	1.6	157999.39	200000	
27	Al	45	He	34068.856	ppb	1.1	384712.37	200000	
28	Si	45	H2	15875.637	ppb	2.6	259846.60	10000	
39	K	45	He	5815.576	ppb	1.2	155903.61	200000	
40	Ca	45	H2	4202.271	ppb	1.5	623666.04	200000	
51	V	89	He	102.502	ppb	0.7	40379.92	1000	
52	Cr	89	He	59.196	ppb	0.7	29939.49	2000	
55	Mn	89	He	5019.012	ppb	0.7	1174775.95	2000	
56	Fe	89	H2	58117.904	ppb	1.2	30137754.19	100000	
59	Co	89	He	80.811	ppb	1.5	62830.84	1000	
60	Ni	89	He	55.144	ppb	0.6	11664.17	1000	
63	Cu	89	He	49.366	ppb	3.0	75747.87	2000	
66	Zn	89	He	168.481	ppb	1.4	15146.42	2000	
75	As	89	He	5.232	ppb	2.2	612.75	1000	
78	Se	89	H2	0.556	ppb	45.7	16.50	1000	
88	Sr	89	He	48.801	ppb	0.4	14538.14	2000	
95	Mo	89	He	0.911	ppb	17.8	315.57	1000	
107	Ag	89	He	0.080	ppb	6.8	121.12	100	
111	Cd	89	He	0.628	ppb	17.2	91.48	1000	
118	Sn	159	He	49.334	ppb	0.7	12659.71	1000	
121	Sb	159	No Gas	0.253	ppb	9.0	530.60	1000	
137	Ba	159	No Gas	523.951	ppb	3.5	366965.63	2000	
182	W	159	No Gas	0.130	ppb	26.7	246.95	1000	
205	Tl	209	No Gas	0.594	ppb	6.6	1965.69	1000	
208	Pb	209	No Gas	52.457	ppb	3.1	233422.42	2000	
232	Th	209	No Gas	17.470	ppb	4.3	73849.71	1000	
238	U	209	No Gas	3.437	ppb	4.2	13856.62	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2340303.89	1.5	2459183.84	95.17	29.5	120.4	
Sc	45	No Gas	4924311.64	1.2	4376311.73	112.52	29.5	120.4	
Sc	45	H2	613774.80	1.7	563225.15	108.98	29.5	120.4	
Sc	45	He	168566.77	0.5	146730.33	114.88	29.5	120.4	
Ge	72	No Gas	1010773.21	1.5	936426.06	107.94	29.5	120.4	
Ge	72	H2	181530.81	0.7	183420.15	98.97	29.5	120.4	
Ge	72	He	109315.87	0.5	97408.84	112.22	29.5	120.4	
Y	89	H2	3081259.51	1.2	2733952.55	112.7	29.5	120.4	
Y	89	He	915353.91	0.7	791301.87	115.68	29.5	120.4	
Tb	159	No Gas	9630273.67	1.7	9359761.39	102.89	29.5	120.4	
Tb	159	He	3770906.78	0.8	3741562.06	100.78	29.5	120.4	
Bi	209	No Gas	4597068.11	1.5	4534931.8	101.37	29.5	120.4	

Sample Report

Sample Name RINSE

File Name 078SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 20:21:07

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.014	ppb	14.3	46.67	100	
11	B	6	No Gas	0.754	ppb	7.3	6660.65	1000	
23	Na	45	He	170.098	ppb	3.2	52025.06	200000	
24	Mg	45	He	5.586	ppb	22.6	1013.45	200000	
27	Al	45	He	4.382	ppb	4.7	283.35	200000	
28	Si	45	H2	-3.874	ppb	N/A	8919.42	10000	
39	K	45	He	10.329	ppb	31.0	18348.55	200000	
40	Ca	45	H2	4.791	ppb	9.5	5802.51	200000	
51	V	89	He	0.034	ppb	28.3	184.45	1000	
52	Cr	89	He	0.016	ppb	82.8	491.92	2000	
55	Mn	89	He	0.328	ppb	4.5	400.60	2000	
56	Fe	89	H2	10.569	ppb	2.6	28220.26	100000	
59	Co	89	He	0.026	ppb	21.7	151.12	1000	
60	Ni	89	He	0.130	ppb	20.6	208.90	1000	
63	Cu	89	He	-5.796	ppb	N/A	19473.09	2000	
66	Zn	89	He	-0.008	ppb	N/A	375.58	2000	
75	As	89	He	0.012	ppb	339.8	241.03	1000	
78	Se	89	H2	0.026	ppb	46.8	4.17	1000	
88	Sr	89	He	0.082	ppb	27.1	152.23	2000	
95	Mo	89	He	0.018	ppb	48.0	44.45	1000	
107	Ag	89	He	0.004	ppb	54.7	51.11	100	
111	Cd	89	He	0.006	ppb	109.7	4.44	1000	
118	Sn	159	He	0.051	ppb	44.9	173.34	1000	
121	Sb	159	No Gas	0.010	ppb	30.3	136.82	1000	
137	Ba	159	No Gas	0.238	ppb	16.8	1208.08	2000	
182	W	159	No Gas	0.022	ppb	16.3	213.57	1000	
205	Tl	209	No Gas	0.017	ppb	11.1	323.70	1000	
208	Pb	209	No Gas	0.027	ppb	9.1	770.87	2000	
232	Th	209	No Gas	0.053	ppb	15.7	1194.76	1000	
238	U	209	No Gas	0.016	ppb	1.7	323.70	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2323605.27	1.1	2459183.84	94.49	29.5	120.4	
Sc	45	No Gas	4917958.10	0.7	4376311.73	112.38	29.5	120.4	
Sc	45	H2	617364.96	1.2	563225.15	109.61	29.5	120.4	
Sc	45	He	168745.68	1.0	146730.33	115	29.5	120.4	
Ge	72	No Gas	1017941.33	0.6	936426.06	108.7	29.5	120.4	
Ge	72	H2	187748.54	0.7	183420.15	102.36	29.5	120.4	
Ge	72	He	111470.45	0.6	97408.84	114.44	29.5	120.4	
Y	89	H2	2927891.35	0.7	2733952.55	107.09	29.5	120.4	
Y	89	He	870566.62	0.7	791301.87	110.02	29.5	120.4	
Tb	159	No Gas	9766137.98	0.3	9359761.39	104.34	29.5	120.4	
Tb	159	He	3795156.23	0.5	3741562.06	101.43	29.5	120.4	
Bi	209	No Gas	4597107.47	0.4	4534931.8	101.37	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	079_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 20:23:38
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	26.012	ppb	4.1	71674.71	25	104.05	89.8	110.2	
11	B	6	No Gas	25.709	ppb	4.3	51704.39	25	102.84	89.8	110.2	
23	Na	45	He	5417.262	ppb	1.7	1366341.36	5000	108.35	89.8	110.2	
24	Mg	45	He	4985.148	ppb	1.2	752691.71	5000	99.7	89.8	110.2	
27	Al	45	He	497.665	ppb	0.2	27895.84	500	99.53	89.8	110.2	
28	Si	45	H2	460.838	ppb	3.7	46233.37	500	92.17	89.8	110.2	
39	K	45	He	5601.563	ppb	0.7	679782.94	5000	112.03	89.8	110.2	> +/- 10%
40	Ca	45	H2	4983.039	ppb	3.3	3740031.40	5000	99.66	89.8	110.2	
51	V	89	He	26.813	ppb	1.4	50079.02	25	107.25	89.8	110.2	
52	Cr	89	He	26.700	ppb	0.9	63504.70	25	106.8	89.8	110.2	
55	Mn	89	He	26.041	ppb	0.4	28956.34	25	104.16	89.8	110.2	
56	Fe	89	H2	5082.489	ppb	0.6	12616021.72	5000	101.65	89.8	110.2	
59	Co	89	He	26.411	ppb	1.0	97395.68	25	105.64	89.8	110.2	
60	Ni	89	He	27.095	ppb	0.5	27075.93	25	108.38	89.8	110.2	
63	Cu	89	He	15.994	ppb	0.3	92376.74	25	63.98	89.8	110.2	> +/- 10%
66	Zn	89	He	25.389	ppb	2.6	10922.43	25	101.56	89.8	110.2	
75	As	89	He	25.795	ppb	0.2	8742.71	25	103.18	89.8	110.2	
78	Se	89	H2	25.452	ppb	0.8	3455.10	25	101.81	89.8	110.2	
88	Sr	89	He	24.776	ppb	0.5	34965.33	25	99.1	89.8	110.2	
95	Mo	89	He	25.580	ppb	1.3	39809.91	25	102.32	89.8	110.2	
107	Ag	89	He	25.205	ppb	0.9	128736.02	25	100.82	89.8	110.2	
111	Cd	89	He	24.592	ppb	1.0	16936.99	25	98.37	89.8	110.2	
118	Sn	159	He	26.227	ppb	0.6	33788.75	25	104.91	89.8	110.2	
121	Sb	159	No Gas	25.924	ppb	3.6	256358.37	25	103.7	89.8	110.2	
137	Ba	159	No Gas	25.837	ppb	3.3	91488.78	25	103.35	89.8	110.2	
182	W	159	No Gas	24.472	ppb	3.3	201217.23	25	97.89	89.8	110.2	
205	Tl	209	No Gas	25.044	ppb	3.0	404543.05	25	100.18	89.8	110.2	
208	Pb	209	No Gas	25.255	ppb	3.5	559754.30	25	101.02	89.8	110.2	
232	Th	209	No Gas	26.015	ppb	3.7	547573.62	25	104.06	89.8	110.2	
238	U	209	No Gas	26.017	ppb	2.8	522553.68	25	104.07	89.8	110.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2309738.72	2.2	2459183.84	93.92	29.5	120.4	
Sc	45	No Gas	4914171.76	1.6	4376311.73	112.29	29.5	120.4	
Sc	45	H2	622814.04	2.2	563225.15	110.58	29.5	120.4	
Sc	45	He	167149.45	1.5	146730.33	113.92	29.5	120.4	
Ge	72	No Gas	1017339.86	1.3	936426.06	108.64	29.5	120.4	
Ge	72	H2	189412.66	1.7	183420.15	103.27	29.5	120.4	
Ge	72	He	110999.74	1.5	97408.84	113.95	29.5	120.4	
Y	89	H2	2949210.56	0.9	2733952.55	107.87	29.5	120.4	
Y	89	He	868624.31	0.8	791301.87	109.77	29.5	120.4	
Tb	159	No Gas	9710585.97	2.5	9359761.39	103.75	29.5	120.4	
Tb	159	He	3806434.21	0.7	3741562.06	101.73	29.5	120.4	
Bi	209	No Gas	4581874.47	1.7	4534931.8	101.04	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	080_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 20:26:07
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.071	ppb	5.5	208.90	0.2	
11	B	6	No Gas	0.395	ppb	20.4	6107.06	4	
23	Na	45	He	155.098	ppb	3.0	48328.34	200	Failed DoD
24	Mg	45	He	4.924	ppb	10.6	913.43	20	
27	Al	45	He	1.664	ppb	32.2	130.01	20	
28	Si	45	H2	-9.745	ppb	N/A	8495.33	100	
39	K	45	He	14.758	ppb	40.3	18912.23	200	
40	Ca	45	H2	5.750	ppb	11.0	6546.21	20	
51	V	89	He	0.026	ppb	26.8	171.12	1	
52	Cr	89	He	0.009	ppb	154.4	475.93	1	
55	Mn	89	He	0.128	ppb	20.7	178.63	0.4	
56	Fe	89	H2	8.439	ppb	8.4	23235.18	20	
59	Co	89	He	0.010	ppb	72.8	91.12	0.2	
60	Ni	89	He	0.114	ppb	17.0	194.45	0.4	
63	Cu	89	He	-5.655	ppb	N/A	20018.27	0.6	Fail All Methods□ Failed DoD
66	Zn	89	He	-0.083	ppb	N/A	345.57	2	
75	As	89	He	-0.007	ppb	N/A	235.70	1	
78	Se	89	H2	0.066	ppb	50.6	9.67	1	
88	Sr	89	He	0.031	ppb	21.9	81.11	1	
95	Mo	89	He	0.054	ppb	10.3	101.11	1	
107	Ag	89	He	0.010	ppb	36.3	84.45	0.2	
111	Cd	89	He	0.008	ppb	28.6	6.30	0.2	
118	Sn	159	He	0.076	ppb	79.5	206.73	1	
121	Sb	159	No Gas	0.057	ppb	11.5	604.03	0.2	
137	Ba	159	No Gas	0.060	ppb	54.1	573.99	0.4	
182	W	159	No Gas	0.113	ppb	12.8	971.12	1	
205	Tl	209	No Gas	0.047	ppb	29.3	810.94	0.2	
208	Pb	209	No Gas	0.056	ppb	10.9	1411.61	0.2	
232	Th	209	No Gas	0.096	ppb	15.3	2109.23	1	
238	U	209	No Gas	0.054	ppb	21.7	1104.64	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2362033.17	0.7	2459183.84	96.05	29.5	120.4	
Sc	45	No Gas	4940810.69	3.2	4376311.73	112.9	29.5	120.4	
Sc	45	H2	620530.32	0.9	563225.15	110.17	29.5	120.4	
Sc	45	He	169064.42	0.4	146730.33	115.22	29.5	120.4	
Ge	72	No Gas	1028497.33	4.4	936426.06	109.83	29.5	120.4	
Ge	72	H2	190001.05	1.0	183420.15	103.59	29.5	120.4	
Ge	72	He	110586.68	0.9	97408.84	113.53	29.5	120.4	
Y	89	H2	2961312.14	0.4	2733952.55	108.32	29.5	120.4	
Y	89	He	873808.87	0.3	791301.87	110.43	29.5	120.4	
Tb	159	No Gas	9790127.91	3.2	9359761.39	104.6	29.5	120.4	
Tb	159	He	3837487.55	1.3	3741562.06	102.56	29.5	120.4	
Bi	209	No Gas	4627433.05	2.6	4534931.8	102.04	29.5	120.4	

Prep Blank (PB) Report

Sample Name	PBWOG19IMW2
File Name	086_PB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 20:41:12
Sample Type	PB
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	6	No Gas	0.053	ppb	12.0	36.67	0.5	
B	11	6	No Gas	0.720	ppb	73.6	5402.30	10	
Na	23	45	He	1109.907	ppb	61.5	64189.02	500	PB 6020 Fails DoD PB 6020 Fails Non-DoD
Mg	24	45	He	59.571	ppb	61.1	1947.16	50	PB 6020 Fails DoD
Al	27	45	He	25.905	ppb	74.0	323.36	50	
Si	28	45	H2	-40.025	ppb	N/A	8575.47	250	
K	39	45	He	65.623	ppb	37.2	18477.06	500	
Ca	40	45	H2	74.077	ppb	97.0	13225.21	50	PB 6020 Fails DoD
V	51	89	He	0.763	ppb	18.0	404.47	2.5	
Cr	52	89	He	0.987	ppb	1.4	917.20	2.5	
Mn	55	89	He	1.095	ppb	57.6	278.63	1	PB 6020 Fails DoD
Fe	56	89	H2	33.619	ppb	82.4	18998.43	50	
Co	59	89	He	0.114	ppb	77.7	137.79	0.5	
Ni	60	89	He	0.602	ppb	18.7	198.90	1	
Cu	63	89	He	1.595	ppb	30.9	39839.90	1.5	PB 6020 Fails DoD
Zn	66	89	He	3.030	ppb	27.9	628.93	5	
As	75	89	He	0.131	ppb	123.7	244.70	2.5	
Se	78	89	H2	0.059	ppb	143.8	2.33	2.5	
Sr	88	89	He	0.502	ppb	99.5	177.79	2.5	
Mo	95	89	He	0.078	ppb	96.4	40.00	2.5	
Ag	107	89	He	0.026	ppb	82.3	58.89	0.5	
Cd	111	89	He	0.043	ppb	103.9	6.29	0.5	
Sn	118	159	He	0.566	ppb	29.9	253.35	2.5	
Sb	121	159	No Gas	0.046	ppb	37.6	126.81	0.5	
Ba	137	159	No Gas	0.296	ppb	9.8	573.99	1	
W	182	159	No Gas	0.025	ppb	90.8	76.76	2.5	
Tl	205	209	No Gas	0.013	ppb	60.4	83.43	0.5	
Pb	208	209	No Gas	0.066	ppb	16.0	460.53	0.5	
Th	232	209	No Gas	0.057	ppb	32.7	317.03	2.5	
U	238	209	No Gas	0.018	ppb	36.4	80.09	0.5	

QC ISTD Table

Prep Blank (PB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2260295.53	1.2	2459183.84	91.91	29.5	120.4	
Sc	45	No Gas	4910242.78	0.9	4376311.73	112.2	29.5	120.4	
Sc	45	H2	616494.38	0.5	563225.15	109.46	29.5	120.4	
Sc	45	He	166917.01	1.2	146730.33	113.76	29.5	120.4	
Ge	72	No Gas	1021508.45	1.8	936426.06	109.09	29.5	120.4	
Ge	72	H2	189258.86	1.1	183420.15	103.18	29.5	120.4	
Ge	72	He	110094.98	0.4	97408.84	113.02	29.5	120.4	
Y	89	H2	2964539.72	0.9	2733952.55	108.43	29.5	120.4	
Y	89	He	867301.67	0.2	791301.87	109.6	29.5	120.4	
Tb	159	No Gas	9797374.72	1.7	9359761.39	104.68	29.5	120.4	
Tb	159	He	3797092.13	0.4	3741562.06	101.48	29.5	120.4	
Bi	209	No Gas	4646872.07	0.4	4534931.8	102.47	29.5	120.4	

Laboratory Control Sample (LCS) Report

Sample Name	LCSWOG19IMW2
File Name	087LCSW.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 20:43:45
Sample Type	LCSW
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	6	No Gas	51.760	ppb	3.4	28065.73	50	20.7	79.5	120.4	
B	11	6	No Gas	498.417	ppb	2.8	182317.28	500	19.94	79.5	120.4	
Na	23	45	He	9333.012	ppb	0.7	477076.55	7500	24.89	79.5	120.4	6020□ DoD
Mg	24	45	He	5165.946	ppb	1.3	156242.51	5000	20.66	79.5	120.4	
Al	27	45	He	1944.207	ppb	2.0	21818.50	2000	19.44	79.5	120.4	
Si	28	45	H2	905.739	ppb	5.4	23642.28	1000	18.11	0	200	
K	39	45	He	11585.487	ppb	1.6	291340.15	10000	23.17	79.5	120.4	DoD
Ca	40	45	H2	2599.037	ppb	1.1	389365.79	2500	20.79	79.5	120.4	
V	51	89	He	527.754	ppb	1.1	196207.15	500	21.11	79.5	120.4	
Cr	52	89	He	213.815	ppb	0.9	101139.56	200	21.38	79.5	120.4	
Mn	55	89	He	522.314	ppb	0.7	115706.90	500	20.89	79.5	120.4	
Fe	56	89	H2	1201.796	ppb	0.5	600605.39	1000	24.04	79.5	120.4	DoD
Co	59	89	He	542.782	ppb	1.0	398975.62	500	21.71	79.5	120.4	
Ni	60	89	He	547.892	ppb	0.9	108940.54	500	21.92	79.5	120.4	
Cu	63	89	He	218.588	ppb	1.5	184627.56	250	17.49	79.5	120.4	
Zn	66	89	He	506.646	ppb	1.1	42338.47	500	20.27	79.5	120.4	
As	75	89	He	105.011	ppb	2.4	7139.96	100	21	79.5	120.4	
Se	78	89	H2	100.714	ppb	0.4	2743.48	100	20.14	79.5	120.4	
Sr	88	89	He	505.903	ppb	1.0	142251.05	500	20.24	79.5	120.4	
Mo	95	89	He	104.252	ppb	1.4	32357.04	100	20.85	79.5	120.4	
Ag	107	89	He	51.330	ppb	2.0	52297.29	50	20.53	79.5	120.4	
Cd	111	89	He	254.627	ppb	1.4	34968.74	250	20.37	79.5	120.4	
Sn	118	159	He	531.773	ppb	0.3	136752.51	500	21.27	79.5	120.4	
Sb	121	159	No Gas	108.893	ppb	1.9	216341.05	100	21.78	79.5	120.4	
Ba	137	159	No Gas	1894.735	ppb	2.7	1342801.96	2000	18.95	79.5	120.4	
W	182	159	No Gas	101.094	ppb	2.1	166984.13	100	20.22	79.5	120.4	
Tl	205	209	No Gas	102.292	ppb	2.2	330819.58	100	20.46	79.5	120.4	
[Pb]	206	209	No Gas	105.430	ppb	2.6	117605.43	100	21.09	79.5	120.4	
[Pb]	207	209	No Gas	105.078	ppb	2.5	102458.77	100	21.02	79.5	120.4	
Pb	208	209	No Gas	105.362	ppb	2.5	467587.42	100	21.07	79.5	120.4	
Th	232	209	No Gas	107.748	ppb	2.4	454116.25	100	21.55	79.5	120.4	
U	238	209	No Gas	107.165	ppb	2.5	430919.24	100	21.43	79.5	120.4	

QC ISTD Table

Laboratory Control Sample (LCS) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2271356.09	1.6	2459183.84	92.36	29.5	120.4	
Sc	45	No Gas	4880434.90	1.4	4376311.73	111.52	29.5	120.4	
Sc	45	H2	618167.99	1.3	563225.15	109.76	29.5	120.4	
Sc	45	He	167283.47	1.6	146730.33	114.01	29.5	120.4	
Ge	72	No Gas	1019086.21	1.3	936426.06	108.83	29.5	120.4	
Ge	72	H2	187791.79	1.3	183420.15	102.38	29.5	120.4	
Ge	72	He	109627.43	1.0	97408.84	112.54	29.5	120.4	
Y	89	H2	2958632.20	0.9	2733952.55	108.22	29.5	120.4	
Y	89	He	866114.58	1.4	791301.87	109.45	29.5	120.4	
Tb	159	No Gas	9750577.42	1.4	9359761.39	104.18	29.5	120.4	
Tb	159	He	3808285.36	0.6	3741562.06	101.78	29.5	120.4	
Bi	209	No Gas	4586400.77	1.7	4534931.8	101.13	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	091_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 20:53:49
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	26.777	ppb	2.7	72012.87	25	107.11	89.8	110.2	
11	B	6	No Gas	25.647	ppb	4.1	50345.12	25	102.59	89.8	110.2	
23	Na	45	He	5268.374	ppb	1.4	1320746.92	5000	105.37	89.8	110.2	
24	Mg	45	He	4886.866	ppb	1.0	733226.26	5000	97.74	89.8	110.2	
27	Al	45	He	480.008	ppb	1.4	26735.84	500	96	89.8	110.2	
28	Si	45	H2	450.977	ppb	5.4	44997.84	500	90.2	89.8	110.2	
39	K	45	He	5569.453	ppb	0.9	671736.02	5000	111.39	89.8	110.2	> +/- 10%
40	Ca	45	H2	4993.967	ppb	2.6	3713689.98	5000	99.88	89.8	110.2	
51	V	89	He	26.437	ppb	1.2	48926.98	25	105.75	89.8	110.2	
52	Cr	89	He	26.370	ppb	0.4	62144.94	25	105.48	89.8	110.2	
55	Mn	89	He	25.962	ppb	1.1	28601.77	25	103.85	89.8	110.2	
56	Fe	89	H2	5119.537	ppb	0.1	12655585.03	5000	102.39	89.8	110.2	
59	Co	89	He	26.555	ppb	0.8	97019.44	25	106.22	89.8	110.2	
60	Ni	89	He	27.056	ppb	0.8	26786.39	25	108.22	89.8	110.2	
63	Cu	89	He	15.633	ppb	1.4	90327.13	25	62.53	89.8	110.2	> +/- 10%
66	Zn	89	He	25.905	ppb	1.9	11033.64	25	103.62	89.8	110.2	
75	As	89	He	25.892	ppb	0.8	8693.00	25	103.57	89.8	110.2	
78	Se	89	H2	25.353	ppb	2.7	3427.43	25	101.41	89.8	110.2	
88	Sr	89	He	24.970	ppb	0.7	34913.04	25	99.88	89.8	110.2	
95	Mo	89	He	25.374	ppb	0.7	39125.73	25	101.5	89.8	110.2	
107	Ag	89	He	25.427	ppb	0.8	128664.09	25	101.71	89.8	110.2	
111	Cd	89	He	24.704	ppb	1.1	16856.89	25	98.82	89.8	110.2	
118	Sn	159	He	26.032	ppb	2.3	33506.95	25	104.13	89.8	110.2	
121	Sb	159	No Gas	26.134	ppb	3.3	259222.08	25	104.54	89.8	110.2	
137	Ba	159	No Gas	25.950	ppb	2.5	92174.89	25	103.8	89.8	110.2	
182	W	159	No Gas	24.395	ppb	4.4	201159.41	25	97.58	89.8	110.2	
205	Tl	209	No Gas	25.309	ppb	2.7	407604.29	25	101.24	89.8	110.2	
208	Pb	209	No Gas	25.233	ppb	2.5	557657.27	25	100.93	89.8	110.2	
232	Th	209	No Gas	26.031	ppb	3.0	546338.95	25	104.12	89.8	110.2	
238	U	209	No Gas	26.247	ppb	2.2	525620.67	25	104.99	89.8	110.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2253717.93	1.9	2459183.84	91.64	29.5	120.4	
Sc	45	No Gas	4879561.11	1.7	4376311.73	111.5	29.5	120.4	
Sc	45	H2	616971.32	1.6	563225.15	109.54	29.5	120.4	
Sc	45	He	166100.52	1.4	146730.33	113.2	29.5	120.4	
Ge	72	No Gas	1022713.93	1.6	936426.06	109.21	29.5	120.4	
Ge	72	H2	190321.36	1.0	183420.15	103.76	29.5	120.4	
Ge	72	He	109908.23	0.5	97408.84	112.83	29.5	120.4	
Y	89	H2	2937147.98	0.6	2733952.55	107.43	29.5	120.4	
Y	89	He	860581.07	0.8	791301.87	108.76	29.5	120.4	
Tb	159	No Gas	9739832.15	2.4	9359761.39	104.06	29.5	120.4	
Tb	159	He	3802900.01	0.1	3741562.06	101.64	29.5	120.4	
Bi	209	No Gas	4568022.44	1.4	4534931.8	100.73	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	092_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 20:56:21
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.027	ppb	34.7	77.78	0.2	
11	B	6	No Gas	0.557	ppb	78.6	5936.99	4	
23	Na	45	He	102.643	ppb	3.4	34506.38	200	Failed DoD
24	Mg	45	He	3.272	ppb	13.5	651.17	20	
27	Al	45	He	0.561	ppb	44.8	66.67	20	
28	Si	45	H2	-7.851	ppb	N/A	8652.27	100	
39	K	45	He	10.493	ppb	35.2	18128.29	200	
40	Ca	45	H2	1.704	ppb	6.6	3526.12	20	
51	V	89	He	0.049	ppb	25.5	213.34	1	
52	Cr	89	He	-0.018	ppb	N/A	410.60	1	
55	Mn	89	He	0.069	ppb	8.8	112.65	0.4	
56	Fe	89	H2	3.104	ppb	3.2	9907.85	20	
59	Co	89	He	0.011	ppb	52.0	93.34	0.2	
60	Ni	89	He	0.075	ppb	40.0	154.45	0.4	
63	Cu	89	He	-6.188	ppb	N/A	18163.45	0.6	Fail All Methods Failed DoD
66	Zn	89	He	-0.001	ppb	N/A	378.91	2	
75	As	89	He	-0.007	ppb	N/A	234.70	1	
78	Se	89	H2	0.041	ppb	14.2	6.33	1	
88	Sr	89	He	0.017	ppb	43.0	61.11	1	
95	Mo	89	He	0.042	ppb	32.0	81.12	1	
107	Ag	89	He	0.007	ppb	14.0	67.78	0.2	
111	Cd	89	He	0.007	ppb	47.9	5.18	0.2	
118	Sn	159	He	0.027	ppb	83.6	144.45	1	
121	Sb	159	No Gas	0.027	ppb	18.1	286.99	0.2	
137	Ba	159	No Gas	0.022	ppb	58.4	420.48	0.4	
182	W	159	No Gas	0.095	ppb	8.7	780.90	1	
205	Tl	209	No Gas	0.025	ppb	36.2	420.48	0.2	
208	Pb	209	No Gas	0.019	ppb	30.1	550.62	0.2	
232	Th	209	No Gas	0.065	ppb	5.3	1391.63	1	
238	U	209	No Gas	0.015	ppb	29.9	283.65	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2206687.89	10.0	2459183.84	89.73	29.5	120.4	
Sc	45	No Gas	4656944.75	8.4	4376311.73	106.41	29.5	120.4	
Sc	45	H2	620890.24	1.6	563225.15	110.24	29.5	120.4	
Sc	45	He	166563.29	1.6	146730.33	113.52	29.5	120.4	
Ge	72	No Gas	973801.48	10.5	936426.06	103.99	29.5	120.4	
Ge	72	H2	189534.87	1.5	183420.15	103.33	29.5	120.4	
Ge	72	He	110522.18	0.6	97408.84	113.46	29.5	120.4	
Y	89	H2	2951995.49	1.1	2733952.55	107.98	29.5	120.4	
Y	89	He	870873.24	0.6	791301.87	110.06	29.5	120.4	
Tb	159	No Gas	9320815.00	7.9	9359761.39	99.58	29.5	120.4	
Tb	159	He	3834119.53	0.7	3741562.06	102.47	29.5	120.4	
Bi	209	No Gas	4393878.04	9.0	4534931.8	96.89	29.5	120.4	

Prep Blank (PB) Report

Sample Name	PBWOG29IMW2
File Name	093_PB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 20:58:52
Sample Type	PB
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	6	No Gas	0.070	ppb	13.9	45.56	0.5	
B	11	6	No Gas	1.728	ppb	14.6	5670.18	10	
Na	23	45	He	645.691	ppb	3.9	39959.86	500	PB 6020 Fails DoD
Mg	24	45	He	25.585	ppb	3.6	902.32	50	
Al	27	45	He	9.958	ppb	21.8	142.23	50	
Si	28	45	H2	-33.780	ppb	N/A	8485.34	250	
K	39	45	He	82.297	ppb	15.6	18298.53	500	
Ca	40	45	H2	39.203	ppb	2.5	7881.35	50	
V	51	89	He	1.140	ppb	15.0	526.70	2.5	
Cr	52	89	He	1.727	ppb	2.7	1223.84	2.5	
Mn	55	89	He	0.690	ppb	5.9	182.64	1	
Fe	56	89	H2	26.107	ppb	4.2	14814.32	50	
Co	59	89	He	0.015	ppb	351.9	62.23	0.5	
Ni	60	89	He	0.596	ppb	24.1	191.12	1	
Cu	63	89	He	54.163	ppb	0.5	72487.39	1.5	PB 6020 Fails DoD PB 6020 Fails Non-DoD
Zn	66	89	He	2.432	ppb	15.8	560.03	5	
As	75	89	He	-0.013	ppb	N/A	227.36	2.5	
Se	78	89	H2	0.124	ppb	75.7	4.00	2.5	
Sr	88	89	He	0.103	ppb	67.1	63.34	2.5	
Mo	95	89	He	0.115	ppb	28.1	50.00	2.5	
Ag	107	89	He	0.026	ppb	106.7	57.78	0.5	
Cd	111	89	He	0.019	ppb	49.3	2.96	0.5	
Sn	118	159	He	0.691	ppb	8.8	280.01	2.5	
Sb	121	159	No Gas	0.090	ppb	27.1	210.24	0.5	
Ba	137	159	No Gas	0.581	ppb	12.3	760.88	1	
W	182	159	No Gas	0.075	ppb	25.3	156.84	2.5	
Tl	205	209	No Gas	0.056	ppb	23.4	220.25	0.5	
Pb	208	209	No Gas	0.102	ppb	23.4	610.69	0.5	
Th	232	209	No Gas	0.175	ppb	14.7	800.94	2.5	
U	238	209	No Gas	0.023	ppb	24.1	96.77	0.5	

QC ISTD Table

Prep Blank (PB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2226776.36	3.7	2459183.84	90.55	29.5	120.4	
Sc	45	No Gas	4762667.71	1.2	4376311.73	108.83	29.5	120.4	
Sc	45	H2	602936.55	0.7	563225.15	107.05	29.5	120.4	
Sc	45	He	161819.46	0.1	146730.33	110.28	29.5	120.4	
Ge	72	No Gas	994859.05	1.7	936426.06	106.24	29.5	120.4	
Ge	72	H2	183326.16	0.8	183420.15	99.95	29.5	120.4	
Ge	72	He	106935.32	0.8	97408.84	109.78	29.5	120.4	
Y	89	H2	2882034.46	1.5	2733952.55	105.42	29.5	120.4	
Y	89	He	838445.91	0.5	791301.87	105.96	29.5	120.4	
Tb	159	No Gas	9591566.67	1.2	9359761.39	102.48	29.5	120.4	
Tb	159	He	3724544.04	0.5	3741562.06	99.55	29.5	120.4	
Bi	209	No Gas	4547022.54	2.5	4534931.8	100.27	29.5	120.4	

Laboratory Control Sample (LCS) Report

Sample Name	LCSWOG29IMW2
File Name	094LCSW.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 21:01:22
Sample Type	LCSW
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	6	No Gas	49.727	ppb	2.0	26743.19	50	19.89	79.5	120.4	
B	11	6	No Gas	477.358	ppb	2.6	173412.30	500	19.09	79.5	120.4	
Na	23	45	He	8925.132	ppb	1.4	447663.39	7500	23.8	79.5	120.4	DoD
Mg	24	45	He	5013.127	ppb	0.4	148681.44	5000	20.05	79.5	120.4	
Al	27	45	He	1929.796	ppb	1.2	21235.32	2000	19.3	79.5	120.4	
Si	28	45	H2	904.219	ppb	2.3	23074.42	1000	18.08	0	200	
K	39	45	He	11250.243	ppb	0.4	277915.61	10000	22.5	79.5	120.4	
Ca	40	45	H2	2718.408	ppb	0.7	397786.99	2500	21.75	79.5	120.4	
V	51	89	He	508.680	ppb	0.9	186612.83	500	20.35	79.5	120.4	
Cr	52	89	He	205.031	ppb	1.0	95713.65	200	20.5	79.5	120.4	
Mn	55	89	He	504.591	ppb	0.3	110300.45	500	20.18	79.5	120.4	
Fe	56	89	H2	1161.193	ppb	0.9	567665.48	1000	23.22	79.5	120.4	
Co	59	89	He	522.248	ppb	0.8	378794.16	500	20.89	79.5	120.4	
Ni	60	89	He	521.844	ppb	0.2	102390.49	500	20.87	79.5	120.4	
Cu	63	89	He	212.127	ppb	1.3	177923.47	250	16.97	79.5	120.4	DoD
Zn	66	89	He	531.030	ppb	1.7	43769.51	500	21.24	79.5	120.4	
As	75	89	He	101.657	ppb	1.0	6829.09	100	20.33	79.5	120.4	
Se	78	89	H2	98.577	ppb	1.0	2626.30	100	19.72	79.5	120.4	
Sr	88	89	He	490.075	ppb	1.3	135969.61	500	19.6	79.5	120.4	
Mo	95	89	He	99.238	ppb	1.3	30395.82	100	19.85	79.5	120.4	
Ag	107	89	He	49.441	ppb	0.6	49707.53	50	19.78	79.5	120.4	
Cd	111	89	He	246.189	ppb	0.8	33363.65	250	19.7	79.5	120.4	
Sn	118	159	He	509.340	ppb	0.8	129822.26	500	20.37	79.5	120.4	
Sb	121	159	No Gas	103.856	ppb	0.9	203638.20	100	20.77	79.5	120.4	
Ba	137	159	No Gas	1828.819	ppb	0.3	1279247.97	2000	18.29	79.5	120.4	
W	182	159	No Gas	95.309	ppb	1.0	155390.76	100	19.06	79.5	120.4	
Tl	205	209	No Gas	100.459	ppb	1.0	320455.43	100	20.09	79.5	120.4	
[Pb]	206	209	No Gas	102.045	ppb	1.2	112275.22	100	20.41	79.5	120.4	
[Pb]	207	209	No Gas	103.637	ppb	1.3	99681.22	100	20.73	79.5	120.4	
Pb	208	209	No Gas	102.762	ppb	1.6	449835.68	100	20.55	79.5	120.4	
Th	232	209	No Gas	103.055	ppb	2.3	428452.46	100	20.61	79.5	120.4	
U	238	209	No Gas	102.481	ppb	2.3	406484.15	100	20.5	79.5	120.4	

QC ISTD Table

Laboratory Control Sample (LCS) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2252310.93	0.1	2459183.84	91.59	29.5	120.4	
Sc	45	No Gas	4749666.01	1.6	4376311.73	108.53	29.5	120.4	
Sc	45	H2	603884.05	1.2	563225.15	107.22	29.5	120.4	
Sc	45	He	164020.00	1.6	146730.33	111.78	29.5	120.4	
Ge	72	No Gas	992310.44	0.2	936426.06	105.97	29.5	120.4	
Ge	72	H2	183659.62	2.1	183420.15	100.13	29.5	120.4	
Ge	72	He	108461.53	1.2	97408.84	111.35	29.5	120.4	
Y	89	H2	2893843.43	1.2	2733952.55	105.85	29.5	120.4	
Y	89	He	854592.62	1.1	791301.87	108	29.5	120.4	
Tb	159	No Gas	9621598.40	1.4	9359761.39	102.8	29.5	120.4	
Tb	159	He	3774464.77	0.6	3741562.06	100.88	29.5	120.4	
Bi	209	No Gas	4522616.88	0.8	4534931.8	99.73	29.5	120.4	

Sample Report

Sample Name	RINSE
File Name	098SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 21:11:26
Sample Type	Sample
Total Dilution	1.0000
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.006	ppb	81.4	23.33	100	
11	B	6	No Gas	0.273	ppb	17.8	5643.53	1000	
23	Na	45	He	84.892	ppb	8.5	29021.48	200000	
24	Mg	45	He	3.107	ppb	23.4	604.51	200000	
27	Al	45	He	0.491	ppb	59.9	61.11	200000	
28	Si	45	H2	-9.537	ppb	N/A	8421.84	10000	
39	K	45	He	12.696	ppb	78.6	17741.31	200000	
40	Ca	45	H2	2.508	ppb	5.6	4081.86	200000	
51	V	89	He	0.022	ppb	67.2	157.79	1000	
52	Cr	89	He	-0.008	ppb	N/A	421.93	2000	
55	Mn	89	He	0.043	ppb	8.1	80.65	2000	
56	Fe	89	H2	1.192	ppb	6.6	5153.39	100000	
59	Co	89	He	0.006	ppb	81.9	73.34	1000	
60	Ni	89	He	0.086	ppb	12.8	160.01	1000	
63	Cu	89	He	-6.105	ppb	N/A	17827.51	2000	
66	Zn	89	He	-0.096	ppb	N/A	328.90	2000	
75	As	89	He	-0.004	ppb	N/A	228.36	1000	
78	Se	89	H2	0.001	ppb	265.9	0.83	1000	
88	Sr	89	He	0.037	ppb	30.7	86.67	2000	
95	Mo	89	He	0.012	ppb	67.2	33.33	1000	
107	Ag	89	He	0.007	ppb	38.9	66.67	100	
111	Cd	89	He	0.007	ppb	44.6	5.18	1000	
118	Sn	159	He	0.013	ppb	69.6	123.34	1000	
121	Sb	159	No Gas	0.005	ppb	60.0	83.43	1000	
137	Ba	159	No Gas	0.036	ppb	44.3	490.56	2000	
182	W	159	No Gas	0.007	ppb	25.7	93.44	1000	
205	Tl	209	No Gas	0.004	ppb	36.9	110.13	1000	
208	Pb	209	No Gas	0.006	ppb	33.8	290.33	2000	
232	Th	209	No Gas	0.006	ppb	12.9	196.89	1000	
238	U	209	No Gas	0.003	ppb	20.7	76.75	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2266156.08	1.5	2459183.84	92.15	29.5	120.4	
Sc	45	No Gas	4891421.04	0.4	4376311.73	111.77	29.5	120.4	
Sc	45	H2	614017.40	0.6	563225.15	109.02	29.5	120.4	
Sc	45	He	160982.92	4.9	146730.33	109.71	29.5	120.4	
Ge	72	No Gas	1016054.28	1.4	936426.06	108.5	29.5	120.4	
Ge	72	H2	188768.34	0.4	183420.15	102.92	29.5	120.4	
Ge	72	He	106667.85	4.6	97408.84	109.51	29.5	120.4	
Y	89	H2	2948638.87	0.1	2733952.55	107.85	29.5	120.4	
Y	89	He	843182.45	4.7	791301.87	106.56	29.5	120.4	
Tb	159	No Gas	9808415.13	0.3	9359761.39	104.79	29.5	120.4	
Tb	159	He	3730704.81	4.7	3741562.06	99.71	29.5	120.4	
Bi	209	No Gas	4630747.35	1.1	4534931.8	102.11	29.5	120.4	

Sample Report

Sample Name SO4723-001P

File Name 099SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 21:13:58

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	57.491	ppb	2.3	31234.52	100	
11	B	6	No Gas	555.795	ppb	1.6	203138.75	1000	
23	Na	45	He	13615.265	ppb	1.4	668486.76	200000	
24	Mg	45	He	15066.315	ppb	1.6	440014.24	200000	
27	Al	45	He	2246.865	ppb	1.8	24360.33	200000	
28	Si	45	H2	4220.167	ppb	1.3	73037.47	10000	
39	K	45	He	13467.829	ppb	0.5	324634.70	200000	
40	Ca	45	H2	79409.819	ppb	1.2	11315487.75	200000	
51	V	89	He	586.714	ppb	0.5	211588.64	1000	
52	Cr	89	He	236.663	ppb	1.2	108545.01	2000	
55	Mn	89	He	584.817	ppb	1.2	125662.41	2000	
56	Fe	89	H2	1424.720	ppb	0.8	688453.61	100000	
59	Co	89	He	594.061	ppb	1.0	423609.45	1000	
60	Ni	89	He	592.438	ppb	1.1	114257.84	1000	
63	Cu	89	He	259.585	ppb	1.0	205648.35	2000	
66	Zn	89	He	564.657	ppb	0.6	45732.77	2000	
75	As	89	He	116.598	ppb	1.6	7665.95	1000	
78	Se	89	H2	112.756	ppb	0.8	2971.35	1000	
88	Sr	89	He	1149.314	ppb	0.2	313457.56	2000	
95	Mo	89	He	118.290	ppb	0.4	35615.15	1000	
107	Ag	89	He	56.002	ppb	2.2	55341.55	100	
111	Cd	89	He	282.644	ppb	0.3	37656.29	1000	
118	Sn	159	He	592.311	ppb	0.3	150378.82	1000	
121	Sb	159	No Gas	117.671	ppb	3.1	233040.74	1000	
137	Ba	159	No Gas	2124.547	ppb	2.2	1501201.00	2000	
182	W	159	No Gas	113.245	ppb	3.5	186465.30	1000	
205	Tl	209	No Gas	115.507	ppb	2.6	370145.33	1000	
208	Pb	209	No Gas	115.747	ppb	2.9	508964.95	2000	
232	Th	209	No Gas	120.171	ppb	2.8	501815.68	1000	
238	U	209	No Gas	121.052	ppb	2.7	482315.01	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2275729.42	1.2	2459183.84	92.54	29.5	120.4	
Sc	45	No Gas	4797248.12	1.4	4376311.73	109.62	29.5	120.4	
Sc	45	H2	591210.62	0.1	563225.15	104.97	29.5	120.4	
Sc	45	He	161643.29	1.5	146730.33	110.16	29.5	120.4	
Ge	72	No Gas	999186.34	2.2	936426.06	106.7	29.5	120.4	
Ge	72	H2	182181.83	1.0	183420.15	99.32	29.5	120.4	
Ge	72	He	106797.29	0.8	97408.84	109.64	29.5	120.4	
Y	89	H2	2862293.76	0.2	2733952.55	104.69	29.5	120.4	
Y	89	He	840129.09	0.8	791301.87	106.17	29.5	120.4	
Tb	159	No Gas	9721626.59	1.9	9359761.39	103.87	29.5	120.4	
Tb	159	He	3759988.42	0.8	3741562.06	100.49	29.5	120.4	
Bi	209	No Gas	4544790.93	2.1	4534931.8	100.22	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	103_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 21:24:00
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	26.718	ppb	4.0	71162.27	25	106.87	89.8	110.2	
11	B	6	No Gas	25.445	ppb	4.2	49513.46	25	101.78	89.8	110.2	
23	Na	45	He	5153.113	ppb	0.7	1287979.01	5000	103.06	89.8	110.2	
24	Mg	45	He	4873.285	ppb	0.6	728872.33	5000	97.47	89.8	110.2	
27	Al	45	He	481.367	ppb	1.1	26726.88	500	96.27	89.8	110.2	
28	Si	45	H2	462.761	ppb	1.5	45315.71	500	92.55	89.8	110.2	
39	K	45	He	5520.105	ppb	1.0	663805.31	5000	110.4	89.8	110.2	> +/- 10%
40	Ca	45	H2	5044.393	ppb	1.2	3699548.73	5000	100.89	89.8	110.2	
51	V	89	He	26.300	ppb	1.3	48633.64	25	105.2	89.8	110.2	
52	Cr	89	He	26.420	ppb	0.4	62216.59	25	105.68	89.8	110.2	
55	Mn	89	He	26.002	ppb	0.3	28624.36	25	104.01	89.8	110.2	
56	Fe	89	H2	4985.374	ppb	0.2	12390235.53	5000	99.71	89.8	110.2	
59	Co	89	He	26.611	ppb	1.3	97147.12	25	106.44	89.8	110.2	
60	Ni	89	He	26.764	ppb	1.9	26478.01	25	107.06	89.8	110.2	
63	Cu	89	He	15.576	ppb	2.4	90058.73	25	62.3	89.8	110.2	> +/- 10%
66	Zn	89	He	25.146	ppb	1.5	10715.60	25	100.58	89.8	110.2	
75	As	89	He	25.665	ppb	1.6	8612.27	25	102.66	89.8	110.2	
78	Se	89	H2	24.854	ppb	2.3	3377.09	25	99.42	89.8	110.2	
88	Sr	89	He	24.755	ppb	1.0	34585.52	25	99.02	89.8	110.2	
95	Mo	89	He	25.743	ppb	1.8	39662.73	25	102.97	89.8	110.2	
107	Ag	89	He	25.044	ppb	0.8	126634.21	25	100.18	89.8	110.2	
111	Cd	89	He	24.999	ppb	1.4	17044.55	25	100	89.8	110.2	
118	Sn	159	He	25.888	ppb	1.7	33541.48	25	103.55	89.8	110.2	
121	Sb	159	No Gas	26.296	ppb	3.5	257657.88	25	105.18	89.8	110.2	
137	Ba	159	No Gas	26.077	ppb	3.5	91491.92	25	104.31	89.8	110.2	
182	W	159	No Gas	24.496	ppb	3.7	199566.57	25	97.98	89.8	110.2	
205	Tl	209	No Gas	25.150	ppb	2.6	404497.81	25	100.6	89.8	110.2	
208	Pb	209	No Gas	25.260	ppb	2.0	557514.26	25	101.04	89.8	110.2	
232	Th	209	No Gas	26.068	ppb	3.6	546414.66	25	104.27	89.8	110.2	
238	U	209	No Gas	25.949	ppb	2.2	519021.81	25	103.8	89.8	110.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2232032.81	1.4	2459183.84	90.76	29.5	120.4	
Sc	45	No Gas	4786862.21	2.2	4376311.73	109.38	29.5	120.4	
Sc	45	H2	608449.35	3.1	563225.15	108.03	29.5	120.4	
Sc	45	He	165560.79	0.3	146730.33	112.83	29.5	120.4	
Ge	72	No Gas	1000986.05	2.2	936426.06	106.89	29.5	120.4	
Ge	72	H2	189224.43	3.1	183420.15	103.16	29.5	120.4	
Ge	72	He	108766.19	0.8	97408.84	111.66	29.5	120.4	
Y	89	H2	2952955.82	2.8	2733952.55	108.01	29.5	120.4	
Y	89	He	859950.27	1.0	791301.87	108.68	29.5	120.4	
Tb	159	No Gas	9621528.81	2.5	9359761.39	102.8	29.5	120.4	
Tb	159	He	3827731.44	0.4	3741562.06	102.3	29.5	120.4	
Bi	209	No Gas	4561415.94	1.1	4534931.8	100.58	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	104_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 21:26:32
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.032	ppb	21.0	97.78	0.2	
11	B	6	No Gas	0.427	ppb	4.9	6057.03	4	
23	Na	45	He	75.573	ppb	5.8	27449.95	200	
24	Mg	45	He	2.362	ppb	10.1	508.94	20	
27	Al	45	He	0.276	ppb	115.6	50.00	20	
28	Si	45	H2	-8.413	ppb	N/A	8415.18	100	
39	K	45	He	9.960	ppb	8.7	17876.43	200	
40	Ca	45	H2	3.029	ppb	10.9	4414.20	20	
51	V	89	He	0.011	ppb	76.2	140.01	1	
52	Cr	89	He	0.003	ppb	1025.8	455.26	1	
55	Mn	89	He	0.042	ppb	8.6	81.32	0.4	
56	Fe	89	H2	2.218	ppb	12.6	7640.63	20	
59	Co	89	He	0.013	ppb	21.1	102.23	0.2	
60	Ni	89	He	0.060	ppb	39.1	137.78	0.4	
63	Cu	89	He	-6.434	ppb	N/A	17144.39	0.6	Fail All Methods□ Failed DoD
66	Zn	89	He	0.015	ppb	569.7	381.13	2	
75	As	89	He	0.024	ppb	112.5	242.03	1	
78	Se	89	H2	0.058	ppb	14.1	8.50	1	
88	Sr	89	He	0.042	ppb	77.0	95.56	1	
95	Mo	89	He	0.035	ppb	39.8	70.00	1	
107	Ag	89	He	0.008	ppb	60.9	71.11	0.2	
111	Cd	89	He	0.009	ppb	47.6	6.67	0.2	
118	Sn	159	He	0.028	ppb	105.5	145.56	1	
121	Sb	159	No Gas	0.035	ppb	31.8	380.43	0.2	
137	Ba	159	No Gas	0.056	ppb	32.6	560.64	0.4	
182	W	159	No Gas	0.089	ppb	3.5	767.54	1	
205	Tl	209	No Gas	0.030	ppb	25.5	533.94	0.2	
208	Pb	209	No Gas	0.025	ppb	25.7	717.49	0.2	
232	Th	209	No Gas	0.075	ppb	16.8	1675.33	1	
238	U	209	No Gas	0.023	ppb	32.1	477.22	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2319967.00	1.8	2459183.84	94.34	29.5	120.4	
Sc	45	No Gas	4845335.11	0.5	4376311.73	110.72	29.5	120.4	
Sc	45	H2	607156.56	2.1	563225.15	107.8	29.5	120.4	
Sc	45	He	164803.83	2.1	146730.33	112.32	29.5	120.4	
Ge	72	No Gas	1018562.32	0.7	936426.06	108.77	29.5	120.4	
Ge	72	H2	188628.29	2.0	183420.15	102.84	29.5	120.4	
Ge	72	He	108831.04	1.1	97408.84	111.73	29.5	120.4	
Y	89	H2	2926287.30	1.8	2733952.55	107.04	29.5	120.4	
Y	89	He	860967.26	0.9	791301.87	108.8	29.5	120.4	
Tb	159	No Gas	9764606.04	0.7	9359761.39	104.33	29.5	120.4	
Tb	159	He	3823455.70	0.9	3741562.06	102.19	29.5	120.4	
Bi	209	No Gas	4633043.61	0.9	4534931.8	102.16	29.5	120.4	

Sample Report

Sample Name SO4723-008

File Name 110SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 21:41:37

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.027	ppb	36.4	22.22	100	
11	B	6	No Gas	0.043	ppb	473.2	5015.48	1000	
23	Na	45	He	519.995	ppb	2.5	33626.88	200000	
24	Mg	45	He	21.214	ppb	11.9	768.97	200000	
27	Al	45	He	6.016	ppb	28.2	98.90	200000	
28	Si	45	H2	-100.148	ppb	N/A	7289.98	10000	
39	K	45	He	74.998	ppb	13.6	18003.35	200000	
40	Ca	45	H2	132.592	ppb	1.7	20973.91	200000	
51	V	89	He	0.647	ppb	14.8	346.69	1000	
52	Cr	89	He	0.879	ppb	14.3	831.21	2000	
55	Mn	89	He	0.356	ppb	25.2	109.98	2000	
56	Fe	89	H2	7.177	ppb	9.7	5594.00	100000	
59	Co	89	He	0.044	ppb	111.1	82.23	1000	
60	Ni	89	He	0.776	ppb	9.4	224.45	1000	
63	Cu	89	He	13.542	ppb	3.0	45921.89	2000	
66	Zn	89	He	1.500	ppb	29.3	482.25	2000	
75	As	89	He	0.100	ppb	53.3	233.03	1000	
78	Se	89	H2	0.030	ppb	166.0	1.50	1000	
88	Sr	89	He	0.429	ppb	12.2	151.12	2000	
95	Mo	89	He	0.027	ppb	4.2	23.33	1000	
107	Ag	89	He	0.022	ppb	102.3	53.34	100	
111	Cd	89	He	0.022	ppb	98.9	3.33	1000	
118	Sn	159	He	0.379	ppb	21.8	203.34	1000	
121	Sb	159	No Gas	0.035	ppb	15.6	103.45	1000	
137	Ba	159	No Gas	0.412	ppb	17.6	654.08	2000	
182	W	159	No Gas	0.029	ppb	41.3	83.43	1000	
205	Tl	209	No Gas	0.015	ppb	3.5	90.10	1000	
208	Pb	209	No Gas	0.070	ppb	42.0	473.87	2000	
232	Th	209	No Gas	0.037	ppb	62.1	226.93	1000	
238	U	209	No Gas	0.006	ppb	72.0	30.03	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2196250.73	2.0	2459183.84	89.31	29.5	120.4	
Sc	45	No Gas	4751389.76	0.6	4376311.73	108.57	29.5	120.4	
Sc	45	H2	589603.33	1.3	563225.15	104.68	29.5	120.4	
Sc	45	He	160689.02	0.9	146730.33	109.51	29.5	120.4	
Ge	72	No Gas	996110.24	1.3	936426.06	106.37	29.5	120.4	
Ge	72	H2	181492.96	1.5	183420.15	98.95	29.5	120.4	
Ge	72	He	106061.11	1.4	97408.84	108.88	29.5	120.4	
Y	89	H2	2865792.93	1.3	2733952.55	104.82	29.5	120.4	
Y	89	He	832788.36	1.5	791301.87	105.24	29.5	120.4	
Tb	159	No Gas	9754997.49	1.1	9359761.39	104.22	29.5	120.4	
Tb	159	He	3760972.48	0.9	3741562.06	100.52	29.5	120.4	
Bi	209	No Gas	4610571.24	1.9	4534931.8	101.67	29.5	120.4	

Sample Report

Sample Name SO4724-001

File Name 111SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 21:44:08

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.037	ppb	34.6	26.67	100	
11	B	6	No Gas	0.087	ppb	323.2	4935.46	1000	
23	Na	45	He	18218.213	ppb	1.9	880099.98	200000	
24	Mg	45	He	6598.559	ppb	1.0	190332.02	200000	
27	Al	45	He	48.826	ppb	7.0	555.59	200000	
28	Si	45	H2	2325.923	ppb	0.3	44438.72	10000	
39	K	45	He	1280.214	ppb	3.5	45100.47	200000	
40	Ca	45	H2	83822.183	ppb	0.3	12003109.96	200000	
51	V	89	He	1.812	ppb	5.6	766.72	1000	
52	Cr	89	He	0.823	ppb	17.4	809.21	2000	
55	Mn	89	He	0.892	ppb	15.9	225.30	2000	
56	Fe	89	H2	12.675	ppb	3.4	8268.26	100000	
59	Co	89	He	0.215	ppb	13.1	204.46	1000	
60	Ni	89	He	4.643	ppb	5.6	966.74	1000	
63	Cu	89	He	17.569	ppb	7.7	48703.56	2000	
66	Zn	89	He	33.927	ppb	1.3	3077.13	2000	
75	As	89	He	0.434	ppb	147.4	255.03	1000	
78	Se	89	H2	0.156	ppb	43.3	4.83	1000	
88	Sr	89	He	548.969	ppb	0.5	149042.57	2000	
95	Mo	89	He	0.124	ppb	57.8	52.22	1000	
107	Ag	89	He	0.006	ppb	111.3	37.78	100	
111	Cd	89	He	0.039	ppb	56.9	5.56	1000	
118	Sn	159	He	0.696	ppb	13.6	284.46	1000	
121	Sb	159	No Gas	0.055	ppb	53.8	146.83	1000	
137	Ba	159	No Gas	37.491	ppb	2.7	27342.17	2000	
182	W	159	No Gas	0.041	ppb	89.8	103.45	1000	
205	Tl	209	No Gas	0.016	ppb	87.1	93.44	1000	
208	Pb	209	No Gas	0.723	ppb	5.2	3383.98	2000	
232	Th	209	No Gas	0.016	ppb	7.1	136.82	1000	
238	U	209	No Gas	0.603	ppb	11.2	2439.66	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2155295.72	2.6	2459183.84	87.64	29.5	120.4	
Sc	45	No Gas	4802555.51	0.2	4376311.73	109.74	29.5	120.4	
Sc	45	H2	594140.92	0.6	563225.15	105.49	29.5	120.4	
Sc	45	He	159564.36	1.3	146730.33	108.75	29.5	120.4	
Ge	72	No Gas	1001985.60	1.5	936426.06	107	29.5	120.4	
Ge	72	H2	182039.26	0.5	183420.15	99.25	29.5	120.4	
Ge	72	He	105732.09	0.7	97408.84	108.54	29.5	120.4	
Y	89	H2	2873304.48	1.1	2733952.55	105.1	29.5	120.4	
Y	89	He	836214.95	0.9	791301.87	105.68	29.5	120.4	
Tb	159	No Gas	9899674.57	0.3	9359761.39	105.77	29.5	120.4	
Tb	159	He	3766814.32	0.4	3741562.06	100.67	29.5	120.4	
Bi	209	No Gas	4603144.18	0.9	4534931.8	101.5	29.5	120.4	

Sample Report

Sample Name	RINSE
File Name	114SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 21:51:39
Sample Type	Sample
Total Dilution	1.0000
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.004	ppb	31.5	20.00	100	
11	B	6	No Gas	0.345	ppb	10.0	5756.91	1000	
23	Na	45	He	61.957	ppb	1.3	23776.02	200000	
24	Mg	45	He	2.453	ppb	20.7	515.60	200000	
27	Al	45	He	0.142	ppb	130.8	42.22	200000	
28	Si	45	H2	-6.278	ppb	N/A	8595.53	10000	
39	K	45	He	9.136	ppb	11.2	17544.66	200000	
40	Ca	45	H2	6.013	ppb	6.4	6609.59	200000	
51	V	89	He	0.015	ppb	36.6	144.45	1000	
52	Cr	89	He	-0.014	ppb	N/A	408.60	2000	
55	Mn	89	He	0.018	ppb	25.5	54.66	2000	
56	Fe	89	H2	0.325	ppb	33.0	2966.97	100000	
59	Co	89	He	0.002	ppb	86.8	60.00	1000	
60	Ni	89	He	0.061	ppb	11.6	136.67	1000	
63	Cu	89	He	-6.681	ppb	N/A	16065.34	2000	
66	Zn	89	He	0.008	ppb	299.3	372.24	2000	
75	As	89	He	-0.028	ppb	N/A	221.69	1000	
78	Se	89	H2	0.018	ppb	66.7	3.17	1000	
88	Sr	89	He	0.043	ppb	7.4	94.45	2000	
95	Mo	89	He	0.008	ppb	96.8	27.78	1000	
107	Ag	89	He	0.001	ppb	66.4	36.67	100	
111	Cd	89	He	0.002	ppb	58.4	1.48	1000	
118	Sn	159	He	-0.004	ppb	N/A	103.34	1000	
121	Sb	159	No Gas	0.003	ppb	123.0	70.08	1000	
137	Ba	159	No Gas	0.016	ppb	76.6	423.82	2000	
182	W	159	No Gas	0.020	ppb	18.4	206.90	1000	
205	Tl	209	No Gas	0.005	ppb	20.3	116.80	1000	
208	Pb	209	No Gas	0.003	ppb	83.1	243.61	2000	
232	Th	209	No Gas	0.009	ppb	41.3	260.29	1000	
238	U	209	No Gas	0.002	ppb	31.8	53.39	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2259865.33	2.1	2459183.84	91.89	29.5	120.4	
Sc	45	No Gas	4812367.25	2.4	4376311.73	109.96	29.5	120.4	
Sc	45	H2	608004.20	0.9	563225.15	107.95	29.5	120.4	
Sc	45	He	162608.55	0.3	146730.33	110.82	29.5	120.4	
Ge	72	No Gas	1013984.89	1.4	936426.06	108.28	29.5	120.4	
Ge	72	H2	187229.49	1.5	183420.15	102.08	29.5	120.4	
Ge	72	He	107537.00	0.3	97408.84	110.4	29.5	120.4	
Y	89	H2	2914413.87	0.9	2733952.55	106.6	29.5	120.4	
Y	89	He	847501.50	1.0	791301.87	107.1	29.5	120.4	
Tb	159	No Gas	9899260.62	1.7	9359761.39	105.76	29.5	120.4	
Tb	159	He	3804220.05	0.6	3741562.06	101.67	29.5	120.4	
Bi	209	No Gas	4703574.45	0.9	4534931.8	103.72	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	115_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 21:54:10
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	26.165	ppb	3.9	69855.90	25	104.66	89.8	110.2	
11	B	6	No Gas	24.945	ppb	2.3	48760.93	25	99.78	89.8	110.2	
23	Na	45	He	5222.335	ppb	0.7	1269120.42	5000	104.45	89.8	110.2	
24	Mg	45	He	4908.736	ppb	0.0	713891.10	5000	98.17	89.8	110.2	
27	Al	45	He	480.539	ppb	1.5	25942.08	500	96.11	89.8	110.2	
28	Si	45	H2	457.525	ppb	4.4	44207.37	500	91.5	89.8	110.2	
39	K	45	He	5503.885	ppb	0.6	643605.27	5000	110.08	89.8	110.2	
40	Ca	45	H2	5037.330	ppb	0.8	3637763.52	5000	100.75	89.8	110.2	
51	V	89	He	26.428	ppb	2.3	47535.63	25	105.71	89.8	110.2	
52	Cr	89	He	26.247	ppb	0.3	60128.07	25	104.99	89.8	110.2	
55	Mn	89	He	25.785	ppb	0.9	27610.56	25	103.14	89.8	110.2	
56	Fe	89	H2	5122.972	ppb	0.7	12362758.57	5000	102.46	89.8	110.2	
59	Co	89	He	26.296	ppb	0.7	93388.33	25	105.18	89.8	110.2	
60	Ni	89	He	26.431	ppb	0.7	25437.26	25	105.72	89.8	110.2	
63	Cu	89	He	14.651	ppb	2.7	84625.05	25	58.6	89.8	110.2	> +/- 10%
66	Zn	89	He	25.459	ppb	2.4	10546.55	25	101.84	89.8	110.2	
75	As	89	He	25.963	ppb	1.7	8472.18	25	103.85	89.8	110.2	
78	Se	89	H2	25.614	ppb	2.1	3381.10	25	102.46	89.8	110.2	
88	Sr	89	He	24.898	ppb	0.8	33836.87	25	99.59	89.8	110.2	
95	Mo	89	He	25.472	ppb	0.9	38177.52	25	101.89	89.8	110.2	
107	Ag	89	He	25.531	ppb	0.2	125581.72	25	102.12	89.8	110.2	
111	Cd	89	He	25.065	ppb	0.6	16625.13	25	100.26	89.8	110.2	
118	Sn	159	He	26.072	ppb	1.2	33089.34	25	104.29	89.8	110.2	
121	Sb	159	No Gas	25.394	ppb	2.7	253186.68	25	101.58	89.8	110.2	
137	Ba	159	No Gas	25.296	ppb	3.6	90313.66	25	101.18	89.8	110.2	
182	W	159	No Gas	24.213	ppb	3.5	200707.57	25	96.85	89.8	110.2	
205	Tl	209	No Gas	24.525	ppb	3.1	401651.73	25	98.1	89.8	110.2	
208	Pb	209	No Gas	24.814	ppb	3.0	557658.91	25	99.26	89.8	110.2	
232	Th	209	No Gas	25.552	ppb	4.2	545328.59	25	102.21	89.8	110.2	
238	U	209	No Gas	25.787	ppb	4.0	525095.51	25	103.15	89.8	110.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2237195.45	1.6	2459183.84	90.97	29.5	120.4	
Sc	45	No Gas	4750807.67	0.3	4376311.73	108.56	29.5	120.4	
Sc	45	H2	599014.03	2.0	563225.15	106.35	29.5	120.4	
Sc	45	He	160985.46	0.8	146730.33	109.72	29.5	120.4	
Ge	72	No Gas	1003234.21	0.7	936426.06	107.13	29.5	120.4	
Ge	72	H2	185543.91	2.0	183420.15	101.16	29.5	120.4	
Ge	72	He	106112.93	0.4	97408.84	108.94	29.5	120.4	
Y	89	H2	2867188.39	1.2	2733952.55	104.87	29.5	120.4	
Y	89	He	836496.90	0.6	791301.87	105.71	29.5	120.4	
Tb	159	No Gas	9785265.06	0.3	9359761.39	104.55	29.5	120.4	
Tb	159	He	3749692.72	0.8	3741562.06	100.22	29.5	120.4	
Bi	209	No Gas	4645039.62	1.0	4534931.8	102.43	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	116_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 21:56:41
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.033	ppb	19.4	100.00	0.2	
11	B	6	No Gas	0.228	ppb	32.1	5660.21	4	
23	Na	45	He	65.229	ppb	2.4	24304.23	200	
24	Mg	45	He	2.464	ppb	36.9	511.16	20	
27	Al	45	He	0.028	ppb	575.6	35.56	20	
28	Si	45	H2	-13.237	ppb	N/A	7997.93	100	
39	K	45	He	11.240	ppb	29.7	17589.54	200	
40	Ca	45	H2	3.819	ppb	8.6	4971.06	20	
51	V	89	He	0.004	ppb	332.5	124.45	1	
52	Cr	89	He	-0.014	ppb	N/A	407.27	1	
55	Mn	89	He	0.026	ppb	40.6	62.66	0.4	
56	Fe	89	H2	1.844	ppb	7.6	6635.69	20	
59	Co	89	He	0.006	ppb	28.5	73.34	0.2	
60	Ni	89	He	0.049	ppb	32.9	124.45	0.4	
63	Cu	89	He	-6.823	ppb	N/A	15535.82	0.6	Fail All Methods□ Failed DoD
66	Zn	89	He	-0.049	ppb	N/A	347.80	2	
75	As	89	He	0.044	ppb	110.5	243.70	1	
78	Se	89	H2	0.025	ppb	25.8	4.00	1	
88	Sr	89	He	0.030	ppb	57.1	76.67	1	
95	Mo	89	He	0.044	ppb	15.5	81.11	1	
107	Ag	89	He	0.005	ppb	63.6	54.45	0.2	
111	Cd	89	He	0.008	ppb	43.3	5.56	0.2	
118	Sn	159	He	0.021	ppb	61.0	135.56	1	
121	Sb	159	No Gas	0.030	ppb	5.5	340.39	0.2	
137	Ba	159	No Gas	0.005	ppb	524.1	383.77	0.4	
182	W	159	No Gas	0.076	ppb	13.5	670.76	1	
205	Tl	209	No Gas	0.029	ppb	24.2	513.92	0.2	
208	Pb	209	No Gas	0.020	ppb	32.1	614.03	0.2	
232	Th	209	No Gas	0.071	ppb	6.4	1591.88	1	
238	U	209	No Gas	0.021	ppb	25.6	437.17	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2304475.51	1.3	2459183.84	93.71	29.5	120.4	
Sc	45	No Gas	4790873.46	2.5	4376311.73	109.47	29.5	120.4	
Sc	45	H2	604383.88	2.3	563225.15	107.31	29.5	120.4	
Sc	45	He	160830.75	1.2	146730.33	109.61	29.5	120.4	
Ge	72	No Gas	1007333.44	3.0	936426.06	107.57	29.5	120.4	
Ge	72	H2	186260.45	1.4	183420.15	101.55	29.5	120.4	
Ge	72	He	107051.36	1.0	97408.84	109.9	29.5	120.4	
Y	89	H2	2889158.79	0.8	2733952.55	105.68	29.5	120.4	
Y	89	He	843812.28	0.9	791301.87	106.64	29.5	120.4	
Tb	159	No Gas	9873745.34	2.1	9359761.39	105.49	29.5	120.4	
Tb	159	He	3791279.14	0.8	3741562.06	101.33	29.5	120.4	
Bi	209	No Gas	4685975.60	1.9	4534931.8	103.33	29.5	120.4	

Sample Report

Sample Name SO4724-002L

File Name 117SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 21:59:12

Sample Type Sample

Total Dilution 25.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.278	ppb	30.3	38.89	100	
11	B	6	No Gas	12.131	ppb	24.8	6101.51	1000	
23	Na	45	He	21449.681	ppb	1.4	212785.66	200000	
24	Mg	45	He	7026.797	ppb	0.3	40473.24	200000	
27	Al	45	He	39.523	ppb	11.8	117.78	200000	
28	Si	45	H2	2327.837	ppb	3.4	16093.63	10000	
39	K	45	He	1535.731	ppb	2.8	23018.17	200000	
40	Ca	45	H2	89054.637	ppb	0.9	2567870.26	200000	
51	V	89	He	0.968	ppb	36.7	185.56	1000	
52	Cr	89	He	0.404	ppb	78.6	471.93	2000	
55	Mn	89	He	2.767	ppb	14.7	152.64	2000	
56	Fe	89	H2	27.206	ppb	11.5	4792.84	100000	
59	Co	89	He	0.184	ppb	50.4	77.78	1000	
60	Ni	89	He	2.590	ppb	33.2	175.56	1000	
63	Cu	89	He	-124.346	ppb	N/A	21340.19	2000	
66	Zn	89	He	22.717	ppb	8.5	726.71	2000	
75	As	89	He	0.395	ppb	573.7	232.36	1000	
78	Se	89	H2	0.369	ppb	39.9	2.67	1000	
88	Sr	89	He	579.450	ppb	0.3	31467.92	2000	
95	Mo	89	He	0.544	ppb	22.6	47.78	1000	
107	Ag	89	He	0.054	ppb	50.6	42.23	100	
111	Cd	89	He	0.069	ppb	59.9	2.22	1000	
118	Sn	159	He	1.129	ppb	42.2	164.45	1000	
121	Sb	159	No Gas	0.223	ppb	43.6	123.47	1000	
137	Ba	159	No Gas	49.307	ppb	2.6	7343.56	2000	
182	W	159	No Gas	0.542	ppb	26.0	213.58	1000	
205	Tl	209	No Gas	0.121	ppb	40.3	120.14	1000	
208	Pb	209	No Gas	0.597	ppb	4.1	700.80	2000	
232	Th	209	No Gas	0.439	ppb	13.9	447.18	1000	
238	U	209	No Gas	0.270	ppb	15.9	226.92	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2297919.42	2.3	2459183.84	93.44	29.5	120.4	
Sc	45	No Gas	4732370.48	0.7	4376311.73	108.14	29.5	120.4	
Sc	45	H2	597762.01	0.7	563225.15	106.13	29.5	120.4	
Sc	45	He	158831.68	0.8	146730.33	108.25	29.5	120.4	
Ge	72	No Gas	991203.07	0.8	936426.06	105.85	29.5	120.4	
Ge	72	H2	185661.16	1.4	183420.15	101.22	29.5	120.4	
Ge	72	He	106585.71	0.6	97408.84	109.42	29.5	120.4	
Y	89	H2	2885763.24	0.9	2733952.55	105.55	29.5	120.4	
Y	89	He	835604.75	0.9	791301.87	105.6	29.5	120.4	
Tb	159	No Gas	9739867.84	1.7	9359761.39	104.06	29.5	120.4	
Tb	159	He	3758096.61	0.6	3741562.06	100.44	29.5	120.4	
Bi	209	No Gas	4647435.39	1.6	4534931.8	102.48	29.5	120.4	

Sample Report

Sample Name RINSE

File Name 121SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 22:09:11

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.004	ppb	111.3	20.00	100	
11	B	6	No Gas	0.321	ppb	18.7	5660.19	1000	
23	Na	45	He	56.096	ppb	4.8	21750.74	200000	
24	Mg	45	He	2.115	ppb	15.3	453.38	200000	
27	Al	45	He	-0.004	ppb	N/A	33.34	200000	
28	Si	45	H2	-5.682	ppb	N/A	8348.46	10000	
39	K	45	He	10.111	ppb	6.5	17186.02	200000	
40	Ca	45	H2	7.588	ppb	9.6	7497.82	200000	
51	V	89	He	0.015	ppb	77.2	142.23	1000	
52	Cr	89	He	-0.031	ppb	N/A	361.27	2000	
55	Mn	89	He	0.021	ppb	39.7	56.66	2000	
56	Fe	89	H2	0.310	ppb	17.8	2856.82	100000	
59	Co	89	He	0.012	ppb	85.9	93.34	1000	
60	Ni	89	He	0.051	ppb	33.2	124.45	1000	
63	Cu	89	He	-6.643	ppb	N/A	15862.85	2000	
66	Zn	89	He	-0.023	ppb	N/A	352.24	2000	
75	As	89	He	0.020	ppb	68.9	232.36	1000	
78	Se	89	H2	0.010	ppb	37.5	2.00	1000	
88	Sr	89	He	0.043	ppb	40.3	93.34	2000	
95	Mo	89	He	0.015	ppb	56.3	37.78	1000	
107	Ag	89	He	0.005	ppb	15.4	55.56	100	
111	Cd	89	He	0.010	ppb	16.9	6.67	1000	
118	Sn	159	He	0.019	ppb	56.5	130.01	1000	
121	Sb	159	No Gas	0.009	ppb	31.5	126.81	1000	
137	Ba	159	No Gas	0.018	ppb	84.2	420.48	2000	
182	W	159	No Gas	0.016	ppb	24.6	166.86	1000	
205	Tl	209	No Gas	0.005	ppb	40.8	126.81	1000	
208	Pb	209	No Gas	0.008	ppb	11.1	333.71	2000	
232	Th	209	No Gas	0.008	ppb	25.7	233.60	1000	
238	U	209	No Gas	0.003	ppb	63.2	60.06	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2238927.65	1.5	2459183.84	91.04	29.5	120.4	
Sc	45	No Gas	4654352.42	1.5	4376311.73	106.35	29.5	120.4	
Sc	45	H2	587459.63	1.0	563225.15	104.3	29.5	120.4	
Sc	45	He	158271.50	0.4	146730.33	107.87	29.5	120.4	
Ge	72	No Gas	985159.78	0.6	936426.06	105.2	29.5	120.4	
Ge	72	H2	182055.77	0.6	183420.15	99.26	29.5	120.4	
Ge	72	He	105294.17	0.8	97408.84	108.1	29.5	120.4	
Y	89	H2	2841369.24	0.9	2733952.55	103.93	29.5	120.4	
Y	89	He	830472.66	0.9	791301.87	104.95	29.5	120.4	
Tb	159	No Gas	9612731.39	1.6	9359761.39	102.7	29.5	120.4	
Tb	159	He	3722121.12	1.2	3741562.06	99.48	29.5	120.4	
Bi	209	No Gas	4638775.75	1.6	4534931.8	102.29	29.5	120.4	

Sample Report

Sample Name SO4724-004

File Name 122SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 22:11:43

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.024	ppb	52.7	20.00	100	
11	B	6	No Gas	60.451	ppb	3.4	25319.54	1000	
23	Na	45	He	15439.126	ppb	2.9	729334.70	200000	
24	Mg	45	He	24056.510	ppb	0.8	676906.16	200000	
27	Al	45	He	9.509	ppb	10.5	132.23	200000	
28	Si	45	H2	3845.343	ppb	1.2	66032.52	10000	
39	K	45	He	758.731	ppb	2.4	32527.38	200000	
40	Ca	45	H2	59633.221	ppb	0.9	8333664.74	200000	
51	V	89	He	0.566	ppb	19.6	312.24	1000	
52	Cr	89	He	0.807	ppb	17.8	785.22	2000	
55	Mn	89	He	0.705	ppb	13.2	181.30	2000	
56	Fe	89	H2	10.315	ppb	6.3	6932.77	100000	
59	Co	89	He	0.068	ppb	116.0	97.79	1000	
60	Ni	89	He	0.947	ppb	25.9	252.23	1000	
63	Cu	89	He	17.696	ppb	3.7	47732.27	2000	
66	Zn	89	He	22.845	ppb	3.2	2143.58	2000	
75	As	89	He	-0.070	ppb	N/A	218.36	1000	
78	Se	89	H2	0.155	ppb	30.2	4.67	1000	
88	Sr	89	He	1207.782	ppb	0.9	320763.09	2000	
95	Mo	89	He	0.097	ppb	60.5	43.34	1000	
107	Ag	89	He	0.004	ppb	313.7	34.45	100	
111	Cd	89	He	0.023	ppb	38.5	3.33	1000	
118	Sn	159	He	0.373	ppb	19.6	198.90	1000	
121	Sb	159	No Gas	0.094	ppb	48.4	216.91	1000	
137	Ba	159	No Gas	52.971	ppb	2.6	37290.51	2000	
182	W	159	No Gas	0.057	ppb	16.5	126.81	1000	
205	Tl	209	No Gas	0.024	ppb	53.6	116.80	1000	
208	Pb	209	No Gas	0.429	ppb	1.2	2065.71	2000	
232	Th	209	No Gas	0.073	ppb	21.5	377.10	1000	
238	U	209	No Gas	0.114	ppb	16.2	463.87	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2158073.57	3.0	2459183.84	87.76	29.5	120.4	
Sc	45	No Gas	4626004.02	2.0	4376311.73	105.71	29.5	120.4	
Sc	45	H2	579821.87	1.3	563225.15	102.95	29.5	120.4	
Sc	45	He	155734.08	0.3	146730.33	106.14	29.5	120.4	
Ge	72	No Gas	982355.90	1.6	936426.06	104.9	29.5	120.4	
Ge	72	H2	179799.66	1.5	183420.15	98.03	29.5	120.4	
Ge	72	He	104148.18	0.1	97408.84	106.92	29.5	120.4	
Y	89	H2	2794599.99	1.0	2733952.55	102.22	29.5	120.4	
Y	89	He	818140.72	0.9	791301.87	103.39	29.5	120.4	
Tb	159	No Gas	9597192.84	2.3	9359761.39	102.54	29.5	120.4	
Tb	159	He	3700055.40	1.0	3741562.06	98.89	29.5	120.4	
Bi	209	No Gas	4581102.71	2.4	4534931.8	101.02	29.5	120.4	

Sample Report

Sample Name SO4724-005

File Name 123SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 22:14:14

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.038	ppb	54.0	27.78	100	
11	B	6	No Gas	45.031	ppb	5.6	20226.96	1000	
23	Na	45	He	15376.921	ppb	1.5	726988.47	200000	
24	Mg	45	He	24172.924	ppb	0.6	680781.39	200000	
27	Al	45	He	9.509	ppb	21.4	132.23	200000	
28	Si	45	H2	3584.463	ppb	2.5	61771.98	10000	
39	K	45	He	804.761	ppb	2.3	33572.36	200000	
40	Ca	45	H2	59608.237	ppb	2.0	8280286.96	200000	
51	V	89	He	0.633	ppb	12.4	335.57	1000	
52	Cr	89	He	0.888	ppb	12.8	819.88	2000	
55	Mn	89	He	1.319	ppb	2.3	309.28	2000	
56	Fe	89	H2	78.119	ppb	1.7	38904.14	100000	
59	Co	89	He	0.075	ppb	79.5	102.23	1000	
60	Ni	89	He	1.315	ppb	5.9	321.13	1000	
63	Cu	89	He	10.438	ppb	4.3	43098.45	2000	
66	Zn	89	He	10.616	ppb	7.2	1185.65	2000	
75	As	89	He	0.317	ppb	17.5	242.03	1000	
78	Se	89	H2	0.167	ppb	23.8	5.00	1000	
88	Sr	89	He	1535.462	ppb	0.6	407237.97	2000	
95	Mo	89	He	0.109	ppb	29.8	46.67	1000	
107	Ag	89	He	0.020	ppb	88.3	50.00	100	
111	Cd	89	He	0.037	ppb	27.0	5.18	1000	
118	Sn	159	He	0.466	ppb	21.5	222.24	1000	
121	Sb	159	No Gas	0.077	ppb	13.2	186.87	1000	
137	Ba	159	No Gas	52.026	ppb	3.0	37143.41	2000	
182	W	159	No Gas	0.030	ppb	24.4	83.43	1000	
205	Tl	209	No Gas	0.015	ppb	37.8	90.10	1000	
208	Pb	209	No Gas	0.595	ppb	5.5	2809.96	2000	
232	Th	209	No Gas	0.035	ppb	23.8	216.91	1000	
238	U	209	No Gas	0.425	ppb	14.0	1718.72	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2169552.99	1.6	2459183.84	88.22	29.5	120.4	
Sc	45	No Gas	4636289.30	0.5	4376311.73	105.94	29.5	120.4	
Sc	45	H2	576360.62	0.9	563225.15	102.33	29.5	120.4	
Sc	45	He	155869.16	0.8	146730.33	106.23	29.5	120.4	
Ge	72	No Gas	988428.47	1.5	936426.06	105.55	29.5	120.4	
Ge	72	H2	179020.07	1.5	183420.15	97.6	29.5	120.4	
Ge	72	He	104291.17	1.5	97408.84	107.07	29.5	120.4	
Y	89	H2	2800433.96	0.6	2733952.55	102.43	29.5	120.4	
Y	89	He	817064.40	2.0	791301.87	103.26	29.5	120.4	
Tb	159	No Gas	9728350.55	0.5	9359761.39	103.94	29.5	120.4	
Tb	159	He	3701288.90	1.8	3741562.06	98.92	29.5	120.4	
Bi	209	No Gas	4598670.07	1.6	4534931.8	101.41	29.5	120.4	

Sample Report

Sample Name SO4724-006

File Name 124SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b

Acq Time 8/27/2021 22:16:43

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.053	ppb	21.5	35.56	100	
11	B	6	No Gas	43.550	ppb	4.2	19711.79	1000	
23	Na	45	He	15321.754	ppb	4.0	724917.78	200000	
24	Mg	45	He	23595.898	ppb	0.4	665066.66	200000	
27	Al	45	He	9.051	ppb	25.9	127.78	200000	
28	Si	45	H2	3550.672	ppb	1.5	61674.84	10000	
39	K	45	He	777.539	ppb	1.3	32996.60	200000	
40	Ca	45	H2	58352.626	ppb	1.1	8159731.20	200000	
51	V	89	He	0.525	ppb	10.2	296.68	1000	
52	Cr	89	He	0.885	ppb	5.9	815.21	2000	
55	Mn	89	He	1.056	ppb	8.3	253.29	2000	
56	Fe	89	H2	78.219	ppb	1.3	39422.82	100000	
59	Co	89	He	0.117	ppb	29.0	131.12	1000	
60	Ni	89	He	2.977	ppb	8.8	630.03	1000	
63	Cu	89	He	13.424	ppb	8.2	44787.11	2000	
66	Zn	89	He	20.363	ppb	8.5	1939.09	2000	
75	As	89	He	0.181	ppb	94.9	232.70	1000	
78	Se	89	H2	0.216	ppb	40.3	6.33	1000	
88	Sr	89	He	1504.031	ppb	0.8	397232.46	2000	
95	Mo	89	He	0.125	ppb	51.4	51.11	1000	
107	Ag	89	He	-0.003	ppb	N/A	27.78	100	
111	Cd	89	He	0.046	ppb	46.5	6.30	1000	
118	Sn	159	He	0.579	ppb	40.7	250.01	1000	
121	Sb	159	No Gas	0.076	ppb	56.4	183.54	1000	
137	Ba	159	No Gas	51.804	ppb	0.6	36593.92	2000	
182	W	159	No Gas	0.030	ppb	81.8	83.43	1000	
205	Tl	209	No Gas	0.007	ppb	51.0	63.41	1000	
208	Pb	209	No Gas	2.482	ppb	4.2	11231.29	2000	
232	Th	209	No Gas	0.034	ppb	15.5	216.92	1000	
238	U	209	No Gas	0.365	ppb	13.9	1481.76	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2168896.94	2.7	2459183.84	88.2	29.5	120.4	
Sc	45	No Gas	4637312.05	1.0	4376311.73	105.96	29.5	120.4	
Sc	45	H2	580171.68	0.9	563225.15	103.01	29.5	120.4	
Sc	45	He	156000.77	0.8	146730.33	106.32	29.5	120.4	
Ge	72	No Gas	981524.33	2.8	936426.06	104.82	29.5	120.4	
Ge	72	H2	180876.32	1.0	183420.15	98.61	29.5	120.4	
Ge	72	He	104653.94	0.7	97408.84	107.44	29.5	120.4	
Y	89	H2	2834270.32	0.7	2733952.55	103.67	29.5	120.4	
Y	89	He	813628.36	1.2	791301.87	102.82	29.5	120.4	
Tb	159	No Gas	9624513.26	0.6	9359761.39	102.83	29.5	120.4	
Tb	159	He	3695759.25	0.9	3741562.06	98.78	29.5	120.4	
Bi	209	No Gas	4611552.95	2.0	4534931.8	101.69	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	127_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 22:24:19
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	26.113	ppb	2.5	69736.15	25	104.45	89.8	110.2	
11	B	6	No Gas	24.981	ppb	2.0	48834.65	25	99.92	89.8	110.2	
23	Na	45	He	5230.805	ppb	0.6	1250636.53	5000	104.62	89.8	110.2	
24	Mg	45	He	4946.470	ppb	0.7	707739.92	5000	98.93	89.8	110.2	
27	Al	45	He	489.232	ppb	2.2	25982.03	500	97.85	89.8	110.2	
28	Si	45	H2	465.833	ppb	4.1	43963.03	500	93.17	89.8	110.2	
39	K	45	He	5520.695	ppb	1.0	635091.74	5000	110.41	89.8	110.2	> +/- 10%
40	Ca	45	H2	5059.773	ppb	0.6	3581564.22	5000	101.2	89.8	110.2	
51	V	89	He	26.075	ppb	1.7	46567.90	25	104.3	89.8	110.2	
52	Cr	89	He	26.360	ppb	1.1	59953.38	25	105.44	89.8	110.2	
55	Mn	89	He	25.794	ppb	1.2	27423.53	25	103.18	89.8	110.2	
56	Fe	89	H2	4989.475	ppb	1.9	12055262.65	5000	99.79	89.8	110.2	
59	Co	89	He	26.164	ppb	1.3	92257.30	25	104.66	89.8	110.2	
60	Ni	89	He	26.302	ppb	0.3	25133.30	25	105.21	89.8	110.2	
63	Cu	89	He	14.271	ppb	1.4	82805.06	25	57.08	89.8	110.2	> +/- 10%
66	Zn	89	He	25.797	ppb	2.0	10606.64	25	103.19	89.8	110.2	
75	As	89	He	25.940	ppb	1.2	8404.80	25	103.76	89.8	110.2	
78	Se	89	H2	24.756	ppb	1.8	3271.74	25	99.02	89.8	110.2	
88	Sr	89	He	24.761	ppb	1.4	33410.32	25	99.04	89.8	110.2	
95	Mo	89	He	25.472	ppb	0.7	37905.73	25	101.89	89.8	110.2	
107	Ag	89	He	25.464	ppb	0.7	124356.17	25	101.86	89.8	110.2	
111	Cd	89	He	25.013	ppb	1.0	16472.72	25	100.05	89.8	110.2	
118	Sn	159	He	25.788	ppb	1.1	32848.62	25	103.15	89.8	110.2	
121	Sb	159	No Gas	25.921	ppb	2.5	253932.22	25	103.68	89.8	110.2	
137	Ba	159	No Gas	25.708	ppb	0.7	90188.85	25	102.83	89.8	110.2	
182	W	159	No Gas	24.541	ppb	2.6	199880.45	25	98.16	89.8	110.2	
205	Tl	209	No Gas	24.729	ppb	1.2	406333.86	25	98.92	89.8	110.2	
208	Pb	209	No Gas	25.102	ppb	1.9	565942.29	25	100.41	89.8	110.2	
232	Th	209	No Gas	25.889	ppb	1.7	554337.81	25	103.56	89.8	110.2	
238	U	209	No Gas	26.109	ppb	1.9	533377.02	25	104.44	89.8	110.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2237504.85	0.8	2459183.84	90.99	29.5	120.4	
Sc	45	No Gas	4673324.67	0.7	4376311.73	106.79	29.5	120.4	
Sc	45	H2	587152.09	0.7	563225.15	104.25	29.5	120.4	
Sc	45	He	158389.99	1.4	146730.33	107.95	29.5	120.4	
Ge	72	No Gas	981901.33	1.0	936426.06	104.86	29.5	120.4	
Ge	72	H2	183082.24	2.1	183420.15	99.82	29.5	120.4	
Ge	72	He	105582.94	0.2	97408.84	108.39	29.5	120.4	
Y	89	H2	2871308.84	1.6	2733952.55	105.02	29.5	120.4	
Y	89	He	830513.01	0.4	791301.87	104.96	29.5	120.4	
Tb	159	No Gas	9615997.57	1.1	9359761.39	102.74	29.5	120.4	
Tb	159	He	3763305.53	0.4	3741562.06	100.58	29.5	120.4	
Bi	209	No Gas	4659663.56	1.2	4534931.8	102.75	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	128_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\08-AUG\LOH27A.b
Acq Time	8/27/2021 22:26:49
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.025	ppb	28.1	76.67	0.2	
11	B	6	No Gas	0.289	ppb	2.2	5682.45	4	
23	Na	45	He	55.387	ppb	5.6	21687.04	200	
24	Mg	45	He	2.859	ppb	7.5	562.28	20	
27	Al	45	He	0.098	ppb	47.0	38.89	20	
28	Si	45	H2	-11.362	ppb	N/A	7977.71	100	
39	K	45	He	9.028	ppb	26.9	17144.21	200	
40	Ca	45	H2	4.028	ppb	9.8	5019.96	20	
51	V	89	He	0.012	ppb	109.0	136.67	1	
52	Cr	89	He	-0.025	ppb	N/A	376.60	1	
55	Mn	89	He	0.020	ppb	105.9	55.32	0.4	
56	Fe	89	H2	1.765	ppb	6.7	6385.19	20	
59	Co	89	He	0.013	ppb	43.7	95.57	0.2	
60	Ni	89	He	0.037	ppb	77.6	111.12	0.4	
63	Cu	89	He	-7.467	ppb	N/A	13252.32	0.6	Fail All Methods□ Failed DoD
66	Zn	89	He	-0.011	ppb	N/A	357.80	2	
75	As	89	He	0.004	ppb	893.5	227.70	1	
78	Se	89	H2	0.047	ppb	28.0	6.83	1	
88	Sr	89	He	0.056	ppb	21.1	111.12	1	
95	Mo	89	He	0.043	ppb	17.3	78.89	1	
107	Ag	89	He	0.006	ppb	29.4	60.00	0.2	
111	Cd	89	He	0.004	ppb	49.8	2.96	0.2	
118	Sn	159	He	0.035	ppb	10.1	151.12	1	
121	Sb	159	No Gas	0.029	ppb	21.5	323.70	0.2	
137	Ba	159	No Gas	0.017	ppb	150.6	420.48	0.4	
182	W	159	No Gas	0.098	ppb	6.4	840.96	1	
205	Tl	209	No Gas	0.025	ppb	29.0	447.18	0.2	
208	Pb	209	No Gas	0.019	ppb	49.0	594.01	0.2	
232	Th	209	No Gas	0.074	ppb	19.2	1658.65	1	
238	U	209	No Gas	0.021	ppb	33.0	427.16	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	2270230.26	1.0	2459183.84	92.32	29.5	120.4	
Sc	45	No Gas	4691355.20	0.3	4376311.73	107.2	29.5	120.4	
Sc	45	H2	592048.64	1.2	563225.15	105.12	29.5	120.4	
Sc	45	He	159025.60	1.4	146730.33	108.38	29.5	120.4	
Ge	72	No Gas	990366.39	0.9	936426.06	105.76	29.5	120.4	
Ge	72	H2	183985.66	2.4	183420.15	100.31	29.5	120.4	
Ge	72	He	105384.40	0.9	97408.84	108.19	29.5	120.4	
Y	89	H2	2864585.06	2.0	2733952.55	104.78	29.5	120.4	
Y	89	He	832110.58	0.9	791301.87	105.16	29.5	120.4	
Tb	159	No Gas	9718786.17	0.5	9359761.39	103.84	29.5	120.4	
Tb	159	He	3759196.05	0.5	3741562.06	100.47	29.5	120.4	
Bi	209	No Gas	4668842.53	0.5	4534931.8	102.95	29.5	120.4	

KATAHDIN ANALYTICAL SERVICES, LLC
METALS ANALYSIS RUN INFORMATION SHEET

INSTR. ID: L (Agilent 7800) **ANALYST**: NWA **ANALYSIS DATE**: 09/24/21

METHOD: **ICP-MS**
- ☐ 200.8
- ☑ 6020
- ☑ DOD

REVIEWED
SM 09-28-21
KATAHDIN ANALYTICAL
METALS SECTION

FILE NAME: LOI24A

The pHs of all samples that were tested by direct analysis in this analytical run were checked just prior to analysis and confirmed to be <2. The time of preservation of these samples was checked in the "Measured Turbidity and Preservation of Incoming Samples" logbook to verify that they had been preserved at least 16 hours prior to analysis. These verifications were performed by _____ (initials) on _____ (date).

STANDARDS USED:

Standard Name	Standard ID	Prep Date	Expiration Date	Standard Conc.
Cal. Blk/ICB/CCB	MW20521	09/13/21	09/13/22	0 ug/L
Standard 1	MW20538	09/22/21	12/15/21	Varies by Element
ICV	MW20524	09/15/21	11/10/21	Varies by Element
PQL	MW20523	09/14/21	12/13/21	Varies by Element
LRS1	MW20516	09/13/21	12/13/21	Varies by Element
LRS2	MW20515	09/13/21	12/13/21	Varies by Element
ICSA	MW20525	09/17/21	09/24/21	Varies by Element
ICSAB	MW20530	09/21/21	09/28/21	Varies by Element
CCV	MW20545	09/24/21	12/15/21	Varies by Element
Internal Standard (ISTD)	MW20397	08/04/21	11/4/21	0.4 mg/L (Li,Sc,Ge/Y,Tb,Bi)

Additional Comments and Notes:

Ag ICV MW20544

ICSA failed high for Cu (DOD) - accepted results w/ narration.

SM 09-28-21

Dilutions: Some samples were diluted based on history or due to interfering element concentrations.

Dilution preparations are as follows:

5x, 25x, 50x diln.: 2.0 mL of sample, 5x dilute sample, or 10x dilute sample (pipet M25) + 8.0 mL of MW20521 (pipet M22)

Post Spike: 0.10 mL of MW20514 (pipet M27) into 10 mL final volume of appropriately diluted sample (pipet M22)

INSTRUMENT RUNLOG

Instrument: AGILENT 7800

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
CalBlank	1	LOI24A	09/24/2021	09:07	NWA
CalStd	1	LOI24A	09/24/2021	09:11	NWA
ICV	1	LOI24A	09/24/2021	09:14	NWA
AG ICV	1	LOI24A	09/24/2021	09:16	NWA
ICB	1	LOI24A	09/24/2021	09:19	NWA
FE PQL	1	LOI24A	09/24/2021	09:21	NWA
PQL	1	LOI24A	09/24/2021	09:24	NWA
ICSA	1	LOI24A	09/24/2021	09:27	NWA
ICSAB	1	LOI24A	09/24/2021	09:29	NWA
LRS1	1	LOI24A	09/24/2021	09:32	NWA
LRS2	1	LOI24A	09/24/2021	09:34	NWA
RINSE	1	LOI24A	09/24/2021	09:37	NWA
RINSE	1	LOI24A	09/24/2021	09:40	NWA
CCV	1	LOI24A	09/24/2021	09:42	NWA
CCB	1	LOI24A	09/24/2021	09:45	NWA
PBWOI23IMW2	5	LOI24A	09/24/2021	09:48	NWA
LCSWOI23IMW2	5	LOI24A	09/24/2021	09:50	NWA
SO4723-001R	5	LOI24A	09/24/2021	09:53	NWA
SO4723-001RA	5	LOI24A	09/24/2021	09:55	NWA
SO4723-001RL	25	LOI24A	09/24/2021	09:58	NWA
RINSE	1	LOI24A	09/24/2021	10:01	NWA
SO4723-001RP	5	LOI24A	09/24/2021	10:03	NWA
SO4723-001RS	5	LOI24A	09/24/2021	10:06	NWA
SO4723-002	5	LOI24A	09/24/2021	10:08	NWA
RINSE	1	LOI24A	09/24/2021	10:11	NWA
CCV	1	LOI24A	09/24/2021	10:14	NWA
CCB	1	LOI24A	09/24/2021	10:16	NWA
SO4723-003	5	LOI24A	09/24/2021	10:19	NWA
SO4723-004	5	LOI24A	09/24/2021	10:21	NWA
SO4723-005	5	LOI24A	09/24/2021	10:24	NWA
SO4723-006	5	LOI24A	09/24/2021	10:26	NWA
SO4723-008	5	LOI24A	09/24/2021	10:29	NWA
RINSE	1	LOI24A	09/24/2021	10:32	NWA
SO4724-001R	5	LOI24A	09/24/2021	10:34	NWA
SO4724-002R	5	LOI24A	09/24/2021	10:37	NWA
SO4724-002RA	5	LOI24A	09/24/2021	10:40	NWA
RINSE	1	LOI24A	09/24/2021	10:42	NWA
CCV	1	LOI24A	09/24/2021	10:45	NWA
CCB	1	LOI24A	09/24/2021	10:47	NWA
SO4724-002RL	25	LOI24A	09/24/2021	10:50	NWA
SO4724-002RP	5	LOI24A	09/24/2021	10:53	NWA
SO4724-002RS	5	LOI24A	09/24/2021	10:55	NWA
RINSE	1	LOI24A	09/24/2021	10:58	NWA
SO4724-003R	5	LOI24A	09/24/2021	11:00	NWA

SAMPLE ID	DF	FILE	DATE	TIME	ANALYST
SO4724-004R	5	LOI24A	09/24/2021	11:03	NWA
SO4724-005R	5	LOI24A	09/24/2021	11:06	NWA
SO4724-006R	5	LOI24A	09/24/2021	11:08	NWA
RINSE	1	LOI24A	09/24/2021	11:11	NWA
RINSE	1	LOI24A	09/24/2021	11:13	NWA
CCV	1	LOI24A	09/24/2021	11:16	NWA
CCB	1	LOI24A	09/24/2021	11:19	NWA
PBSOI15IMS2	5	LOI24A	09/24/2021	11:21	NWA
LCSOOI15IMS2	5	LOI24A	09/24/2021	11:24	NWA
SO5599-001	5	LOI24A	09/24/2021	11:26	NWA
SO5599-002	5	LOI24A	09/24/2021	11:29	NWA
RINSE	1	LOI24A	09/24/2021	11:32	NWA
RINSE	1	LOI24A	09/24/2021	11:34	NWA
PBWOI23IMW2	5	LOI24A	09/24/2021	11:37	NWA
LCSWOI23IMW2	5	LOI24A	09/24/2021	11:39	NWA
RINSE	1	LOI24A	09/24/2021	11:42	NWA
RINSE	1	LOI24A	09/24/2021	11:45	NWA
CCV	1	LOI24A	09/24/2021	11:47	NWA
CCB	1	LOI24A	09/24/2021	11:50	NWA
CCV	1	LOI24A	09/24/2021	11:53	NWA
CCB	1	LOI24A	09/24/2021	11:55	NWA
FE PQL	1	LOI24A	09/24/2021	11:58	NWA
PQL	1	LOI24A	09/24/2021	12:00	NWA
RINSE	1	LOI24A	09/24/2021	12:03	NWA
RINSE	1	LOI24A	09/24/2021	12:06	NWA

US EPA Tune Check Report

Acq/Data Batch D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq. Date-Time 9/24/2021 08:46:20

Report Comment ---

Instrument Name G8421A SG18503526

[No Gas]

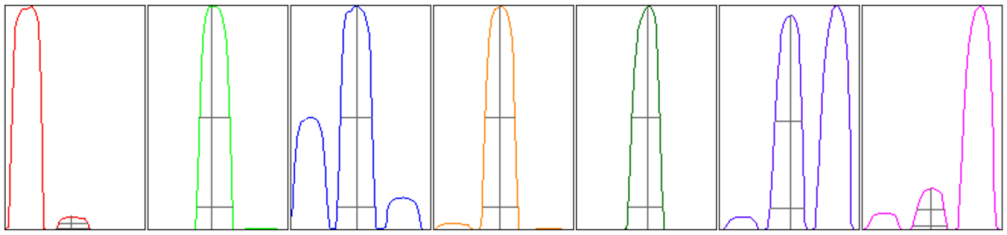
Sensitivity

Mass	Count	CPS	RSD%	RSD% (Required)	RSD% (Flag)
7	7254	72538.63	0.636	5.000	
9	4031	40308.61	0.528	5.000	
24	122531	1225305.16	0.448	5.000	
59	22196	221964.51	0.568	5.000	
115	299568	2995678.81	0.603	5.000	
205	17421	174214.58	0.661	5.000	
208	37899	378986.66	0.511	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	7327	7232	7272	7221	7218
9	4007	4054	4011	4049	4034
24	122426	121771	122625	123309	122521
59	22174	22079	22260	22380	22089
115	298588	298475	301748	301267	297760
205	17337	17337	17374	17611	17449
208	37795	37670	37878	38185	37966

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	11887.06	6.95	6.90 - 7.10	
9	6371.70	8.90	8.90 - 9.10	
24	184745.23	23.95	23.90 - 24.10	
59	35632.93	58.95	58.90 - 59.10	
115	516216.95	115.05	114.90 - 115.10	
205	30274.08	205.05	204.90 - 205.10	
208	65695.10	208.00	207.90 - 208.10	

US EPA Tune Check Report

Mass	W-50%	W-10%	W-10% (Required)	W-10% (Flag)
7	0.62	0.716	0.900	
9	0.65	0.769	0.900	
24	0.68	0.806	0.900	
59	0.64	0.768	0.900	
115	0.61	0.751	0.900	
205	0.59	0.738	0.900	
208	0.59	0.741	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	247
Y Axis	Linear

US EPA Tune Check Report

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	0.99 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.20 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	7.7 V	Deflect	12.8 V
Extract 2	-175.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-85 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.5 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	190 V		

QP Parameters

Mass Gain	122	Axis Gain	0.9988	QP Bias	-2.5 V
Mass Offset	125	Axis Offset	0.03		

Hardware Settings

Torch

Torch H	-0.1 mm	Torch V	0.0 mm

EM

Discriminator	3.3 mV	Analog HV	2768 V	Pulse HV	1404 V

[H2]

Sensitivity

Mass	Count	CPS	RSD%	RSD% (Required)	RSD% (Flag)
59	1399	13992.13	0.943	5.000	
89	171575	1715746.14	2.059	5.000	
205	14270	142697.82	0.476	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
59	1383	1402	1400	1393	1419
89	166501	169677	172195	174896	174605
205	14181	14334	14214	14297	14322

Integration Time [sec] 0.1

US EPA Tune Check Report

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	0.99 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.20 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	7.7 V	Deflect	1.2 V
Extract 2	-175.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-85 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.5 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	122	Axis Gain	0.9990	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	-0.03		

Hardware Settings

Torch

Torch H	-0.1 mm	Torch V	0.0 mm

EM

Discriminator	3.3 mV	Analog HV	2768 V	Pulse HV	1404 V

[He]

Sensitivity

Mass	Count	CPS	RSD%	RSD% (Required)	RSD% (Flag)
59	4678	46777.01	1.097	5.000	
89	39556	395564.06	0.865	5.000	
205	8417	84170.71	0.575	5.000	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
59	4609	4717	4640	4692	4729
89	39202	39303	39529	40069	39680
205	8348	8484	8410	8422	8422

Integration Time [sec] 0.1

US EPA Tune Check Report

Tune Parameters

Plasma Parameters

Plasma Mode	General Purpose	Nebulizer Gas	0.99 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.20 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	7.7 V	Deflect	1.2 V
Extract 2	-175.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-85 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	4.5 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	122	Axis Gain	0.9990	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	-0.03		

Hardware Settings

Torch

Torch H	-0.1 mm	Torch V	0.0 mm		

EM

Discriminator	3.3 mV	Analog HV	2768 V	Pulse HV	1404 V

Calibration Blank Report

Sample Name	CalBlank
File Name	006CALB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:07:30
Sample Type	CalBlk
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	CPS	RSD
9	Be	6	No Gas	21.11	55.4
11	B	6	No Gas	3484.98	1.4
23	Na	45	He	19184.03	3.2
24	Mg	45	He	277.80	10.0
27	Al	45	He	68.89	12.2
28	Si	45	H2	5583.97	0.9
39	K	45	He	19447.92	3.8
40	Ca	45	H2	4440.86	2.4
51	V	89	He	332.24	11.1
52	Cr	89	He	693.89	5.5
55	Mn	89	He	165.97	22.9
56	Fe	89	H2	11637.85	3.3
59	Co	89	He	88.90	31.2
60	Ni	89	He	547.81	7.5
63	Cu	89	He	1132.31	4.9
66	Zn	89	He	626.70	5.6
75	As	89	He	360.71	3.1
78	Se	89	H2	1.33	57.3
88	Sr	89	He	16.66	69.3
95	Mo	89	He	70.00	19.0
107	Ag	89	He	25.56	39.8
111	Cd	89	He	0.74	173.2
118	Sn	159	He	418.91	13.3
121	Sb	159	No Gas	140.16	32.7
137	Ba	159	No Gas	100.11	26.5
182	W	159	No Gas	46.72	65.5
205	Tl	209	No Gas	510.58	16.8
208	Pb	209	No Gas	1912.21	2.4
232	Th	209	No Gas	317.03	4.8
238	U	209	No Gas	16.68	69.3

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD
Li	6	No Gas	4285305.73	1.7
Sc	45	No Gas	8716701.08	1.0
Sc	45	H2	1073440.43	1.4
Sc	45	He	283880.71	0.9
Ge	72	No Gas	1715165.05	0.9
Ge	72	H2	363056.55	2.3
Ge	72	He	177772.18	0.5
Y	89	H2	5502376.66	1.8
Y	89	He	1468553.09	0.4
Tb	159	No Gas	15204271.44	1.0
Tb	159	He	5847670.12	2.3
Bi	209	No Gas	6985104.03	0.5

Calibration Standard Report

Sample Name	CalStd
File Name	007CALS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:11:04
Sample Type	CalStd
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	CPS	RSD
9	Be	6	No Gas	245103.22	1.0
11	B	6	No Gas	161312.15	0.9
23	Na	45	He	3707381.68	1.0
24	Mg	45	He	2222553.68	0.7
27	Al	45	He	81267.91	1.4
28	Si	45	H2	146303.00	1.8
39	K	45	He	1780835.23	1.4
40	Ca	45	H2	13108358.41	1.7
51	V	89	He	146603.70	1.4
52	Cr	89	He	185785.13	0.5
55	Mn	89	He	83164.29	1.5
56	Fe	89	H2	41784569.76	1.4
59	Co	89	He	284248.80	1.8
60	Ni	89	He	77996.65	2.8
63	Cu	89	He	206083.51	0.5
66	Zn	89	He	30185.69	0.9
75	As	89	He	23773.82	1.4
78	Se	89	H2	10202.94	1.5
88	Sr	89	He	99978.79	1.6
95	Mo	89	He	113241.21	0.6
107	Ag	89	He	354921.24	0.8
111	Cd	89	He	46286.38	0.8
118	Sn	159	He	93371.08	0.3
121	Sb	159	No Gas	731592.14	1.2
137	Ba	159	No Gas	269905.77	1.6
182	W	159	No Gas	553562.38	0.9
205	Tl	209	No Gas	1009985.38	0.3
208	Pb	209	No Gas	1504657.55	1.0
232	Th	209	No Gas	1358663.78	1.8
238	U	209	No Gas	1318688.22	1.3

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4280304.27	2.3	4285305.73	99.88	29.5	120.4	
Sc	45	No Gas	8797770.17	1.8	8716701.08	100.93	29.5	120.4	
Sc	45	H2	1085976.65	1.8	1073440.43	101.17	29.5	120.4	
Sc	45	He	284364.67	2.0	283880.71	100.17	29.5	120.4	
Ge	72	No Gas	1723299.36	2.4	1715165.05	100.47	29.5	120.4	
Ge	72	H2	363754.64	2.4	363056.55	100.19	29.5	120.4	
Ge	72	He	177088.74	1.4	177772.18	99.62	29.5	120.4	
Y	89	H2	5476922.98	2.5	5502376.66	99.54	29.5	120.4	
Y	89	He	1472116.61	1.0	1468553.09	100.24	29.5	120.4	
Tb	159	No Gas	15355633.24	2.5	15204271.44	101	29.5	120.4	
Tb	159	He	5868812.20	0.8	5847670.12	100.36	29.5	120.4	
Bi	209	No Gas	6960805.46	2.9	6985104.03	99.65	29.5	120.4	

Initial Calibration Verification (ICV) Report

Sample Name	ICV
File Name	008_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:14:02
Sample Type	ICV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	19.584	ppb	1.0	97411.71	20	97.92	89.6	110.4	
11	B	6	No Gas	20.950	ppb	0.8	70619.98	20	104.75	89.6	110.4	
23	Na	45	He	4056.416	ppb	1.4	1540523.57	4000	101.41	89.6	110.4	
24	Mg	45	He	3965.498	ppb	2.6	896174.85	4000	99.14	89.6	110.4	
27	Al	45	He	404.641	ppb	0.8	33468.99	400	101.16	89.6	110.4	
28	Si	45	H2	501.906	ppb	2.9	75056.86	400	125.48	89.6	110.4	> +/- 10%
39	K	45	He	4333.045	ppb	0.8	795633.14	4000	108.33	89.6	110.4	
40	Ca	45	H2	4057.384	ppb	1.2	5237352.08	4000	101.43	89.6	110.4	
51	V	89	He	19.460	ppb	0.5	57651.44	20	97.3	89.6	110.4	
52	Cr	89	He	19.548	ppb	0.3	73556.17	20	97.74	89.6	110.4	
55	Mn	89	He	20.085	ppb	1.5	33734.82	20	100.43	89.6	110.4	
56	Fe	89	H2	3995.430	ppb	1.4	16676564.52	4000	99.89	89.6	110.4	
59	Co	89	He	20.078	ppb	0.8	114966.64	20	100.39	89.6	110.4	
60	Ni	89	He	20.233	ppb	1.1	32102.10	20	101.16	89.6	110.4	
63	Cu	89	He	20.307	ppb	0.3	84951.03	20	101.54	89.6	110.4	
66	Zn	89	He	20.229	ppb	1.5	12671.69	20	101.14	89.6	110.4	
75	As	89	He	19.512	ppb	0.4	9562.67	20	97.56	89.6	110.4	
78	Se	89	H2	19.900	ppb	2.5	4054.57	20	99.5	89.6	110.4	
88	Sr	89	He	20.170	ppb	1.7	40617.75	20	100.85	89.6	110.4	
95	Mo	89	He	39.141	ppb	0.7	89274.17	40	97.85	89.6	110.4	
107	Ag	89	He	14.126	ppb	0.4	100984.06	20	70.63	89.6	110.4	> +/- 10%
111	Cd	89	He	20.040	ppb	0.8	18679.29	20	100.2	89.6	110.4	
118	Sn	159	He	19.822	ppb	2.9	37437.51	20	99.11	89.6	110.4	
121	Sb	159	No Gas	19.753	ppb	1.2	291472.39	20	98.76	89.6	110.4	
137	Ba	159	No Gas	19.651	ppb	1.2	106971.84	20	98.26	89.6	110.4	
182	W	159	No Gas	17.479	ppb	0.2	195082.58	20	87.4	89.6	110.4	> +/- 10%
205	Tl	209	No Gas	21.957	ppb	1.0	446724.53	20	109.78	89.6	110.4	
208	Pb	209	No Gas	19.950	ppb	0.7	605537.03	20	99.75	89.6	110.4	
232	Th	209	No Gas	22.333	ppb	0.6	610905.90	20	111.66	89.6	110.4	> +/- 10%
238	U	209	No Gas	21.710	ppb	1.7	576163.43	20	108.55	89.6	110.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4340983.33	0.4	4285305.73	101.3	29.5	120.4	
Sc	45	No Gas	8905463.27	1.0	8716701.08	102.17	29.5	120.4	
Sc	45	H2	1068940.06	1.7	1073440.43	99.58	29.5	120.4	
Sc	45	He	289043.80	0.5	283880.71	101.82	29.5	120.4	
Ge	72	No Gas	1758705.31	0.5	1715165.05	102.54	29.5	120.4	
Ge	72	H2	355033.93	2.1	363056.55	97.79	29.5	120.4	
Ge	72	He	178716.15	0.3	177772.18	100.53	29.5	120.4	
Y	89	H2	5467810.17	1.5	5502376.66	99.37	29.5	120.4	
Y	89	He	1482137.74	0.7	1468553.09	100.93	29.5	120.4	
Tb	159	No Gas	15473712.55	0.4	15204271.44	101.77	29.5	120.4	
Tb	159	He	5895031.16	0.3	5847670.12	100.81	29.5	120.4	
Bi	209	No Gas	7002577.07	1.0	6985104.03	100.25	29.5	120.4	

Initial Calibration Verification (ICV) Report

Sample Name	AG ICV
File Name	009_ICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:16:39
Sample Type	ICV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	19.760	ppb	2.8	100024.22	20	98.8	89.6	110.4	
11	B	6	No Gas	2.660	ppb	1.6	12265.57	20	13.3	89.6	110.4	> +/- 10%
23	Na	45	He	1.018	ppb	135.0	19775.56	4000	0.03	89.6	110.4	> +/- 10%
24	Mg	45	He	1.333	ppb	16.4	580.06	4000	0.03	89.6	110.4	> +/- 10%
27	Al	45	He	21.412	ppb	6.3	1824.63	400	5.35	89.6	110.4	> +/- 10%
28	Si	45	H2	99.396	ppb	4.4	19331.36	400	24.85	89.6	110.4	> +/- 10%
39	K	45	He	1.175	ppb	290.9	19859.93	4000	0.03	89.6	110.4	> +/- 10%
40	Ca	45	H2	1.298	ppb	9.8	6097.09	4000	0.03	89.6	110.4	> +/- 10%
51	V	89	He	19.917	ppb	2.2	58927.71	20	99.58	89.6	110.4	
52	Cr	89	He	20.207	ppb	1.4	75926.35	20	101.04	89.6	110.4	
55	Mn	89	He	20.637	ppb	1.2	34615.36	20	103.18	89.6	110.4	
56	Fe	89	H2	0.485	ppb	17.5	13584.99	4000	0.01	89.6	110.4	> +/- 10%
59	Co	89	He	20.961	ppb	1.1	119887.45	20	104.8	89.6	110.4	
60	Ni	89	He	20.978	ppb	0.2	33225.89	20	104.89	89.6	110.4	
63	Cu	89	He	21.035	ppb	0.8	87854.71	20	105.18	89.6	110.4	
66	Zn	89	He	20.306	ppb	0.9	12702.88	20	101.53	89.6	110.4	
75	As	89	He	20.049	ppb	1.0	9804.87	20	100.24	89.6	110.4	
78	Se	89	H2	19.879	ppb	1.4	4050.07	20	99.4	89.6	110.4	
88	Sr	89	He	0.057	ppb	31.2	132.23	20	0.29	89.6	110.4	> +/- 10%
95	Mo	89	He	0.078	ppb	9.8	247.79	40	0.19	89.6	110.4	> +/- 10%
107	Ag	89	He	20.765	ppb	0.3	148264.14	20	103.83	89.6	110.4	
111	Cd	89	He	20.563	ppb	1.3	19143.66	20	102.81	89.6	110.4	
118	Sn	159	He	0.326	ppb	13.9	1033.42	20	1.63	89.6	110.4	> +/- 10%
121	Sb	159	No Gas	20.404	ppb	2.2	300759.34	20	102.02	89.6	110.4	
137	Ba	159	No Gas	20.272	ppb	0.5	110249.84	20	101.36	89.6	110.4	
182	W	159	No Gas	0.112	ppb	7.1	1298.19	20	0.56	89.6	110.4	> +/- 10%
205	Tl	209	No Gas	22.300	ppb	0.8	461331.41	20	111.5	89.6	110.4	> +/- 10%
208	Pb	209	No Gas	20.140	ppb	0.7	621548.53	20	100.7	89.6	110.4	
232	Th	209	No Gas	0.209	ppb	4.5	6128.40	20	1.04	89.6	110.4	> +/- 10%
238	U	209	No Gas	0.029	ppb	17.6	790.92	20	0.15	89.6	110.4	> +/- 10%

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4418769.40	1.2	4285305.73	103.11	29.5	120.4	
Sc	45	No Gas	8942909.26	0.6	8716701.08	102.6	29.5	120.4	
Sc	45	H2	1069248.71	1.1	1073440.43	99.61	29.5	120.4	
Sc	45	He	286947.37	1.0	283880.71	101.08	29.5	120.4	
Ge	72	No Gas	1763982.70	1.3	1715165.05	102.85	29.5	120.4	
Ge	72	H2	357783.95	1.5	363056.55	98.55	29.5	120.4	
Ge	72	He	178026.95	0.6	177772.18	100.14	29.5	120.4	
Y	89	H2	5467219.79	1.6	5502376.66	99.36	29.5	120.4	
Y	89	He	1480421.18	0.5	1468553.09	100.81	29.5	120.4	
Tb	159	No Gas	15459130.61	0.8	15204271.44	101.68	29.5	120.4	
Tb	159	He	5899801.30	0.8	5847670.12	100.89	29.5	120.4	
Bi	209	No Gas	7120402.18	0.4	6985104.03	101.94	29.5	120.4	

Initial Calibration Blank (ICB) Report

Sample Name	ICB
File Name	010_ICB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:19:13
Sample Type	ICB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.020	ppb	39.4	118.89	0.2	
11	B	6	No Gas	0.132	ppb	20.4	3952.90	4	
23	Na	45	He	-1.917	ppb	N/A	18499.07	200	
24	Mg	45	He	0.029	ppb	702.0	284.47	20	
27	Al	45	He	0.218	ppb	38.1	86.67	20	
28	Si	45	H2	1.104	ppb	191.3	5727.64	100	
39	K	45	He	-1.912	ppb	N/A	19127.61	200	
40	Ca	45	H2	0.459	ppb	32.6	5019.97	20	
51	V	89	He	-0.032	ppb	N/A	240.01	1	
52	Cr	89	He	0.068	ppb	22.5	950.92	1	
55	Mn	89	He	0.002	ppb	640.4	169.97	0.4	
56	Fe	89	H2	0.659	ppb	26.0	14346.68	20	
59	Co	89	He	0.009	ppb	113.1	142.24	0.2	
60	Ni	89	He	0.012	ppb	205.4	570.03	0.4	
63	Cu	89	He	0.035	ppb	39.5	1281.22	0.6	
66	Zn	89	He	-0.029	ppb	N/A	613.37	2	
75	As	89	He	0.029	ppb	48.1	376.38	1	
78	Se	89	H2	0.022	ppb	36.4	5.83	1	
88	Sr	89	He	0.005	ppb	89.1	26.67	1	
95	Mo	89	He	0.001	ppb	803.6	73.33	1	
107	Ag	89	He	0.006	ppb	12.5	68.89	0.2	
111	Cd	89	He	0.006	ppb	33.3	5.93	0.2	
118	Sn	159	He	0.033	ppb	29.9	475.58	1	
121	Sb	159	No Gas	0.024	ppb	18.0	490.56	0.2	
137	Ba	159	No Gas	0.008	ppb	51.4	146.83	0.4	
182	W	159	No Gas	0.007	ppb	41.5	130.14	1	
205	Tl	209	No Gas	0.015	ppb	54.2	807.60	0.2	
208	Pb	209	No Gas	0.014	ppb	71.0	2336.04	0.2	
232	Th	209	No Gas	0.022	ppb	11.4	921.07	1	
238	U	209	No Gas	0.002	ppb	26.6	73.42	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4338010.98	1.4	4285305.73	101.23	29.5	120.4	
Sc	45	No Gas	8822453.60	1.5	8716701.08	101.21	29.5	120.4	
Sc	45	H2	1070764.61	2.2	1073440.43	99.75	29.5	120.4	
Sc	45	He	284158.81	0.5	283880.71	100.1	29.5	120.4	
Ge	72	No Gas	1745190.34	1.8	1715165.05	101.75	29.5	120.4	
Ge	72	H2	364136.11	2.0	363056.55	100.3	29.5	120.4	
Ge	72	He	176494.19	1.5	177772.18	99.28	29.5	120.4	
Y	89	H2	5483991.45	2.3	5502376.66	99.67	29.5	120.4	
Y	89	He	1477293.01	0.5	1468553.09	100.6	29.5	120.4	
Tb	159	No Gas	15375501.02	1.7	15204271.44	101.13	29.5	120.4	
Tb	159	He	5791172.76	2.0	5847670.12	99.03	29.5	120.4	
Bi	209	No Gas	6989942.14	0.9	6985104.03	100.07	29.5	120.4	

Low Level Initial Calibration Verification (LLICV) Report

Sample Name	FE PQL
File Name	011LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:21:53
Sample Type	LLICV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High
9	Be	6	No Gas	0.004	ppb	28.1	41.11	0.2	2	79.5	120.4
11	B	6	No Gas	2.133	ppb	5.4	10460.81	4	53.32	79.5	120.4
23	Na	45	He	-2.716	ppb	N/A	18121.35	200	-1.36	79.5	120.4
24	Mg	45	He	-0.086	ppb	N/A	257.80	20	-0.43	79.5	120.4
27	Al	45	He	0.897	ppb	32.6	141.12	20	4.49	79.5	120.4
28	Si	45	H2	88.600	ppb	5.9	17891.11	100	88.6	79.5	120.4
39	K	45	He	-2.544	ppb	N/A	18927.37	200	-1.27	79.5	120.4
40	Ca	45	H2	1.612	ppb	5.1	6523.96	20	8.06	79.5	120.4
51	V	89	He	-0.008	ppb	N/A	310.02	1	-0.8	79.5	120.4
52	Cr	89	He	0.082	ppb	124.3	1003.17	1	8.2	79.5	120.4
55	Mn	89	He	-0.044	ppb	N/A	93.32	0.4	-11	79.5	120.4
56	Fe	89	H2	22.754	ppb	2.1	104702.29	20	113.77	79.5	120.4
59	Co	89	He	0.007	ppb	30.4	126.67	0.2	3.5	79.5	120.4
60	Ni	89	He	-0.058	ppb	N/A	461.14	0.4	-14.5	79.5	120.4
63	Cu	89	He	0.025	ppb	62.0	1243.44	0.6	4.17	79.5	120.4
66	Zn	89	He	-0.014	ppb	N/A	622.26	2	-0.7	79.5	120.4
75	As	89	He	-0.016	ppb	N/A	355.38	1	-1.6	79.5	120.4
78	Se	89	H2	0.011	ppb	24.8	3.50	1	1.1	79.5	120.4
88	Sr	89	He	0.001	ppb	514.2	18.89	1	0.1	79.5	120.4
95	Mo	89	He	0.006	ppb	145.4	83.34	1	0.6	79.5	120.4
107	Ag	89	He	0.003	ppb	49.7	48.89	0.2	1.5	79.5	120.4
111	Cd	89	He	0.002	ppb	75.7	2.22	0.2	1	79.5	120.4
118	Sn	159	He	0.002	ppb	1587.6	422.24	1	0.2	79.5	120.4
121	Sb	159	No Gas	0.006	ppb	47.1	226.92	0.2	3	79.5	120.4
137	Ba	159	No Gas	-0.005	ppb	N/A	73.41	0.4	-1.25	79.5	120.4
182	W	159	No Gas	0.003	ppb	30.2	80.09	1	0.3	79.5	120.4
205	Tl	209	No Gas	-0.007	ppb	N/A	370.42	0.2	-3.5	79.5	120.4
208	Pb	209	No Gas	-0.036	ppb	N/A	824.27	0.2	-18	79.5	120.4
232	Th	209	No Gas	0.009	ppb	28.9	580.66	0.2	4.5	79.5	120.4
238	U	209	No Gas	0.000	ppb	238.2	23.36	0.2	0	79.5	120.4

QC Flag
Failed DoD □ Failed 6020/EPA
Failed DoD □ Failed 6020/EPA
Failed DoD □ Failed 6020/EPA
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Failed DoD □ Failed 6020/EPA
Failed DoD □ Failed 6020/EPA

Low Level Initial Calibration Verification (LLICV) Report

QC Flag
Failed DoD □ Failed 6020/EPA
Failed DoD □ Failed 6020/EPA
Failed DoD □ Failed 6020/EPA
Failed DoD □ Failed 6020/EPA
Failed DoD □ Failed 6020/EPA
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Failed DoD □ Failed 6020/EPA
Failed DoD □ Failed 6020/EPA
Failed DoD □ Failed 6020/EPA

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4383873.41	1.0	4285305.73	102.3	29.5	120.4	
Sc	45	No Gas	8910428.34	0.6	8716701.08	102.22	29.5	120.4	
Sc	45	H2	1072616.63	2.6	1073440.43	99.92	29.5	120.4	
Sc	45	He	282834.90	0.0	283880.71	99.63	29.5	120.4	
Ge	72	No Gas	1752540.18	0.8	1715165.05	102.18	29.5	120.4	
Ge	72	H2	354717.08	2.5	363056.55	97.7	29.5	120.4	
Ge	72	He	176071.80	1.1	177772.18	99.04	29.5	120.4	
Y	89	H2	5377571.34	1.6	5502376.66	97.73	29.5	120.4	
Y	89	He	1478465.15	0.5	1468553.09	100.67	29.5	120.4	
Tb	159	No Gas	15346283.10	0.0	15204271.44	100.93	29.5	120.4	
Tb	159	He	5845838.39	1.7	5847670.12	99.97	29.5	120.4	
Bi	209	No Gas	7071327.01	1.3	6985104.03	101.23	29.5	120.4	

Low Level Initial Calibration Verification (LLICV) Report

Sample Name	PQL
File Name	012LICV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:24:27
Sample Type	LLICV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High	QC Flag
9	Be	6	No Gas	0.198	ppb	4.2	1004.51	0.2	99	79.5	120.4	
11	B	6	No Gas	3.972	ppb	3.0	16256.31	4	99.3	79.5	120.4	
23	Na	45	He	219.245	ppb	0.5	99773.66	200	109.62	79.5	120.4	
24	Mg	45	He	19.597	ppb	6.1	4618.83	20	97.99	79.5	120.4	
27	Al	45	He	19.684	ppb	11.6	1661.27	20	98.42	79.5	120.4	
28	Si	45	H2	101.934	ppb	3.6	19672.49	100	101.93	79.5	120.4	
39	K	45	He	214.449	ppb	2.0	57066.09	200	107.22	79.5	120.4	
40	Ca	45	H2	20.998	ppb	1.2	31496.86	20	104.99	79.5	120.4	
51	V	89	He	0.988	ppb	3.8	3217.16	1	98.8	79.5	120.4	
52	Cr	89	He	1.032	ppb	4.3	4504.62	1	103.2	79.5	120.4	
55	Mn	89	He	0.404	ppb	5.9	834.54	0.4	101	79.5	120.4	
56	Fe	89	H2	23.537	ppb	4.3	108358.97	20	117.68	79.5	120.4	
59	Co	89	He	0.213	ppb	6.3	1295.72	0.2	106.5	79.5	120.4	
60	Ni	89	He	0.430	ppb	3.8	1212.32	0.4	107.5	79.5	120.4	
63	Cu	89	He	0.675	ppb	6.4	3890.68	0.6	112.5	79.5	120.4	
66	Zn	89	He	2.035	ppb	9.2	1826.85	2	101.75	79.5	120.4	
75	As	89	He	0.954	ppb	6.0	806.78	1	95.4	79.5	120.4	
78	Se	89	H2	0.977	ppb	8.1	197.82	1	97.7	79.5	120.4	
88	Sr	89	He	1.003	ppb	3.5	2018.00	1	100.3	79.5	120.4	
95	Mo	89	He	1.016	ppb	4.1	2365.84	1	101.6	79.5	120.4	
107	Ag	89	He	0.232	ppb	11.1	1670.17	0.2	116	79.5	120.4	
111	Cd	89	He	0.198	ppb	6.7	183.71	0.2	99	79.5	120.4	
118	Sn	159	He	1.030	ppb	3.5	2342.51	1	103	79.5	120.4	
121	Sb	159	No Gas	0.205	ppb	2.0	3103.81	0.2	102.5	79.5	120.4	
137	Ba	159	No Gas	0.428	ppb	5.1	2382.86	0.4	107	79.5	120.4	
182	W	159	No Gas	1.020	ppb	7.0	11197.37	1	102	79.5	120.4	
205	Tl	209	No Gas	0.223	ppb	6.1	5036.65	0.2	111.5	79.5	120.4	
208	Pb	209	No Gas	0.196	ppb	3.3	7843.08	0.2	98	79.5	120.4	
232	Th	209	No Gas	0.197	ppb	9.7	5692.49	0.2	98.5	79.5	120.4	
238	U	209	No Gas	0.223	ppb	0.5	5921.40	0.2	111.5	79.5	120.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4343946.81	1.6	4285305.73	101.37	29.5	120.4	
Sc	45	No Gas	8741794.82	2.1	8716701.08	100.29	29.5	120.4	
Sc	45	H2	1068749.18	2.2	1073440.43	99.56	29.5	120.4	
Sc	45	He	283452.62	0.8	283880.71	99.85	29.5	120.4	
Ge	72	No Gas	1717784.81	1.6	1715165.05	100.15	29.5	120.4	
Ge	72	H2	353373.43	2.0	363056.55	97.33	29.5	120.4	
Ge	72	He	175474.27	0.9	177772.18	98.71	29.5	120.4	
Y	89	H2	5402776.39	3.1	5502376.66	98.19	29.5	120.4	
Y	89	He	1469120.62	1.5	1468553.09	100.04	29.5	120.4	
Tb	159	No Gas	15173236.30	2.0	15204271.44	99.8	29.5	120.4	
Tb	159	He	5886278.18	0.4	5847670.12	100.66	29.5	120.4	
Bi	209	No Gas	6997131.83	1.2	6985104.03	100.17	29.5	120.4	

Interference Check Solution A (ICS-A) Report

Sample Name	ICSA
File Name	013ICSA.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:27:08
Sample Type	ICSA
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Low	%High	QC Flag
Be	9	6	No Gas	0.005	ppb	85.8	45.56	-0.1	100	100	
B	11	6	No Gas	0.313	ppb	9.6	4256.33	-2	100	100	
Na	23	45	He	100008.551	ppb	0.8	35672035.78	100000	80	120	
Mg	24	45	He	96860.830	ppb	0.5	20806425.52	100000	80	120	
Al	27	45	He	99043.801	ppb	1.0	7773047.03	100000	80	120	
Si	28	45	H2	2.847	ppb	46.4	5787.69	-50	100	100	
K	39	45	He	97618.233	ppb	1.4	16637170.39	100000	80	120	
Ca	40	45	H2	100493.456	ppb	0.9	125978322.57	100000	80	120	
V	51	89	He	-0.028	ppb	N/A	240.01	-0.5	100	100	
Cr	52	89	He	2.022	ppb	0.2	7847.45	1.8	100	100	
Mn	55	89	He	0.483	ppb	6.1	929.20	0.55211	100	100	DoD
Fe	56	89	H2	99011.399	ppb	2.3	391615101.31	100000	80	120	
Co	59	89	He	0.077	ppb	16.9	504.50	0.04	100	100	
Ni	60	89	He	0.118	ppb	8.5	702.27	0.02	100	100	
Cu	63	89	He	0.523	ppb	6.6	3146.02	0.184875	100	100	
Zn	66	89	He	0.669	ppb	21.9	981.19	-0.72	100	100	
As	75	89	He	0.035	ppb	86.5	362.71	-0.5	100	100	
Se	78	89	H2	0.230	ppb	13.4	45.67	-0.5	100	100	
Sr	88	89	He	1.063	ppb	1.0	2055.79	0.41	100	100	
Mo	95	89	He	1969.425	ppb	0.7	4276282.02	2000	80	120	
Ag	107	89	He	0.285	ppb	2.1	1962.44	0.2	100	100	
Cd	111	89	He	0.395	ppb	5.6	351.49	0.2743	100	100	
Sn	118	159	He	0.044	ppb	102.4	473.36	-0.5	100	100	
Sb	121	159	No Gas	0.055	ppb	6.0	914.39	-0.1	100	100	
Ba	137	159	No Gas	0.294	ppb	8.9	1621.92	0.1	100	100	
W	182	159	No Gas	0.130	ppb	5.4	1435.04	-0.3	100	100	
Tl	205	209	No Gas	-0.005	ppb	N/A	363.75	-0.1	100	100	
Pb	208	209	No Gas	0.069	ppb	13.0	3640.96	-0.1	100	100	
Th	232	209	No Gas	0.058	ppb	17.1	1725.38	-0.1	100	100	
U	238	209	No Gas	0.003	ppb	9.9	76.75	-0.1	100	100	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4077422.75	1.1	4285305.73	95.15	29.5	120.4	
Sc	45	No Gas	8451252.41	0.9	8716701.08	96.95	29.5	120.4	
Sc	45	H2	1038890.27	0.7	1073440.43	96.78	29.5	120.4	
Sc	45	He	274809.86	0.8	283880.71	96.8	29.5	120.4	
Ge	72	No Gas	1654779.75	1.7	1715165.05	96.48	29.5	120.4	
Ge	72	H2	334825.09	1.0	363056.55	92.22	29.5	120.4	
Ge	72	He	169059.12	1.1	177772.18	95.1	29.5	120.4	
Y	89	H2	5185675.03	1.5	5502376.66	94.24	29.5	120.4	
Y	89	He	1412149.29	1.5	1468553.09	96.16	29.5	120.4	
Tb	159	No Gas	14774452.70	1.1	15204271.44	97.17	29.5	120.4	
Tb	159	He	5528919.85	0.8	5847670.12	94.55	29.5	120.4	
Bi	209	No Gas	6364553.96	1.5	6985104.03	91.12	29.5	120.4	

Interference Check Solution AB (ICS-AB) Report

Sample Name	ICSAB
File Name	014ICSB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:29:43
Sample Type	ICSB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Low	%High	QC Flag
9	Be	6	No Gas	19.411	ppb	2.4	91489.05	20	79.5	120.4	
11	B	6	No Gas	19.834	ppb	1.1	63539.41	20	79.5	120.4	
23	Na	45	He	99036.231	ppb	0.7	36548452.58	100000	79.5	120.4	
24	Mg	45	He	95835.276	ppb	0.7	21300002.88	100000	79.5	120.4	
27	Al	45	He	97815.857	ppb	0.8	7942795.86	100000	79.5	120.4	
28	Si	45	H2	514.176	ppb	1.8	74792.23	500	79.5	120.4	
39	K	45	He	97492.032	ppb	0.7	17191997.38	100000	79.5	120.4	
40	Ca	45	H2	102966.953	ppb	0.4	129441991.41	100000	79.5	120.4	
51	V	89	He	20.063	ppb	1.8	58193.46	20	79.5	120.4	
52	Cr	89	He	21.349	ppb	1.2	78610.56	20	79.5	120.4	
55	Mn	89	He	19.968	ppb	0.4	32846.86	20	79.5	120.4	
56	Fe	89	H2	99897.639	ppb	1.7	404312955.38	100000	79.5	120.4	
59	Co	89	He	19.491	ppb	2.2	109291.07	20	79.5	120.4	
60	Ni	89	He	19.112	ppb	2.1	29723.42	20	79.5	120.4	
63	Cu	89	He	19.528	ppb	1.1	80046.50	20	79.5	120.4	
66	Zn	89	He	20.145	ppb	1.3	12361.49	20	79.5	120.4	
75	As	89	He	19.919	ppb	0.4	9552.99	20	79.5	120.4	
78	Se	89	H2	20.272	ppb	1.6	4008.57	20	79.5	120.4	
88	Sr	89	He	20.637	ppb	1.3	40701.18	20	79.5	120.4	
95	Mo	89	He	1980.920	ppb	1.2	4421013.23	2000	79.5	120.4	
107	Ag	89	He	18.322	ppb	1.4	128257.75	20	79.5	120.4	
111	Cd	89	He	19.157	ppb	0.4	17486.62	20	79.5	120.4	
118	Sn	159	He	20.148	ppb	1.8	35918.88	20	79.5	120.4	
121	Sb	159	No Gas	19.800	ppb	0.3	277697.99	20	79.5	120.4	
137	Ba	159	No Gas	20.210	ppb	0.1	104567.17	20	79.5	120.4	
182	W	159	No Gas	19.679	ppb	1.2	208746.76	20	79.5	120.4	
205	Tl	209	No Gas	21.528	ppb	1.4	397188.48	20	79.5	120.4	
208	Pb	209	No Gas	19.988	ppb	1.4	550107.73	20	79.5	120.4	
232	Th	209	No Gas	22.770	ppb	2.2	564720.59	20	79.5	120.4	
238	U	209	No Gas	22.305	ppb	1.0	536864.32	20	79.5	120.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4114821.60	2.3	4285305.73	96.02	29.5	120.4	
Sc	45	No Gas	8699072.00	2.0	8716701.08	99.8	29.5	120.4	
Sc	45	H2	1041784.49	1.2	1073440.43	97.05	29.5	120.4	
Sc	45	He	284345.64	0.8	283880.71	100.16	29.5	120.4	
Ge	72	No Gas	1700382.37	1.6	1715165.05	99.14	29.5	120.4	
Ge	72	H2	342480.20	1.1	363056.55	94.33	29.5	120.4	
Ge	72	He	174956.54	1.2	177772.18	98.42	29.5	120.4	
Y	89	H2	5306039.39	1.7	5502376.66	96.43	29.5	120.4	
Y	89	He	1451552.83	1.2	1468553.09	98.84	29.5	120.4	
Tb	159	No Gas	14707610.20	0.8	15204271.44	96.73	29.5	120.4	
Tb	159	He	5566132.14	1.1	5847670.12	95.19	29.5	120.4	
Bi	209	No Gas	6351000.41	2.2	6985104.03	90.92	29.5	120.4	

Linear Range Sample (LRS) Report

Sample Name	LRS1
File Name	015_LRS.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:32:25
Sample Type	LRS
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	%Rec	%Low	%High	QC Flag
9	Be	6	No Gas	96.706	ppb	2.8	474060.07	100	96.71	89.5	110.4	
11	B	6	No Gas	483.762	ppb	2.2	1530545.57	500	96.75	89.5	110.4	
51	V	89	He	1009.344	ppb	1.4	2783446.94	1000	100.93	89.5	110.4	
52	Cr	89	He	1875.197	ppb	1.8	6543517.91	2000	93.76	89.5	110.4	
55	Mn	89	He	1887.192	ppb	0.9	2952968.95	2000	94.36	89.5	110.4	
59	Co	89	He	1022.686	ppb	1.0	5478355.89	1000	102.27	89.5	110.4	
60	Ni	89	He	1028.596	ppb	1.2	1502105.08	1000	102.86	89.5	110.4	
63	Cu	89	He	2009.959	ppb	1.1	7767365.65	2000	100.5	89.5	110.4	
66	Zn	89	He	1978.182	ppb	1.2	1102862.96	2000	98.91	89.5	110.4	
75	As	89	He	978.418	ppb	1.1	432183.74	1000	97.84	89.5	110.4	
78	Se	89	H2	962.276	ppb	2.4	190873.60	1000	96.23	89.5	110.4	
88	Sr	89	He	1947.218	ppb	0.3	3669728.49	2000	97.36	89.5	110.4	
95	Mo	89	He	1023.877	ppb	1.3	2184597.96	1000	102.39	89.5	110.4	
107	Ag	89	He	99.996	ppb	1.2	669107.43	100	100	89.5	110.4	
111	Cd	89	He	1028.607	ppb	0.8	897581.27	1000	102.86	89.5	110.4	
118	Sn	159	He	1020.068	ppb	1.1	1812510.65	1000	102.01	89.5	110.4	
121	Sb	159	No Gas	925.774	ppb	3.2	13559697.34	1000	92.58	89.5	110.4	
137	Ba	159	No Gas	1770.381	ppb	2.2	9563218.19	2000	88.52	89.5	110.4	> +/- 10%
182	W	159	No Gas	932.990	ppb	1.1	10341816.14	1000	93.3	89.5	110.4	
205	Tl	209	No Gas	1003.476	ppb	1.2	20844610.33	1000	100.35	89.5	110.4	
208	Pb	209	No Gas	1823.270	ppb	2.5	56378684.92	2000	91.16	89.5	110.4	
232	Th	209	No Gas	1005.848	ppb	1.8	28106537.21	1000	100.58	89.5	110.4	
238	U	209	No Gas	972.380	ppb	1.7	26381213.20	1000	97.24	89.5	110.4	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4280624.01	2.4	4285305.73	99.89	29.5	120.4	
Sc	45	No Gas	8838785.87	0.8	8716701.08	101.4	29.5	120.4	
Ge	72	No Gas	1749601.70	1.2	1715165.05	102.01	29.5	120.4	
Tb	159	No Gas	15373726.58	2.3	15204271.44	101.11	29.5	120.4	
Bi	209	No Gas	7158080.59	1.4	6985104.03	102.48	29.5	120.4	
Sc	45	H2	1014674.47	0.9	1073440.43	94.53	29.5	120.4	
Ge	72	H2	332575.34	2.3	363056.55	91.6	29.5	120.4	
Y	89	H2	5325264.98	1.9	5502376.66	96.78	29.5	120.4	
Sc	45	He	262823.03	0.6	283880.71	92.58	29.5	120.4	
Ge	72	He	166599.74	0.5	177772.18	93.72	29.5	120.4	
Y	89	He	1387740.69	1.4	1468553.09	94.5	29.5	120.4	
Tb	159	He	5608331.93	0.8	5847670.12	95.91	29.5	120.4	

Sample Report

Sample Name LRS2

File Name 016SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 09:34:46

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Fail

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.145	ppb	45.5	674.49	100	
11	B	6	No Gas	11.296	ppb	6.6	36033.63	1000	
23	Na	45	He	194204.459	ppb	1.1	74020175.90	200000	
24	Mg	45	He	188551.619	ppb	1.0	43291942.69	200000	
27	Al	45	He	197263.591	ppb	1.2	16547329.61	200000	
28	Si	45	H2	9464.131	ppb	2.2	1312354.51	10000	
39	K	45	He	196449.472	ppb	1.3	35766449.44	200000	
40	Ca	45	H2	202534.271	ppb	2.3	260571211.67	200000	>LDR
51	V	89	He	0.215	ppb	8.5	971.19	1000	
52	Cr	89	He	1.431	ppb	16.9	6060.98	2000	
55	Mn	89	He	1.569	ppb	1.4	2799.11	2000	
56	Fe	89	H2	97602.280	ppb	0.5	402129929.10	100000	
59	Co	89	He	1.490	ppb	1.2	8643.39	1000	
60	Ni	89	He	1.440	ppb	2.4	2808.18	1000	
63	Cu	89	He	1.658	ppb	2.7	8012.59	2000	
66	Zn	89	He	7.630	ppb	3.5	5192.28	2000	
75	As	89	He	0.364	ppb	12.6	537.40	1000	
78	Se	89	H2	0.700	ppb	9.7	142.16	1000	
88	Sr	89	He	3.082	ppb	1.7	6240.53	2000	
95	Mo	89	He	1.348	ppb	3.2	3152.72	1000	
107	Ag	89	He	0.061	ppb	8.4	464.47	100	
111	Cd	89	He	0.203	ppb	0.6	190.38	1000	
118	Sn	159	He	1.166	ppb	6.5	2445.88	1000	
121	Sb	159	No Gas	1.305	ppb	34.7	18610.71	1000	
137	Ba	159	No Gas	2.500	ppb	38.3	13169.66	2000	
182	W	159	No Gas	2.399	ppb	21.4	25673.25	1000	
205	Tl	209	No Gas	0.875	ppb	53.1	16349.30	1000	
208	Pb	209	No Gas	2.712	ppb	37.2	74936.11	2000	
232	Th	209	No Gas	3.118	ppb	30.4	76290.15	1000	
238	U	209	No Gas	1.562	ppb	47.8	37028.00	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	3942763.67	2.9	4285305.73	92.01	29.5	120.4	
Sc	45	No Gas	8523695.37	1.7	8716701.08	97.79	29.5	120.4	
Sc	45	H2	1066196.04	1.7	1073440.43	99.33	29.5	120.4	
Sc	45	He	293732.26	0.9	283880.71	103.47	29.5	120.4	
Ge	72	No Gas	1652337.54	2.3	1715165.05	96.34	29.5	120.4	
Ge	72	H2	340319.40	3.3	363056.55	93.74	29.5	120.4	
Ge	72	He	179131.57	1.1	177772.18	100.76	29.5	120.4	
Y	89	H2	5400743.52	2.4	5502376.66	98.15	29.5	120.4	
Y	89	He	1487188.99	1.0	1468553.09	101.27	29.5	120.4	
Tb	159	No Gas	14754835.47	3.3	15204271.44	97.04	29.5	120.4	
Tb	159	He	5545874.78	1.1	5847670.12	94.84	29.5	120.4	
Bi	209	No Gas	6233720.64	1.9	6985104.03	89.24	29.5	120.4	

Sample Report

Sample Name RINSE

File Name 017SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 09:37:31

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.010	ppb	54.1	73.34	100	
11	B	6	No Gas	1.124	ppb	2.9	7376.58	1000	
23	Na	45	He	126.746	ppb	63.3	69010.39	200000	
24	Mg	45	He	76.389	ppb	93.6	18119.72	200000	
27	Al	45	He	76.075	ppb	90.7	6557.52	200000	
28	Si	45	H2	3.787	ppb	40.0	6291.76	10000	
39	K	45	He	95.693	ppb	79.1	37976.42	200000	
40	Ca	45	H2	36.578	ppb	16.2	53297.68	200000	
51	V	89	He	0.174	ppb	83.9	866.79	1000	
52	Cr	89	He	0.274	ppb	108.8	1762.21	2000	
55	Mn	89	He	0.231	ppb	127.5	566.65	2000	
56	Fe	89	H2	25.885	ppb	14.6	123057.80	100000	
59	Co	89	He	0.126	ppb	109.3	826.96	1000	
60	Ni	89	He	0.105	ppb	137.5	734.51	1000	
63	Cu	89	He	0.661	ppb	44.1	3967.76	2000	
66	Zn	89	He	0.392	ppb	81.4	887.84	2000	
75	As	89	He	0.142	ppb	136.2	441.72	1000	
78	Se	89	H2	0.085	ppb	15.4	19.33	1000	
88	Sr	89	He	0.236	ppb	106.2	502.34	2000	
95	Mo	89	He	0.786	ppb	91.1	1903.44	1000	
107	Ag	89	He	0.014	ppb	89.9	131.12	100	
111	Cd	89	He	0.116	ppb	98.9	111.12	1000	
118	Sn	159	He	0.331	ppb	47.9	1036.78	1000	
121	Sb	159	No Gas	0.054	ppb	38.5	921.09	1000	
137	Ba	159	No Gas	0.044	ppb	147.1	333.74	2000	
182	W	159	No Gas	0.163	ppb	13.7	1818.83	1000	
205	Tl	209	No Gas	0.042	ppb	90.3	1341.66	1000	
208	Pb	209	No Gas	0.070	ppb	78.9	3964.91	2000	
232	Th	209	No Gas	0.108	ppb	25.6	3217.52	1000	
238	U	209	No Gas	0.031	ppb	103.8	824.41	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4491265.64	2.9	4285305.73	104.81	29.5	120.4	
Sc	45	No Gas	9281836.40	0.3	8716701.08	106.48	29.5	120.4	
Sc	45	H2	1104963.83	0.9	1073440.43	102.94	29.5	120.4	
Sc	45	He	296278.78	1.7	283880.71	104.37	29.5	120.4	
Ge	72	No Gas	1821478.97	1.8	1715165.05	106.2	29.5	120.4	
Ge	72	H2	366069.77	1.4	363056.55	100.83	29.5	120.4	
Ge	72	He	186722.81	1.1	177772.18	105.03	29.5	120.4	
Y	89	H2	5635376.43	1.3	5502376.66	102.42	29.5	120.4	
Y	89	He	1520721.68	0.9	1468553.09	103.55	29.5	120.4	
Tb	159	No Gas	15097859.50	0.3	15204271.44	99.3	29.5	120.4	
Tb	159	He	5887571.71	1.8	5847670.12	100.68	29.5	120.4	
Bi	209	No Gas	6865481.65	1.2	6985104.03	98.29	29.5	120.4	

Sample Report

Sample Name RINSE

File Name 018SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 09:40:08

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.008	ppb	42.3	62.22	100	
11	B	6	No Gas	0.611	ppb	7.0	5623.52	1000	
23	Na	45	He	80.529	ppb	62.6	50348.16	200000	
24	Mg	45	He	59.410	ppb	81.9	13907.84	200000	
27	Al	45	He	55.478	ppb	85.8	4721.17	200000	
28	Si	45	H2	0.447	ppb	415.1	5711.16	10000	
39	K	45	He	69.849	ppb	79.9	32693.05	200000	
40	Ca	45	H2	10.954	ppb	29.6	18829.39	200000	
51	V	89	He	0.148	ppb	58.5	785.65	1000	
52	Cr	89	He	0.218	ppb	68.9	1543.45	2000	
55	Mn	89	He	0.206	ppb	74.7	520.63	2000	
56	Fe	89	H2	8.759	ppb	31.5	49033.62	100000	
59	Co	89	He	0.115	ppb	66.5	762.49	1000	
60	Ni	89	He	0.084	ppb	106.6	697.84	1000	
63	Cu	89	He	0.445	ppb	30.3	3036.29	2000	
66	Zn	89	He	0.356	ppb	52.2	861.18	2000	
75	As	89	He	0.131	ppb	57.6	434.06	1000	
78	Se	89	H2	0.047	ppb	21.8	11.17	1000	
88	Sr	89	He	0.200	ppb	74.8	426.76	2000	
95	Mo	89	He	0.436	ppb	52.0	1084.71	1000	
107	Ag	89	He	0.013	ppb	53.0	124.45	100	
111	Cd	89	He	0.122	ppb	79.6	116.30	1000	
118	Sn	159	He	0.209	ppb	48.1	797.85	1000	
121	Sb	159	No Gas	0.048	ppb	37.9	850.98	1000	
137	Ba	159	No Gas	0.069	ppb	68.9	477.21	2000	
182	W	159	No Gas	0.096	ppb	20.3	1121.31	1000	
205	Tl	209	No Gas	0.037	ppb	67.1	1278.20	1000	
208	Pb	209	No Gas	0.072	ppb	55.3	4118.29	2000	
232	Th	209	No Gas	0.086	ppb	27.0	2690.01	1000	
238	U	209	No Gas	0.035	ppb	56.6	957.81	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4448587.86	1.4	4285305.73	103.81	29.5	120.4	
Sc	45	No Gas	9221266.67	0.3	8716701.08	105.79	29.5	120.4	
Sc	45	H2	1085128.62	1.9	1073440.43	101.09	29.5	120.4	
Sc	45	He	291991.07	1.2	283880.71	102.86	29.5	120.4	
Ge	72	No Gas	1805952.58	0.5	1715165.05	105.29	29.5	120.4	
Ge	72	H2	354548.39	1.7	363056.55	97.66	29.5	120.4	
Ge	72	He	182263.69	0.8	177772.18	102.53	29.5	120.4	
Y	89	H2	5577493.03	1.6	5502376.66	101.37	29.5	120.4	
Y	89	He	1512530.92	1.4	1468553.09	102.99	29.5	120.4	
Tb	159	No Gas	15553455.05	1.1	15204271.44	102.3	29.5	120.4	
Tb	159	He	5802923.25	2.6	5847670.12	99.23	29.5	120.4	
Bi	209	No Gas	7036320.92	1.5	6985104.03	100.73	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	019_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:42:48
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	24.753	ppb	3.3	124524.49	25	99.01	89.8	110.2	
11	B	6	No Gas	24.600	ppb	2.2	83264.74	25	98.4	89.8	110.2	
23	Na	45	He	5365.052	ppb	0.8	2022852.94	5000	107.3	89.8	110.2	
24	Mg	45	He	5225.760	ppb	1.2	1176087.74	5000	104.52	89.8	110.2	
27	Al	45	He	504.755	ppb	1.9	41562.50	500	100.95	89.8	110.2	
28	Si	45	H2	482.270	ppb	1.6	72644.41	500	96.45	89.8	110.2	
39	K	45	He	5192.776	ppb	1.0	945665.98	5000	103.86	89.8	110.2	
40	Ca	45	H2	5152.061	ppb	1.5	6678705.94	5000	103.04	89.8	110.2	
51	V	89	He	26.014	ppb	1.3	77243.32	25	104.06	89.8	110.2	
52	Cr	89	He	26.074	ppb	1.2	98247.84	25	104.3	89.8	110.2	
55	Mn	89	He	25.560	ppb	0.7	43044.22	25	102.24	89.8	110.2	
56	Fe	89	H2	5095.152	ppb	1.8	21527796.83	5000	101.9	89.8	110.2	
59	Co	89	He	26.180	ppb	0.3	150448.60	25	104.72	89.8	110.2	
60	Ni	89	He	26.069	ppb	0.9	41357.56	25	104.28	89.8	110.2	
63	Cu	89	He	26.350	ppb	0.5	110305.68	25	105.4	89.8	110.2	
66	Zn	89	He	25.425	ppb	2.0	15822.85	25	101.7	89.8	110.2	
75	As	89	He	26.100	ppb	1.2	12715.20	25	104.4	89.8	110.2	
78	Se	89	H2	25.068	ppb	1.3	5171.72	25	100.27	89.8	110.2	
88	Sr	89	He	25.039	ppb	0.8	50607.50	25	100.16	89.8	110.2	
95	Mo	89	He	25.414	ppb	1.7	58201.49	25	101.66	89.8	110.2	
107	Ag	89	He	25.670	ppb	1.3	184167.39	25	102.68	89.8	110.2	
111	Cd	89	He	25.766	ppb	1.3	24104.90	25	103.06	89.8	110.2	
118	Sn	159	He	25.870	ppb	0.4	47916.23	25	103.48	89.8	110.2	
121	Sb	159	No Gas	26.021	ppb	3.0	383096.65	25	104.08	89.8	110.2	
137	Ba	159	No Gas	25.788	ppb	1.6	140079.70	25	103.15	89.8	110.2	
182	W	159	No Gas	25.005	ppb	1.8	278559.74	25	100.02	89.8	110.2	
205	Tl	209	No Gas	27.645	ppb	2.3	565566.76	25	110.58	89.8	110.2	> +/- 10%
208	Pb	209	No Gas	25.766	ppb	1.9	785955.01	25	103.06	89.8	110.2	
232	Th	209	No Gas	27.377	ppb	2.9	753002.67	25	109.51	89.8	110.2	
238	U	209	No Gas	27.278	ppb	2.5	728135.87	25	109.11	89.8	110.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4392320.66	1.7	4285305.73	102.5	29.5	120.4	
Sc	45	No Gas	9113985.85	1.6	8716701.08	104.56	29.5	120.4	
Sc	45	H2	1073559.09	0.4	1073440.43	100.01	29.5	120.4	
Sc	45	He	287852.46	0.5	283880.71	101.4	29.5	120.4	
Ge	72	No Gas	1797492.22	2.7	1715165.05	104.8	29.5	120.4	
Ge	72	H2	350381.29	1.1	363056.55	96.51	29.5	120.4	
Ge	72	He	180219.88	0.5	177772.18	101.38	29.5	120.4	
Y	89	H2	5536142.61	1.4	5502376.66	100.61	29.5	120.4	
Y	89	He	1487743.59	1.1	1468553.09	101.31	29.5	120.4	
Tb	159	No Gas	15447415.33	2.4	15204271.44	101.6	29.5	120.4	
Tb	159	He	5796404.50	0.5	5847670.12	99.12	29.5	120.4	
Bi	209	No Gas	7044245.20	1.9	6985104.03	100.85	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	020_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:45:21
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.028	ppb	59.0	163.34	0.2	
11	B	6	No Gas	0.510	ppb	7.0	5215.57	4	
23	Na	45	He	8.639	ppb	63.1	22657.71	200	
24	Mg	45	He	4.917	ppb	69.6	1384.84	20	
27	Al	45	He	2.756	ppb	112.3	295.59	20	
28	Si	45	H2	1.048	ppb	102.6	5787.71	100	
39	K	45	He	9.126	ppb	67.8	21321.60	200	
40	Ca	45	H2	2.224	ppb	16.1	7391.09	20	
51	V	89	He	0.007	ppb	154.6	357.80	1	
52	Cr	89	He	0.024	ppb	72.7	795.22	1	
55	Mn	89	He	0.002	ppb	957.0	171.97	0.4	
56	Fe	89	H2	3.109	ppb	7.0	24980.09	20	
59	Co	89	He	0.013	ppb	93.1	166.68	0.2	
60	Ni	89	He	-0.015	ppb	N/A	532.25	0.4	
63	Cu	89	He	0.169	ppb	16.9	1851.31	0.6	
66	Zn	89	He	-0.047	ppb	N/A	607.81	2	
75	As	89	He	0.062	ppb	15.1	395.38	1	
78	Se	89	H2	0.042	ppb	25.2	10.00	1	
88	Sr	89	He	0.021	ppb	103.7	60.01	1	
95	Mo	89	He	0.121	ppb	32.9	346.69	1	
107	Ag	89	He	0.012	ppb	47.7	112.23	0.2	
111	Cd	89	He	0.017	ppb	94.6	16.66	0.2	
118	Sn	159	He	0.096	ppb	8.6	598.93	1	
121	Sb	159	No Gas	0.032	ppb	1.4	630.72	0.2	
137	Ba	159	No Gas	0.024	ppb	40.5	236.95	0.4	
182	W	159	No Gas	0.085	ppb	16.1	1017.85	1	
205	Tl	209	No Gas	0.019	ppb	44.7	897.71	0.2	
208	Pb	209	No Gas	0.027	ppb	36.9	2756.54	0.2	
232	Th	209	No Gas	0.174	ppb	5.5	5110.15	1	
238	U	209	No Gas	0.029	ppb	20.8	780.90	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4383400.80	1.7	4285305.73	102.29	29.5	120.4	
Sc	45	No Gas	9156053.44	1.8	8716701.08	105.04	29.5	120.4	
Sc	45	H2	1084399.63	1.5	1073440.43	101.02	29.5	120.4	
Sc	45	He	287553.27	1.2	283880.71	101.29	29.5	120.4	
Ge	72	No Gas	1801794.43	3.0	1715165.05	105.05	29.5	120.4	
Ge	72	H2	356702.36	1.7	363056.55	98.25	29.5	120.4	
Ge	72	He	182455.94	1.1	177772.18	102.63	29.5	120.4	
Y	89	H2	5569062.56	1.3	5502376.66	101.21	29.5	120.4	
Y	89	He	1490687.77	1.9	1468553.09	101.51	29.5	120.4	
Tb	159	No Gas	15767626.85	0.8	15204271.44	103.71	29.5	120.4	
Tb	159	He	5867429.29	1.6	5847670.12	100.34	29.5	120.4	
Bi	209	No Gas	7063651.63	0.3	6985104.03	101.12	29.5	120.4	

Prep Blank (PB) Report

Sample Name	PBWOI23IMW2
File Name	021_PB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:48:00
Sample Type	PB
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	6	No Gas	0.036	ppb	53.9	56.67	0.5	
B	11	6	No Gas	1.630	ppb	5.0	4563.10	10	
Na	23	45	He	73.692	ppb	2.2	24598.25	500	
Mg	24	45	He	13.255	ppb	23.2	864.53	50	
Al	27	45	He	11.188	ppb	9.4	250.01	50	
Si	28	45	H2	9.740	ppb	26.9	5670.93	250	
K	39	45	He	9.310	ppb	216.7	19753.19	500	
Ca	40	45	H2	30.109	ppb	2.1	11857.61	50	
V	51	89	He	0.907	ppb	6.5	870.06	2.5	
Cr	52	89	He	0.517	ppb	91.6	1084.16	2.5	
Mn	55	89	He	0.352	ppb	13.6	285.29	1	
Fe	56	89	H2	22.569	ppb	5.4	29975.76	50	
Co	59	89	He	0.046	ppb	25.6	142.24	0.5	
Ni	60	89	He	0.073	ppb	185.1	575.59	1	
Cu	63	89	He	2.489	ppb	9.2	3196.04	1.5	PB 6020 Fails DoD
Zn	66	89	He	3.742	ppb	16.0	1077.86	5	
As	75	89	He	0.154	ppb	56.5	378.72	2.5	
Se	78	89	H2	0.157	ppb	30.3	7.67	2.5	
Sr	88	89	He	0.044	ppb	88.7	34.45	2.5	
Mo	95	89	He	0.305	ppb	6.7	210.01	2.5	
Ag	107	89	He	0.022	ppb	66.9	57.78	0.5	
Cd	111	89	He	0.020	ppb	1.6	4.44	0.5	
Sn	118	159	He	0.792	ppb	29.4	693.42	2.5	
Sb	121	159	No Gas	0.046	ppb	39.7	280.32	0.5	
Ba	137	159	No Gas	0.062	ppb	83.7	170.19	1	
W	182	159	No Gas	0.218	ppb	12.9	537.28	2.5	
Tl	205	209	No Gas	0.005	ppb	43.4	537.28	0.5	
Pb	208	209	No Gas	0.080	ppb	14.0	2419.48	0.5	
Th	232	209	No Gas	0.452	ppb	6.7	2810.15	2.5	
U	238	209	No Gas	0.020	ppb	11.0	123.47	0.5	

QC ISTD Table

Prep Blank (PB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4329323.13	1.2	4285305.73	101.03	29.5	120.4	
Sc	45	No Gas	8986719.32	0.4	8716701.08	103.1	29.5	120.4	
Sc	45	H2	1039790.42	2.4	1073440.43	96.87	29.5	120.4	
Sc	45	He	283667.29	1.0	283880.71	99.92	29.5	120.4	
Ge	72	No Gas	1775740.99	1.2	1715165.05	103.53	29.5	120.4	
Ge	72	H2	336856.56	2.7	363056.55	92.78	29.5	120.4	
Ge	72	He	174746.81	0.4	177772.18	98.3	29.5	120.4	
Y	89	H2	5394219.55	2.2	5502376.66	98.03	29.5	120.4	
Y	89	He	1482344.89	1.3	1468553.09	100.94	29.5	120.4	
Tb	159	No Gas	15571115.88	0.9	15204271.44	102.41	29.5	120.4	
Tb	159	He	5683587.14	1.5	5847670.12	97.19	29.5	120.4	
Bi	209	No Gas	7053125.48	0.8	6985104.03	100.97	29.5	120.4	

Laboratory Control Sample (LCS) Report

Sample Name	LCSWOI23IMW2
File Name	022LCSW.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:50:34
Sample Type	LCSW
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	6	No Gas	49.410	ppb	1.8	49026.00	50	19.76	79.5	120.4	
B	11	6	No Gas	484.940	ppb	1.2	313231.32	500	19.4	79.5	120.4	
Na	23	45	He	8545.785	ppb	3.9	648531.21	7500	22.79	79.5	120.4	
Mg	24	45	He	5191.601	ppb	1.5	230620.89	5000	20.77	79.5	120.4	
Al	27	45	He	2007.862	ppb	4.4	32608.02	2000	20.08	79.5	120.4	
Si	28	45	H2	967.924	ppb	3.5	31647.04	1000	19.36	0	200	
K	39	45	He	11330.291	ppb	1.6	417843.12	10000	22.66	79.5	120.4	
Ca	40	45	H2	2560.263	ppb	0.4	650301.20	2500	20.48	79.5	120.4	
V	51	89	He	515.596	ppb	2.1	299319.97	500	20.62	79.5	120.4	
Cr	52	89	He	207.311	ppb	1.8	152819.68	200	20.73	79.5	120.4	
Mn	55	89	He	517.547	ppb	0.6	170470.37	500	20.7	79.5	120.4	
Fe	56	89	H2	1075.596	ppb	2.0	900065.12	1000	21.51	79.5	120.4	
Co	59	89	He	536.508	ppb	2.0	604483.93	500	21.46	79.5	120.4	
Ni	60	89	He	537.445	ppb	2.1	165543.04	500	21.5	79.5	120.4	
Cu	63	89	He	270.534	ppb	0.8	220966.41	250	21.64	79.5	120.4	
Zn	66	89	He	517.563	ppb	0.9	61276.55	500	20.7	79.5	120.4	
As	75	89	He	104.670	ppb	1.6	10074.41	100	20.93	79.5	120.4	
Se	78	89	H2	101.001	ppb	2.8	4076.25	100	20.2	79.5	120.4	
Sr	88	89	He	512.468	ppb	1.3	203112.71	500	20.5	79.5	120.4	
Mo	95	89	He	101.925	ppb	1.9	45803.32	100	20.39	79.5	120.4	
Ag	107	89	He	53.155	ppb	2.2	74821.69	50	21.26	79.5	120.4	
Cd	111	89	He	257.042	ppb	1.3	47172.99	250	20.56	79.5	120.4	
Sn	118	159	He	515.600	ppb	1.0	190988.68	500	20.62	79.5	120.4	
Sb	121	159	No Gas	102.911	ppb	3.0	307339.82	100	20.58	79.5	120.4	
Ba	137	159	No Gas	1889.986	ppb	2.8	2080563.17	2000	18.9	79.5	120.4	
W	182	159	No Gas	103.031	ppb	1.9	232767.10	100	20.61	79.5	120.4	
Tl	205	209	No Gas	113.315	ppb	2.6	461322.98	100	22.66	79.5	120.4	
[Pb]	206	209	No Gas	105.656	ppb	2.9	161115.91	100	21.13	79.5	120.4	
[Pb]	207	209	No Gas	105.889	ppb	2.5	140841.03	100	21.18	79.5	120.4	
Pb	208	209	No Gas	105.838	ppb	2.8	642643.51	100	21.17	79.5	120.4	
Th	232	209	No Gas	112.017	ppb	1.8	613174.64	100	22.4	79.5	120.4	
U	238	209	No Gas	112.806	ppb	2.7	599107.78	100	22.56	79.5	120.4	

QC ISTD Table

Laboratory Control Sample (LCS) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4329299.20	1.3	4285305.73	101.03	29.5	120.4	
Sc	45	No Gas	8866534.66	2.0	8716701.08	101.72	29.5	120.4	
Sc	45	H2	1045524.69	1.4	1073440.43	97.4	29.5	120.4	
Sc	45	He	283858.99	1.4	283880.71	99.99	29.5	120.4	
Ge	72	No Gas	1755976.44	1.7	1715165.05	102.38	29.5	120.4	
Ge	72	H2	338349.78	2.4	363056.55	93.19	29.5	120.4	
Ge	72	He	176989.45	0.6	177772.18	99.56	29.5	120.4	
Y	89	H2	5416010.98	1.9	5502376.66	98.43	29.5	120.4	
Y	89	He	1459162.81	0.5	1468553.09	99.36	29.5	120.4	
Tb	159	No Gas	15663624.77	1.5	15204271.44	103.02	29.5	120.4	
Tb	159	He	5834081.65	0.5	5847670.12	99.77	29.5	120.4	
Bi	209	No Gas	7007848.28	1.7	6985104.03	100.33	29.5	120.4	

Sample Report

Sample Name SO4723-001R

File Name 023SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 09:53:14

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.094	ppb	16.8	111.12	100	
11	B	6	No Gas	11.839	ppb	5.8	10781.05	1000	
23	Na	45	He	3320.393	ppb	0.6	256553.47	200000	
24	Mg	45	He	8625.110	ppb	0.9	372585.77	200000	
27	Al	45	He	98.669	ppb	5.4	1623.49	200000	
28	Si	45	H2	2807.007	ppb	1.5	79596.57	10000	
39	K	45	He	654.186	ppb	1.2	41294.02	200000	
40	Ca	45	H2	67443.718	ppb	1.6	16630987.81	200000	
51	V	89	He	0.537	ppb	21.0	630.04	1000	
52	Cr	89	He	0.742	ppb	18.2	1212.51	2000	
55	Mn	89	He	2.305	ppb	5.4	907.20	2000	
56	Fe	89	H2	91.586	ppb	1.8	85992.93	100000	
59	Co	89	He	0.170	ppb	25.9	275.58	1000	
60	Ni	89	He	0.455	ppb	35.4	672.26	1000	
63	Cu	89	He	3.288	ppb	4.9	3730.63	2000	
66	Zn	89	He	4.771	ppb	6.2	1161.20	2000	
75	As	89	He	0.368	ppb	14.7	385.72	1000	
78	Se	89	H2	0.214	ppb	23.1	9.83	1000	
88	Sr	89	He	518.682	ppb	1.3	202021.71	2000	
95	Mo	89	He	0.404	ppb	22.3	246.68	1000	
107	Ag	89	He	0.020	ppb	14.9	52.22	100	
111	Cd	89	He	0.053	ppb	40.2	10.37	1000	
118	Sn	159	He	0.775	ppb	27.4	697.82	1000	
121	Sb	159	No Gas	0.253	ppb	5.9	904.37	1000	
137	Ba	159	No Gas	39.400	ppb	1.1	43697.72	2000	
182	W	159	No Gas	0.329	ppb	12.2	794.24	1000	
205	Tl	209	No Gas	0.102	ppb	16.4	947.76	1000	
208	Pb	209	No Gas	0.224	ppb	19.2	3353.93	2000	
232	Th	209	No Gas	1.664	ppb	5.4	9641.20	1000	
238	U	209	No Gas	0.315	ppb	32.3	1722.08	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4210619.79	1.9	4285305.73	98.26	29.5	120.4	
Sc	45	No Gas	8737509.50	0.4	8716701.08	100.24	29.5	120.4	
Sc	45	H2	1021680.43	2.0	1073440.43	95.18	29.5	120.4	
Sc	45	He	276144.00	0.8	283880.71	97.27	29.5	120.4	
Ge	72	No Gas	1743541.34	1.5	1715165.05	101.65	29.5	120.4	
Ge	72	H2	329083.49	1.6	363056.55	90.64	29.5	120.4	
Ge	72	He	174133.51	0.3	177772.18	97.95	29.5	120.4	
Y	89	H2	5345062.32	1.6	5502376.66	97.14	29.5	120.4	
Y	89	He	1433893.56	0.4	1468553.09	97.64	29.5	120.4	
Tb	159	No Gas	15739178.65	0.9	15204271.44	103.52	29.5	120.4	
Tb	159	He	5779390.47	0.3	5847670.12	98.83	29.5	120.4	
Bi	209	No Gas	7167707.25	2.0	6985104.03	102.61	29.5	120.4	

Sample Report

Sample Name SO4723-001RA

File Name 024SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 09:55:47

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	9.734	ppb	3.5	9383.39	100	
11	B	6	No Gas	204.706	ppb	1.7	130219.73	1000	
23	Na	45	He	13991.672	ppb	1.1	1020394.82	200000	
24	Mg	45	He	9415.210	ppb	0.8	406421.38	200000	
27	Al	45	He	1070.073	ppb	0.9	16932.83	200000	
28	Si	45	H2	7556.018	ppb	1.2	205415.94	10000	
39	K	45	He	11822.650	ppb	0.9	423118.75	200000	
40	Ca	45	H2	67393.915	ppb	1.9	16630837.95	200000	
51	V	89	He	52.148	ppb	1.3	30242.26	1000	
52	Cr	89	He	53.974	ppb	4.1	39870.15	2000	
55	Mn	89	He	21.753	ppb	2.3	7243.23	2000	
56	Fe	89	H2	1124.284	ppb	2.0	917490.90	100000	
59	Co	89	He	10.560	ppb	0.6	11854.74	1000	
60	Ni	89	He	20.440	ppb	1.9	6745.21	1000	
63	Cu	89	He	35.290	ppb	1.2	29480.81	2000	
66	Zn	89	He	102.021	ppb	2.2	12441.53	2000	
75	As	89	He	51.470	ppb	1.0	5080.49	1000	
78	Se	89	H2	49.631	ppb	1.0	1955.88	1000	
88	Sr	89	He	560.876	ppb	1.2	219901.79	2000	
95	Mo	89	He	51.239	ppb	1.6	22809.77	1000	
107	Ag	89	He	8.412	ppb	0.9	11735.46	100	
111	Cd	89	He	10.139	ppb	3.3	1841.63	1000	
118	Sn	159	He	51.801	ppb	1.5	19248.82	1000	
121	Sb	159	No Gas	10.131	ppb	2.9	30498.90	1000	
137	Ba	159	No Gas	57.695	ppb	1.0	63864.65	2000	
182	W	159	No Gas	51.642	ppb	2.4	117120.58	1000	
205	Tl	209	No Gas	10.829	ppb	1.8	45623.05	1000	
208	Pb	209	No Gas	10.316	ppb	2.9	65920.76	2000	
232	Th	209	No Gas	12.031	ppb	2.9	67729.33	1000	
238	U	209	No Gas	11.182	ppb	0.9	60843.09	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4199180.70	1.1	4285305.73	97.99	29.5	120.4	
Sc	45	No Gas	8716093.91	0.8	8716701.08	99.99	29.5	120.4	
Sc	45	H2	1022436.50	1.4	1073440.43	95.25	29.5	120.4	
Sc	45	He	275956.16	0.9	283880.71	97.21	29.5	120.4	
Ge	72	No Gas	1755628.56	0.8	1715165.05	102.36	29.5	120.4	
Ge	72	H2	328551.65	1.0	363056.55	90.5	29.5	120.4	
Ge	72	He	175289.75	0.8	177772.18	98.6	29.5	120.4	
Y	89	H2	5284717.81	2.2	5502376.66	96.04	29.5	120.4	
Y	89	He	1443315.26	0.8	1468553.09	98.28	29.5	120.4	
Tb	159	No Gas	15723138.65	1.9	15204271.44	103.41	29.5	120.4	
Tb	159	He	5740632.21	1.3	5847670.12	98.17	29.5	120.4	
Bi	209	No Gas	7175838.45	0.8	6985104.03	102.73	29.5	120.4	

Sample Report

Sample Name	SO4723-001RL
File Name	025SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 09:58:25
Sample Type	Sample
Total Dilution	25.0000
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.195	ppb	37.2	58.89	100	
11	B	6	No Gas	18.684	ppb	0.6	5820.28	1000	
23	Na	45	He	3168.376	ppb	2.3	65156.21	200000	
24	Mg	45	He	8646.183	ppb	2.0	76195.44	200000	
27	Al	45	He	92.755	ppb	18.8	365.57	200000	
28	Si	45	H2	2932.339	ppb	3.9	21329.75	10000	
39	K	45	He	625.556	ppb	10.2	23590.41	200000	
40	Ca	45	H2	67642.672	ppb	1.6	3419994.95	200000	
51	V	89	He	1.228	ppb	34.9	476.70	1000	
52	Cr	89	He	1.173	ppb	41.6	869.21	2000	
55	Mn	89	He	2.544	ppb	19.5	335.28	2000	
56	Fe	89	H2	105.499	ppb	3.4	28995.64	100000	
59	Co	89	He	0.264	ppb	73.2	148.90	1000	
60	Ni	89	He	0.376	ppb	313.2	572.26	1000	
63	Cu	89	He	5.196	ppb	12.3	1986.89	2000	
66	Zn	89	He	5.154	ppb	38.1	750.05	2000	
75	As	89	He	0.864	ppb	107.8	377.71	1000	
78	Se	89	H2	0.453	ppb	58.8	5.00	1000	
88	Sr	89	He	513.211	ppb	1.4	41056.77	2000	
95	Mo	89	He	1.065	ppb	22.7	166.68	1000	
107	Ag	89	He	0.105	ppb	35.3	55.56	100	
111	Cd	89	He	0.090	ppb	39.0	4.07	1000	
118	Sn	159	He	1.756	ppb	41.4	548.92	1000	
121	Sb	159	No Gas	0.359	ppb	25.9	360.41	1000	
137	Ba	159	No Gas	38.484	ppb	2.2	8609.03	2000	
182	W	159	No Gas	0.734	ppb	42.4	380.43	1000	
205	Tl	209	No Gas	-0.161	ppb	N/A	393.78	1000	
208	Pb	209	No Gas	0.240	ppb	58.3	2282.67	2000	
232	Th	209	No Gas	0.917	ppb	4.8	1364.94	1000	
238	U	209	No Gas	0.367	ppb	21.3	420.48	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4264723.48	2.9	4285305.73	99.52	29.5	120.4	
Sc	45	No Gas	8933492.55	1.4	8716701.08	102.49	29.5	120.4	
Sc	45	H2	1046263.14	2.0	1073440.43	97.47	29.5	120.4	
Sc	45	He	280862.40	0.4	283880.71	98.94	29.5	120.4	
Ge	72	No Gas	1788794.64	1.5	1715165.05	104.29	29.5	120.4	
Ge	72	H2	340785.96	1.2	363056.55	93.87	29.5	120.4	
Ge	72	He	178071.62	0.3	177772.18	100.17	29.5	120.4	
Y	89	H2	5435607.19	0.8	5502376.66	98.79	29.5	120.4	
Y	89	He	1472145.48	0.4	1468553.09	100.24	29.5	120.4	
Tb	159	No Gas	15723263.38	1.8	15204271.44	103.41	29.5	120.4	
Tb	159	He	5844038.52	0.2	5847670.12	99.94	29.5	120.4	
Bi	209	No Gas	7238799.90	2.1	6985104.03	103.63	29.5	120.4	

Sample Report

Sample Name RINSE

File Name 026SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:01:00

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.001	ppb	574.0	23.33	100	
11	B	6	No Gas	0.220	ppb	17.0	4137.41	1000	
23	Na	45	He	-2.941	ppb	N/A	17925.36	200000	
24	Mg	45	He	6.332	ppb	135.5	1669.45	200000	
27	Al	45	He	1.874	ppb	121.3	218.90	200000	
28	Si	45	H2	0.554	ppb	454.2	5547.41	10000	
39	K	45	He	4.432	ppb	160.9	20016.85	200000	
40	Ca	45	H2	1.780	ppb	18.6	6603.99	200000	
51	V	89	He	0.084	ppb	113.8	584.48	1000	
52	Cr	89	He	0.039	ppb	159.0	847.22	2000	
55	Mn	89	He	0.046	ppb	237.7	243.96	2000	
56	Fe	89	H2	0.403	ppb	16.2	13127.57	100000	
59	Co	89	He	0.077	ppb	145.3	529.00	1000	
60	Ni	89	He	0.027	ppb	487.1	595.59	1000	
63	Cu	89	He	0.134	ppb	51.1	1694.62	2000	
66	Zn	89	He	-0.156	ppb	N/A	540.03	2000	
75	As	89	He	0.063	ppb	88.0	393.72	1000	
78	Se	89	H2	0.008	ppb	77.4	3.00	1000	
88	Sr	89	He	0.201	ppb	161.9	423.41	2000	
95	Mo	89	He	0.068	ppb	107.1	226.69	1000	
107	Ag	89	He	0.015	ppb	169.2	135.56	100	
111	Cd	89	He	0.042	ppb	169.2	40.37	1000	
118	Sn	159	He	0.134	ppb	156.2	670.37	1000	
121	Sb	159	No Gas	0.002	ppb	74.0	180.20	1000	
137	Ba	159	No Gas	-0.003	ppb	N/A	90.10	2000	
182	W	159	No Gas	0.009	ppb	30.0	153.51	1000	
205	Tl	209	No Gas	-0.014	ppb	N/A	243.61	1000	
208	Pb	209	No Gas	-0.005	ppb	N/A	1805.41	2000	
232	Th	209	No Gas	0.006	ppb	32.0	503.91	1000	
238	U	209	No Gas	0.002	ppb	45.6	63.40	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4239535.48	0.8	4285305.73	98.93	29.5	120.4	
Sc	45	No Gas	8902248.08	1.1	8716701.08	102.13	29.5	120.4	
Sc	45	H2	1051534.40	1.9	1073440.43	97.96	29.5	120.4	
Sc	45	He	280940.89	0.4	283880.71	98.96	29.5	120.4	
Ge	72	No Gas	1769283.31	1.5	1715165.05	103.16	29.5	120.4	
Ge	72	H2	344977.01	1.7	363056.55	95.02	29.5	120.4	
Ge	72	He	177949.55	0.6	177772.18	100.1	29.5	120.4	
Y	89	H2	5419404.42	1.1	5502376.66	98.49	29.5	120.4	
Y	89	He	1482440.90	0.4	1468553.09	100.95	29.5	120.4	
Tb	159	No Gas	15809406.71	0.9	15204271.44	103.98	29.5	120.4	
Tb	159	He	5874126.93	0.8	5847670.12	100.45	29.5	120.4	
Bi	209	No Gas	7219275.01	0.8	6985104.03	103.35	29.5	120.4	

Sample Report

Sample Name SO4723-001RP

File Name 027SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:03:39

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	48.753	ppb	1.8	47799.89	100	
11	B	6	No Gas	484.485	ppb	0.8	309234.71	1000	
23	Na	45	He	11328.421	ppb	1.0	821628.91	200000	
24	Mg	45	He	13840.339	ppb	1.3	591491.44	200000	
27	Al	45	He	2093.214	ppb	1.8	32736.13	200000	
28	Si	45	H2	3747.564	ppb	2.2	104599.19	10000	
39	K	45	He	11950.167	ppb	0.8	423306.56	200000	
40	Ca	45	H2	68972.248	ppb	1.8	17027241.69	200000	
51	V	89	He	515.532	ppb	1.3	292980.57	1000	
52	Cr	89	He	206.640	ppb	0.4	149130.16	2000	
55	Mn	89	He	510.474	ppb	0.2	164607.00	2000	
56	Fe	89	H2	1145.418	ppb	2.8	932712.99	100000	
59	Co	89	He	525.067	ppb	0.5	579176.42	1000	
60	Ni	89	He	526.860	ppb	0.5	158887.80	1000	
63	Cu	89	He	265.884	ppb	1.2	212606.68	2000	
66	Zn	89	He	510.824	ppb	0.5	59215.50	2000	
75	As	89	He	103.103	ppb	0.7	9719.79	1000	
78	Se	89	H2	100.161	ppb	3.1	3937.05	1000	
88	Sr	89	He	1012.316	ppb	0.8	392771.52	2000	
95	Mo	89	He	104.569	ppb	1.7	45999.41	1000	
107	Ag	89	He	53.049	ppb	1.0	73102.87	100	
111	Cd	89	He	255.419	ppb	1.6	45884.24	1000	
118	Sn	159	He	515.368	ppb	0.2	186771.67	1000	
121	Sb	159	No Gas	100.640	ppb	1.3	300998.07	1000	
137	Ba	159	No Gas	1865.832	ppb	1.4	2056897.19	2000	
182	W	159	No Gas	101.804	ppb	1.6	230292.95	1000	
205	Tl	209	No Gas	111.387	ppb	2.5	461565.13	1000	
208	Pb	209	No Gas	102.932	ppb	2.8	636200.59	2000	
232	Th	209	No Gas	107.020	ppb	1.8	596354.48	1000	
238	U	209	No Gas	110.190	ppb	1.7	595774.62	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4277721.22	0.9	4285305.73	99.82	29.5	120.4	
Sc	45	No Gas	8731792.00	1.3	8716701.08	100.17	29.5	120.4	
Sc	45	H2	1022845.76	1.4	1073440.43	95.29	29.5	120.4	
Sc	45	He	273280.45	1.3	283880.71	96.27	29.5	120.4	
Ge	72	No Gas	1737892.86	1.7	1715165.05	101.33	29.5	120.4	
Ge	72	H2	328867.55	2.3	363056.55	90.58	29.5	120.4	
Ge	72	He	173423.93	0.6	177772.18	97.55	29.5	120.4	
Y	89	H2	5275214.20	2.1	5502376.66	95.87	29.5	120.4	
Y	89	He	1428493.73	1.2	1468553.09	97.27	29.5	120.4	
Tb	159	No Gas	15682211.71	0.4	15204271.44	103.14	29.5	120.4	
Tb	159	He	5707776.30	0.7	5847670.12	97.61	29.5	120.4	
Bi	209	No Gas	7133267.97	2.2	6985104.03	102.12	29.5	120.4	

Sample Report

Sample Name SO4723-001RS

File Name 028SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:06:12

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	51.064	ppb	3.3	49822.17	100	
11	B	6	No Gas	508.168	ppb	1.8	322656.44	1000	
23	Na	45	He	11401.500	ppb	1.2	838251.91	200000	
24	Mg	45	He	13887.743	ppb	0.7	601745.64	200000	
27	Al	45	He	2110.313	ppb	1.0	33460.10	200000	
28	Si	45	H2	3802.842	ppb	3.1	107821.70	10000	
39	K	45	He	12155.018	ppb	0.2	436200.38	200000	
40	Ca	45	H2	69564.907	ppb	2.0	17461900.44	200000	
51	V	89	He	529.828	ppb	0.2	300642.44	1000	
52	Cr	89	He	211.774	ppb	1.0	152578.19	2000	
55	Mn	89	He	527.437	ppb	0.6	169801.26	2000	
56	Fe	89	H2	1165.448	ppb	0.7	964539.07	100000	
59	Co	89	He	545.307	ppb	0.6	600552.34	1000	
60	Ni	89	He	539.603	ppb	0.1	162462.16	1000	
63	Cu	89	He	272.298	ppb	0.3	217379.70	2000	
66	Zn	89	He	532.800	ppb	0.5	61638.04	2000	
75	As	89	He	107.165	ppb	0.8	10073.41	1000	
78	Se	89	H2	103.109	ppb	0.7	4119.59	1000	
88	Sr	89	He	1034.826	ppb	1.2	400881.07	2000	
95	Mo	89	He	106.862	ppb	1.0	46935.89	1000	
107	Ag	89	He	54.782	ppb	1.1	75371.95	100	
111	Cd	89	He	263.078	ppb	0.6	47189.34	1000	
118	Sn	159	He	527.269	ppb	0.4	192945.78	1000	
121	Sb	159	No Gas	104.518	ppb	1.9	317207.53	1000	
137	Ba	159	No Gas	1916.785	ppb	1.8	2144207.65	2000	
182	W	159	No Gas	104.920	ppb	3.5	240792.22	1000	
205	Tl	209	No Gas	113.807	ppb	2.9	476402.89	1000	
208	Pb	209	No Gas	105.968	ppb	2.7	661665.64	2000	
232	Th	209	No Gas	115.028	ppb	3.3	647354.10	1000	
238	U	209	No Gas	114.872	ppb	4.1	627220.44	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4258388.71	1.7	4285305.73	99.37	29.5	120.4	
Sc	45	No Gas	8767938.99	2.2	8716701.08	100.59	29.5	120.4	
Sc	45	H2	1040170.92	2.7	1073440.43	96.9	29.5	120.4	
Sc	45	He	277060.23	0.9	283880.71	97.6	29.5	120.4	
Ge	72	No Gas	1761757.33	2.4	1715165.05	102.72	29.5	120.4	
Ge	72	H2	330705.47	2.2	363056.55	91.09	29.5	120.4	
Ge	72	He	175354.98	0.7	177772.18	98.64	29.5	120.4	
Y	89	H2	5360326.91	1.8	5502376.66	97.42	29.5	120.4	
Y	89	He	1426200.22	0.4	1468553.09	97.12	29.5	120.4	
Tb	159	No Gas	15914480.32	1.4	15204271.44	104.67	29.5	120.4	
Tb	159	He	5763548.73	0.7	5847670.12	98.56	29.5	120.4	
Bi	209	No Gas	7206983.45	2.2	6985104.03	103.18	29.5	120.4	

Sample Report

Sample Name SO4723-002

File Name 029SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:08:49

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.068	ppb	26.8	86.67	100	
11	B	6	No Gas	16.468	ppb	3.1	13711.37	1000	
23	Na	45	He	8806.865	ppb	0.6	656119.59	200000	
24	Mg	45	He	8680.169	ppb	1.3	378686.17	200000	
27	Al	45	He	12.981	ppb	0.3	274.46	200000	
28	Si	45	H2	2761.823	ppb	2.0	79774.07	10000	
39	K	45	He	1425.910	ppb	1.1	68373.51	200000	
40	Ca	45	H2	81952.274	ppb	1.9	20563307.75	200000	
51	V	89	He	0.760	ppb	13.6	766.72	1000	
52	Cr	89	He	1.731	ppb	6.3	1947.17	2000	
55	Mn	89	He	1.996	ppb	10.4	816.54	2000	
56	Fe	89	H2	18.998	ppb	5.3	26892.84	100000	
59	Co	89	He	0.291	ppb	42.5	413.38	1000	
60	Ni	89	He	0.187	ppb	110.7	597.81	1000	
63	Cu	89	He	3.493	ppb	6.8	3940.71	2000	
66	Zn	89	He	2.286	ppb	33.8	884.50	2000	
75	As	89	He	0.397	ppb	37.9	392.72	1000	
78	Se	89	H2	0.209	ppb	14.1	9.67	1000	
88	Sr	89	He	604.407	ppb	0.8	238075.60	2000	
95	Mo	89	He	0.290	ppb	32.9	198.90	1000	
107	Ag	89	He	0.036	ppb	31.9	75.56	100	
111	Cd	89	He	0.134	ppb	49.4	25.18	1000	
118	Sn	159	He	0.946	ppb	14.8	760.05	1000	
121	Sb	159	No Gas	0.156	ppb	21.5	610.70	1000	
137	Ba	159	No Gas	64.631	ppb	1.8	71344.66	2000	
182	W	159	No Gas	0.238	ppb	24.4	587.34	1000	
205	Tl	209	No Gas	0.031	ppb	136.0	657.42	1000	
208	Pb	209	No Gas	0.063	ppb	17.6	2369.43	2000	
232	Th	209	No Gas	2.067	ppb	3.8	11972.65	1000	
238	U	209	No Gas	0.261	ppb	13.3	1441.71	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4227266.18	1.9	4285305.73	98.65	29.5	120.4	
Sc	45	No Gas	8724565.92	0.6	8716701.08	100.09	29.5	120.4	
Sc	45	H2	1039811.36	2.5	1073440.43	96.87	29.5	120.4	
Sc	45	He	278903.15	1.2	283880.71	98.25	29.5	120.4	
Ge	72	No Gas	1753342.14	1.0	1715165.05	102.23	29.5	120.4	
Ge	72	H2	338406.13	1.3	363056.55	93.21	29.5	120.4	
Ge	72	He	175184.94	0.9	177772.18	98.54	29.5	120.4	
Y	89	H2	5364405.78	1.0	5502376.66	97.49	29.5	120.4	
Y	89	He	1450163.87	1.7	1468553.09	98.75	29.5	120.4	
Tb	159	No Gas	15682791.29	1.2	15204271.44	103.15	29.5	120.4	
Tb	159	He	5773628.59	1.4	5847670.12	98.73	29.5	120.4	
Bi	209	No Gas	7210486.07	1.8	6985104.03	103.23	29.5	120.4	

Sample Report

Sample Name	RINSE
File Name	030SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 10:11:23
Sample Type	Sample
Total Dilution	1.0000
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.001	ppb	157.6	24.44	100	
11	B	6	No Gas	0.411	ppb	8.4	4794.29	1000	
23	Na	45	He	-10.153	ppb	N/A	15231.73	200000	
24	Mg	45	He	0.789	ppb	40.2	446.71	200000	
27	Al	45	He	0.456	ppb	91.8	104.45	200000	
28	Si	45	H2	-1.472	ppb	N/A	5250.30	10000	
39	K	45	He	-0.731	ppb	N/A	19045.82	200000	
40	Ca	45	H2	4.956	ppb	21.0	10597.80	200000	
51	V	89	He	0.000	ppb	3331.9	333.35	1000	
52	Cr	89	He	0.024	ppb	82.3	781.24	2000	
55	Mn	89	He	-0.007	ppb	N/A	155.31	2000	
56	Fe	89	H2	0.389	ppb	8.5	13120.89	100000	
59	Co	89	He	0.008	ppb	71.2	133.34	1000	
60	Ni	89	He	-0.020	ppb	N/A	516.70	1000	
63	Cu	89	He	0.142	ppb	14.0	1712.39	2000	
66	Zn	89	He	-0.144	ppb	N/A	542.25	2000	
75	As	89	He	0.022	ppb	203.2	371.05	1000	
78	Se	89	H2	0.008	ppb	51.3	3.00	1000	
88	Sr	89	He	0.033	ppb	49.9	83.34	2000	
95	Mo	89	He	0.015	ppb	23.9	104.45	1000	
107	Ag	89	He	0.001	ppb	97.3	32.22	100	
111	Cd	89	He	0.004	ppb	108.8	4.45	1000	
118	Sn	159	He	0.037	ppb	20.1	490.03	1000	
121	Sb	159	No Gas	0.005	ppb	50.8	226.93	1000	
137	Ba	159	No Gas	0.025	ppb	34.0	246.94	2000	
182	W	159	No Gas	0.008	ppb	48.2	140.15	1000	
205	Tl	209	No Gas	-0.010	ppb	N/A	317.03	1000	
208	Pb	209	No Gas	-0.004	ppb	N/A	1875.49	2000	
232	Th	209	No Gas	0.036	ppb	11.6	1358.26	1000	
238	U	209	No Gas	0.002	ppb	61.5	80.09	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4292475.03	3.3	4285305.73	100.17	29.5	120.4	
Sc	45	No Gas	8884217.55	1.5	8716701.08	101.92	29.5	120.4	
Sc	45	H2	1047549.57	0.6	1073440.43	97.59	29.5	120.4	
Sc	45	He	279955.57	1.2	283880.71	98.62	29.5	120.4	
Ge	72	No Gas	1767669.25	2.5	1715165.05	103.06	29.5	120.4	
Ge	72	H2	345843.44	0.7	363056.55	95.26	29.5	120.4	
Ge	72	He	177836.03	1.4	177772.18	100.04	29.5	120.4	
Y	89	H2	5439976.09	1.1	5502376.66	98.87	29.5	120.4	
Y	89	He	1469669.67	1.5	1468553.09	100.08	29.5	120.4	
Tb	159	No Gas	15870934.07	1.7	15204271.44	104.38	29.5	120.4	
Tb	159	He	5878402.06	1.0	5847670.12	100.53	29.5	120.4	
Bi	209	No Gas	7335318.24	2.4	6985104.03	105.01	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name CCV

File Name 031_CCV.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:14:03

Sample Type CCV

Total Dilution 1.0000

Comment ---

ISTD Ref FileName 006CALB.d

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

Operator **admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	25.442	ppb	2.4	123111.40	25	101.77	89.8	110.2	
11	B	6	No Gas	25.086	ppb	3.0	81585.05	25	100.34	89.8	110.2	
23	Na	45	He	5360.084	ppb	0.4	1957741.98	5000	107.2	89.8	110.2	
24	Mg	45	He	5256.884	ppb	1.4	1145878.04	5000	105.14	89.8	110.2	
27	Al	45	He	499.689	ppb	1.8	39854.36	500	99.94	89.8	110.2	
28	Si	45	H2	484.320	ppb	1.7	70575.51	500	96.86	89.8	110.2	
39	K	45	He	5166.726	ppb	0.3	911514.53	5000	103.33	89.8	110.2	
40	Ca	45	H2	5169.273	ppb	2.0	6484752.82	5000	103.39	89.8	110.2	
51	V	89	He	25.720	ppb	1.7	74326.95	25	102.88	89.8	110.2	
52	Cr	89	He	25.597	ppb	0.5	93884.42	25	102.39	89.8	110.2	
55	Mn	89	He	25.526	ppb	2.2	41833.62	25	102.1	89.8	110.2	
56	Fe	89	H2	5046.414	ppb	2.9	20948460.01	5000	100.93	89.8	110.2	
59	Co	89	He	26.155	ppb	1.4	146273.54	25	104.62	89.8	110.2	
60	Ni	89	He	26.077	ppb	1.9	40262.29	25	104.31	89.8	110.2	
63	Cu	89	He	26.537	ppb	1.3	108105.53	25	106.15	89.8	110.2	
66	Zn	89	He	25.798	ppb	1.8	15617.00	25	103.19	89.8	110.2	
75	As	89	He	25.586	ppb	0.4	12139.29	25	102.34	89.8	110.2	
78	Se	89	H2	25.069	ppb	2.5	5081.20	25	100.28	89.8	110.2	
88	Sr	89	He	25.141	ppb	0.8	49452.35	25	100.56	89.8	110.2	
95	Mo	89	He	25.745	ppb	1.7	57382.61	25	102.98	89.8	110.2	
107	Ag	89	He	26.412	ppb	1.0	184429.36	25	105.65	89.8	110.2	
111	Cd	89	He	25.876	ppb	1.7	23560.23	25	103.5	89.8	110.2	
118	Sn	159	He	25.431	ppb	1.5	47046.47	25	101.72	89.8	110.2	
121	Sb	159	No Gas	24.964	ppb	0.2	378433.60	25	99.86	89.8	110.2	
137	Ba	159	No Gas	25.123	ppb	0.7	140482.55	25	100.49	89.8	110.2	
182	W	159	No Gas	24.896	ppb	3.0	285470.36	25	99.58	89.8	110.2	
205	Tl	209	No Gas	27.040	ppb	1.2	571591.07	25	108.16	89.8	110.2	
208	Pb	209	No Gas	25.340	ppb	1.1	798725.81	25	101.36	89.8	110.2	
232	Th	209	No Gas	27.189	ppb	1.4	772786.13	25	108.76	89.8	110.2	
238	U	209	No Gas	27.480	ppb	1.9	757923.38	25	109.92	89.8	110.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4224939.95	2.3	4285305.73	98.59	29.5	120.4	
Sc	45	No Gas	8800471.83	1.2	8716701.08	100.96	29.5	120.4	
Sc	45	H2	1038978.92	1.6	1073440.43	96.79	29.5	120.4	
Sc	45	He	278838.78	1.3	283880.71	98.22	29.5	120.4	
Ge	72	No Gas	1748054.60	2.5	1715165.05	101.92	29.5	120.4	
Ge	72	H2	339438.30	2.2	363056.55	93.49	29.5	120.4	
Ge	72	He	175814.75	0.6	177772.18	98.9	29.5	120.4	
Y	89	H2	5439639.92	1.6	5502376.66	98.86	29.5	120.4	
Y	89	He	1447922.01	0.6	1468553.09	98.6	29.5	120.4	
Tb	159	No Gas	15897849.62	0.1	15204271.44	104.56	29.5	120.4	
Tb	159	He	5788997.69	0.9	5847670.12	99	29.5	120.4	
Bi	209	No Gas	7277377.59	1.1	6985104.03	104.18	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	032_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 10:16:36
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.025	ppb	28.6	144.45	0.2	
11	B	6	No Gas	0.392	ppb	3.9	4764.28	4	
23	Na	45	He	-7.720	ppb	N/A	16247.33	200	
24	Mg	45	He	1.749	ppb	9.0	662.28	20	
27	Al	45	He	0.432	ppb	49.1	103.34	20	
28	Si	45	H2	0.185	ppb	940.3	5457.35	100	
39	K	45	He	1.046	ppb	180.9	19511.20	200	
40	Ca	45	H2	2.369	ppb	37.0	7288.82	20	
51	V	89	He	-0.031	ppb	N/A	240.01	1	
52	Cr	89	He	0.035	ppb	124.9	815.34	1	
55	Mn	89	He	-0.005	ppb	N/A	155.98	0.4	
56	Fe	89	H2	2.744	ppb	26.8	22921.84	20	
59	Co	89	He	0.018	ppb	3.2	186.68	0.2	
60	Ni	89	He	0.021	ppb	183.7	574.48	0.4	
63	Cu	89	He	0.117	ppb	7.5	1596.82	0.6	
66	Zn	89	He	-0.047	ppb	N/A	593.37	2	
75	As	89	He	0.053	ppb	49.3	381.72	1	
78	Se	89	H2	0.023	ppb	42.2	6.00	1	
88	Sr	89	He	0.006	ppb	119.1	27.78	1	
95	Mo	89	He	0.069	ppb	8.5	223.34	1	
107	Ag	89	He	0.009	ppb	59.3	90.01	0.2	
111	Cd	89	He	0.009	ppb	62.6	9.26	0.2	
118	Sn	159	He	0.066	ppb	3.9	542.25	1	
121	Sb	159	No Gas	0.031	ppb	16.1	624.05	0.2	
137	Ba	159	No Gas	0.026	ppb	12.3	253.62	0.4	
182	W	159	No Gas	0.069	ppb	14.8	844.31	1	
205	Tl	209	No Gas	0.013	ppb	87.4	807.60	0.2	
208	Pb	209	No Gas	0.017	ppb	66.9	2516.27	0.2	
232	Th	209	No Gas	0.226	ppb	4.7	6762.84	1	
238	U	209	No Gas	0.028	ppb	26.8	800.93	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4320726.25	2.9	4285305.73	100.83	29.5	120.4	
Sc	45	No Gas	8765463.80	1.7	8716701.08	100.56	29.5	120.4	
Sc	45	H2	1043664.04	1.7	1073440.43	97.23	29.5	120.4	
Sc	45	He	282233.38	1.6	283880.71	99.42	29.5	120.4	
Ge	72	No Gas	1727323.62	1.9	1715165.05	100.71	29.5	120.4	
Ge	72	H2	346413.07	1.1	363056.55	95.42	29.5	120.4	
Ge	72	He	177317.53	0.9	177772.18	99.74	29.5	120.4	
Y	89	H2	5455275.24	1.8	5502376.66	99.14	29.5	120.4	
Y	89	He	1454438.17	1.7	1468553.09	99.04	29.5	120.4	
Tb	159	No Gas	15974398.24	1.5	15204271.44	105.07	29.5	120.4	
Tb	159	He	5865698.25	1.3	5847670.12	100.31	29.5	120.4	
Bi	209	No Gas	7278034.03	0.9	6985104.03	104.19	29.5	120.4	

Sample Report

Sample Name SO4723-003

File Name 033SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:19:16

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.020	ppb	33.6	40.00	100	
11	B	6	No Gas	9.747	ppb	1.4	9551.25	1000	
23	Na	45	He	8120.649	ppb	0.6	601947.81	200000	
24	Mg	45	He	7375.307	ppb	0.7	319441.37	200000	
27	Al	45	He	17.608	ppb	5.2	345.57	200000	
28	Si	45	H2	3100.186	ppb	2.1	87481.41	10000	
39	K	45	He	923.294	ppb	1.1	50626.18	200000	
40	Ca	45	H2	75001.387	ppb	1.2	18524681.95	200000	
51	V	89	He	0.378	ppb	4.2	538.92	1000	
52	Cr	89	He	0.800	ppb	40.8	1254.88	2000	
55	Mn	89	He	0.839	ppb	11.8	432.60	2000	
56	Fe	89	H2	34.182	ppb	2.4	38883.82	100000	
59	Co	89	He	0.076	ppb	61.1	171.12	1000	
60	Ni	89	He	0.248	ppb	13.4	608.92	1000	
63	Cu	89	He	3.818	ppb	3.9	4148.55	2000	
66	Zn	89	He	1.208	ppb	12.2	750.05	2000	
75	As	89	He	0.163	ppb	320.6	366.38	1000	
78	Se	89	H2	0.136	ppb	35.5	6.67	1000	
88	Sr	89	He	521.074	ppb	0.3	202715.29	2000	
95	Mo	89	He	0.178	ppb	25.6	146.67	1000	
107	Ag	89	He	0.010	ppb	69.2	38.89	100	
111	Cd	89	He	0.023	ppb	64.1	4.81	1000	
118	Sn	159	He	0.497	ppb	16.0	598.92	1000	
121	Sb	159	No Gas	0.046	ppb	24.7	280.31	1000	
137	Ba	159	No Gas	36.915	ppb	2.2	40764.90	2000	
182	W	159	No Gas	0.118	ppb	14.6	313.69	1000	
205	Tl	209	No Gas	-0.036	ppb	N/A	380.43	1000	
208	Pb	209	No Gas	0.013	ppb	121.1	2065.72	2000	
232	Th	209	No Gas	0.689	ppb	11.7	4232.14	1000	
238	U	209	No Gas	0.214	ppb	7.8	1191.40	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4242324.47	0.7	4285305.73	99	29.5	120.4	
Sc	45	No Gas	8694763.21	0.7	8716701.08	99.75	29.5	120.4	
Sc	45	H2	1023285.38	1.6	1073440.43	95.33	29.5	120.4	
Sc	45	He	276826.55	0.4	283880.71	97.52	29.5	120.4	
Ge	72	No Gas	1739947.91	1.0	1715165.05	101.44	29.5	120.4	
Ge	72	H2	326798.65	1.8	363056.55	90.01	29.5	120.4	
Ge	72	He	175202.21	0.7	177772.18	98.55	29.5	120.4	
Y	89	H2	5305007.89	1.0	5502376.66	96.41	29.5	120.4	
Y	89	He	1432192.96	1.3	1468553.09	97.52	29.5	120.4	
Tb	159	No Gas	15671762.82	1.4	15204271.44	103.07	29.5	120.4	
Tb	159	He	5803106.93	0.9	5847670.12	99.24	29.5	120.4	
Bi	209	No Gas	7253198.98	1.3	6985104.03	103.84	29.5	120.4	

Sample Report

Sample Name SO4723-004

File Name 034SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:21:48

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.035	ppb	84.8	55.56	100	
11	B	6	No Gas	12.115	ppb	1.0	11193.59	1000	
23	Na	45	He	11335.919	ppb	0.1	830526.15	200000	
24	Mg	45	He	8616.915	ppb	0.6	372114.46	200000	
27	Al	45	He	37.345	ppb	6.4	655.59	200000	
28	Si	45	H2	2897.621	ppb	1.1	83570.68	10000	
39	K	45	He	1676.095	ppb	0.5	76231.03	200000	
40	Ca	45	H2	94179.217	ppb	1.0	23669973.54	200000	
51	V	89	He	0.465	ppb	3.3	594.48	1000	
52	Cr	89	He	0.681	ppb	16.5	1179.84	2000	
55	Mn	89	He	1.526	ppb	3.5	661.23	2000	
56	Fe	89	H2	46.560	ppb	3.9	50139.42	100000	
59	Co	89	He	0.075	ppb	43.2	171.13	1000	
60	Ni	89	He	0.082	ppb	38.2	564.48	1000	
63	Cu	89	He	3.566	ppb	2.9	3988.48	2000	
66	Zn	89	He	1.079	ppb	31.9	742.27	2000	
75	As	89	He	0.476	ppb	78.7	398.72	1000	
78	Se	89	H2	0.120	ppb	35.0	6.17	1000	
88	Sr	89	He	675.219	ppb	0.6	265247.42	2000	
95	Mo	89	He	0.120	ppb	20.8	122.23	1000	
107	Ag	89	He	0.014	ppb	7.0	44.45	100	
111	Cd	89	He	0.012	ppb	57.8	2.96	1000	
118	Sn	159	He	0.343	ppb	5.3	543.37	1000	
121	Sb	159	No Gas	0.073	ppb	32.4	367.08	1000	
137	Ba	159	No Gas	62.216	ppb	0.4	69693.98	2000	
182	W	159	No Gas	0.091	ppb	10.8	256.96	1000	
205	Tl	209	No Gas	-0.025	ppb	N/A	417.15	1000	
208	Pb	209	No Gas	0.080	ppb	43.3	2459.51	2000	
232	Th	209	No Gas	0.326	ppb	5.8	2149.27	1000	
238	U	209	No Gas	0.206	ppb	12.3	1134.67	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4303692.92	0.9	4285305.73	100.43	29.5	120.4	
Sc	45	No Gas	8814889.27	1.4	8716701.08	101.13	29.5	120.4	
Sc	45	H2	1041333.37	1.4	1073440.43	97.01	29.5	120.4	
Sc	45	He	276048.35	0.7	283880.71	97.24	29.5	120.4	
Ge	72	No Gas	1768541.06	2.3	1715165.05	103.11	29.5	120.4	
Ge	72	H2	335393.21	0.9	363056.55	92.38	29.5	120.4	
Ge	72	He	174639.37	0.3	177772.18	98.24	29.5	120.4	
Y	89	H2	5440760.62	1.9	5502376.66	98.88	29.5	120.4	
Y	89	He	1446298.16	1.4	1468553.09	98.48	29.5	120.4	
Tb	159	No Gas	15911546.57	1.4	15204271.44	104.65	29.5	120.4	
Tb	159	He	5815536.03	0.2	5847670.12	99.45	29.5	120.4	
Bi	209	No Gas	7169555.40	0.8	6985104.03	102.64	29.5	120.4	

Sample Report

Sample Name SO4723-005

File Name 035SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:24:24

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.008	ppb	63.3	28.89	100	
11	B	6	No Gas	14.894	ppb	4.2	12946.24	1000	
23	Na	45	He	8427.481	ppb	1.1	621161.71	200000	
24	Mg	45	He	10686.123	ppb	1.1	460618.45	200000	
27	Al	45	He	18.125	ppb	16.2	352.24	200000	
28	Si	45	H2	3718.305	ppb	1.1	106554.50	10000	
39	K	45	He	730.072	ppb	0.6	43802.03	200000	
40	Ca	45	H2	105161.534	ppb	0.9	26644229.61	200000	
51	V	89	He	0.445	ppb	19.1	578.92	1000	
52	Cr	89	He	0.361	ppb	30.8	939.87	2000	
55	Mn	89	He	622.046	ppb	1.2	201666.91	2000	
56	Fe	89	H2	1070.051	ppb	2.6	892553.95	100000	
59	Co	89	He	1.384	ppb	3.8	1622.43	1000	
60	Ni	89	He	0.649	ppb	45.2	731.16	1000	
63	Cu	89	He	6.257	ppb	2.0	6112.68	2000	
66	Zn	89	He	6.476	ppb	3.6	1360.12	2000	
75	As	89	He	0.856	ppb	32.8	431.05	1000	
78	Se	89	H2	0.063	ppb	50.4	3.83	1000	
88	Sr	89	He	730.790	ppb	1.3	285176.07	2000	
95	Mo	89	He	0.152	ppb	18.4	135.56	1000	
107	Ag	89	He	0.009	ppb	15.8	37.78	100	
111	Cd	89	He	0.838	ppb	7.2	152.22	1000	
118	Sn	159	He	0.412	ppb	22.5	564.48	1000	
121	Sb	159	No Gas	0.049	ppb	29.8	290.33	1000	
137	Ba	159	No Gas	74.143	ppb	2.0	81600.34	2000	
182	W	159	No Gas	0.053	ppb	41.3	166.86	1000	
205	Tl	209	No Gas	-0.079	ppb	N/A	196.89	1000	
208	Pb	209	No Gas	-0.003	ppb	N/A	1975.62	2000	
232	Th	209	No Gas	0.220	ppb	3.4	1578.53	1000	
238	U	209	No Gas	0.204	ppb	16.9	1144.68	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4300526.63	0.8	4285305.73	100.36	29.5	120.4	
Sc	45	No Gas	8760472.87	0.9	8716701.08	100.5	29.5	120.4	
Sc	45	H2	1049622.85	1.0	1073440.43	97.78	29.5	120.4	
Sc	45	He	275582.51	0.5	283880.71	97.08	29.5	120.4	
Ge	72	No Gas	1748430.09	0.5	1715165.05	101.94	29.5	120.4	
Ge	72	H2	331916.02	0.7	363056.55	91.42	29.5	120.4	
Ge	72	He	173189.76	0.1	177772.18	97.42	29.5	120.4	
Y	89	H2	5398286.69	1.6	5502376.66	98.11	29.5	120.4	
Y	89	He	1436589.74	1.3	1468553.09	97.82	29.5	120.4	
Tb	159	No Gas	15638651.43	0.9	15204271.44	102.86	29.5	120.4	
Tb	159	He	5771343.39	0.5	5847670.12	98.69	29.5	120.4	
Bi	209	No Gas	7280432.16	0.3	6985104.03	104.23	29.5	120.4	

Sample Report

Sample Name SO4723-006

File Name 036SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:26:57

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	-0.001	ppb	N/A	20.00	100	
11	B	6	No Gas	10.539	ppb	3.2	10242.91	1000	
23	Na	45	He	9408.285	ppb	2.8	683950.37	200000	
24	Mg	45	He	9376.778	ppb	1.6	399841.48	200000	
27	Al	45	He	12.369	ppb	18.3	258.90	200000	
28	Si	45	H2	2824.744	ppb	1.5	80965.97	10000	
39	K	45	He	1573.634	ppb	1.1	71817.09	200000	
40	Ca	45	H2	86318.742	ppb	0.6	21524172.32	200000	
51	V	89	He	0.576	ppb	12.8	652.26	1000	
52	Cr	89	He	1.384	ppb	5.1	1675.80	2000	
55	Mn	89	He	0.352	ppb	4.7	275.95	2000	
56	Fe	89	H2	10.804	ppb	10.4	20298.63	100000	
59	Co	89	He	0.053	ppb	75.4	144.46	1000	
60	Ni	89	He	-0.008	ppb	N/A	532.25	1000	
63	Cu	89	He	3.835	ppb	3.7	4168.55	2000	
66	Zn	89	He	0.716	ppb	31.6	694.49	2000	
75	As	89	He	0.294	ppb	70.3	379.05	1000	
78	Se	89	H2	0.125	ppb	23.7	6.33	1000	
88	Sr	89	He	644.820	ppb	1.9	251219.10	2000	
95	Mo	89	He	0.144	ppb	27.6	132.23	1000	
107	Ag	89	He	0.011	ppb	51.0	40.00	100	
111	Cd	89	He	0.014	ppb	39.3	3.33	1000	
118	Sn	159	He	0.326	ppb	41.3	534.49	1000	
121	Sb	159	No Gas	0.032	ppb	36.1	243.61	1000	
137	Ba	159	No Gas	54.997	ppb	1.9	61511.17	2000	
182	W	159	No Gas	0.037	ppb	36.9	133.48	1000	
205	Tl	209	No Gas	-0.074	ppb	N/A	220.25	1000	
208	Pb	209	No Gas	-0.056	ppb	N/A	1645.22	2000	
232	Th	209	No Gas	0.128	ppb	15.5	1061.24	1000	
238	U	209	No Gas	0.186	ppb	6.5	1051.22	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4325880.52	1.6	4285305.73	100.95	29.5	120.4	
Sc	45	No Gas	8772022.23	0.9	8716701.08	100.63	29.5	120.4	
Sc	45	H2	1033104.26	1.5	1073440.43	96.24	29.5	120.4	
Sc	45	He	272619.46	1.5	283880.71	96.03	29.5	120.4	
Ge	72	No Gas	1757909.21	1.7	1715165.05	102.49	29.5	120.4	
Ge	72	H2	330935.07	1.5	363056.55	91.15	29.5	120.4	
Ge	72	He	173305.20	2.5	177772.18	97.49	29.5	120.4	
Y	89	H2	5394014.08	1.2	5502376.66	98.03	29.5	120.4	
Y	89	He	1434715.17	2.8	1468553.09	97.7	29.5	120.4	
Tb	159	No Gas	15886396.29	1.5	15204271.44	104.49	29.5	120.4	
Tb	159	He	5791308.59	2.0	5847670.12	99.04	29.5	120.4	
Bi	209	No Gas	7329430.95	3.0	6985104.03	104.93	29.5	120.4	

Sample Report

Sample Name SO4723-008

File Name 037SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:29:36

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.005	ppb	228.5	25.55	100	
11	B	6	No Gas	0.355	ppb	39.4	3682.82	1000	
23	Na	45	He	169.274	ppb	25.6	30785.29	200000	
24	Mg	45	He	34.459	ppb	128.0	1762.99	200000	
27	Al	45	He	12.997	ppb	63.1	272.24	200000	
28	Si	45	H2	-10.721	ppb	N/A	5113.26	10000	
39	K	45	He	43.588	ppb	17.0	20397.15	200000	
40	Ca	45	H2	126.737	ppb	5.1	36026.93	200000	
51	V	89	He	0.524	ppb	13.2	624.48	1000	
52	Cr	89	He	0.700	ppb	6.7	1184.66	2000	
55	Mn	89	He	0.637	ppb	107.7	369.95	2000	
56	Fe	89	H2	11.844	ppb	8.1	21072.73	100000	
59	Co	89	He	0.133	ppb	121.1	235.59	1000	
60	Ni	89	He	0.256	ppb	49.6	613.37	1000	
63	Cu	89	He	5.014	ppb	6.0	5118.92	2000	
66	Zn	89	He	0.821	ppb	17.4	707.82	2000	
75	As	89	He	0.060	ppb	229.6	358.38	1000	
78	Se	89	H2	0.046	ppb	29.7	3.17	1000	
88	Sr	89	He	1.791	ppb	139.4	721.28	2000	
95	Mo	89	He	0.163	ppb	83.5	141.12	1000	
107	Ag	89	He	0.032	ppb	66.3	70.01	100	
111	Cd	89	He	0.053	ppb	135.9	10.37	1000	
118	Sn	159	He	0.257	ppb	51.5	512.25	1000	
121	Sb	159	No Gas	0.017	ppb	71.5	196.89	1000	
137	Ba	159	No Gas	0.176	ppb	30.5	300.35	2000	
182	W	159	No Gas	0.045	ppb	43.8	150.17	1000	
205	Tl	209	No Gas	-0.079	ppb	N/A	196.89	1000	
208	Pb	209	No Gas	-0.051	ppb	N/A	1668.58	2000	
232	Th	209	No Gas	0.119	ppb	17.3	997.83	1000	
238	U	209	No Gas	0.006	ppb	30.7	50.06	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4254906.06	2.0	4285305.73	99.29	29.5	120.4	
Sc	45	No Gas	8628071.20	0.6	8716701.08	98.98	29.5	120.4	
Sc	45	H2	1037982.28	1.5	1073440.43	96.7	29.5	120.4	
Sc	45	He	276015.49	1.0	283880.71	97.23	29.5	120.4	
Ge	72	No Gas	1718837.07	1.9	1715165.05	100.21	29.5	120.4	
Ge	72	H2	328787.80	1.9	363056.55	90.56	29.5	120.4	
Ge	72	He	173272.22	1.5	177772.18	97.47	29.5	120.4	
Y	89	H2	5373463.90	1.9	5502376.66	97.66	29.5	120.4	
Y	89	He	1436348.14	1.2	1468553.09	97.81	29.5	120.4	
Tb	159	No Gas	15795274.90	1.0	15204271.44	103.89	29.5	120.4	
Tb	159	He	5817897.97	1.4	5847670.12	99.49	29.5	120.4	
Bi	209	No Gas	7241514.38	1.9	6985104.03	103.67	29.5	120.4	

Sample Report

Sample Name	RINSE
File Name	038SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 10:32:11
Sample Type	Sample
Total Dilution	1.0000
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	-0.001	ppb	N/A	16.67	100	
11	B	6	No Gas	0.027	ppb	132.8	3620.58	1000	
23	Na	45	He	-10.080	ppb	N/A	14907.73	200000	
24	Mg	45	He	0.193	ppb	77.0	308.91	200000	
27	Al	45	He	0.360	ppb	15.1	94.45	200000	
28	Si	45	H2	0.501	ppb	245.8	5508.71	10000	
39	K	45	He	4.007	ppb	57.8	19411.16	200000	
40	Ca	45	H2	1.242	ppb	129.3	5894.22	200000	
51	V	89	He	-0.006	ppb	N/A	311.13	1000	
52	Cr	89	He	0.035	ppb	199.2	808.17	2000	
55	Mn	89	He	-0.015	ppb	N/A	139.31	2000	
56	Fe	89	H2	0.026	ppb	104.4	11671.33	100000	
59	Co	89	He	0.001	ppb	329.3	95.56	1000	
60	Ni	89	He	0.013	ppb	106.8	560.03	1000	
63	Cu	89	He	0.138	ppb	8.8	1675.72	2000	
66	Zn	89	He	-0.193	ppb	N/A	506.70	2000	
75	As	89	He	0.038	ppb	196.9	373.71	1000	
78	Se	89	H2	0.005	ppb	75.1	2.33	1000	
88	Sr	89	He	0.005	ppb	98.5	26.67	2000	
95	Mo	89	He	0.011	ppb	104.6	94.45	1000	
107	Ag	89	He	0.001	ppb	178.6	31.11	100	
111	Cd	89	He	0.002	ppb	129.3	2.22	1000	
118	Sn	159	He	0.026	ppb	134.7	470.03	1000	
121	Sb	159	No Gas	-0.002	ppb	N/A	120.13	1000	
137	Ba	159	No Gas	0.000	ppb	5840.2	106.79	2000	
182	W	159	No Gas	0.006	ppb	20.3	116.80	1000	
205	Tl	209	No Gas	-0.017	ppb	N/A	186.88	1000	
208	Pb	209	No Gas	-0.005	ppb	N/A	1882.16	2000	
232	Th	209	No Gas	0.003	ppb	53.7	437.16	1000	
238	U	209	No Gas	0.001	ppb	39.4	56.73	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4344964.60	3.1	4285305.73	101.39	29.5	120.4	
Sc	45	No Gas	8663321.77	2.1	8716701.08	99.39	29.5	120.4	
Sc	45	H2	1045645.78	1.1	1073440.43	97.41	29.5	120.4	
Sc	45	He	273504.49	0.6	283880.71	96.34	29.5	120.4	
Ge	72	No Gas	1729161.80	2.7	1715165.05	100.82	29.5	120.4	
Ge	72	H2	342971.18	1.7	363056.55	94.47	29.5	120.4	
Ge	72	He	174210.03	0.3	177772.18	98	29.5	120.4	
Y	89	H2	5467616.28	1.2	5502376.66	99.37	29.5	120.4	
Y	89	He	1449727.23	2.2	1468553.09	98.72	29.5	120.4	
Tb	159	No Gas	16013841.71	2.4	15204271.44	105.32	29.5	120.4	
Tb	159	He	5889826.72	0.6	5847670.12	100.72	29.5	120.4	
Bi	209	No Gas	7457863.17	2.6	6985104.03	106.77	29.5	120.4	

Sample Report

Sample Name SO4724-001R

File Name 039SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:34:50

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.009	ppb	175.7	30.00	100	
11	B	6	No Gas	0.714	ppb	20.9	3941.79	1000	
23	Na	45	He	19017.471	ppb	0.8	1358849.95	200000	
24	Mg	45	He	6962.160	ppb	0.9	295955.24	200000	
27	Al	45	He	44.157	ppb	5.4	751.16	200000	
28	Si	45	H2	2559.578	ppb	2.3	72323.66	10000	
39	K	45	He	1233.252	ppb	1.1	60118.43	200000	
40	Ca	45	H2	85619.156	ppb	2.6	20902726.77	200000	
51	V	89	He	1.564	ppb	6.4	1204.54	1000	
52	Cr	89	He	0.355	ppb	32.3	923.89	2000	
55	Mn	89	He	0.767	ppb	6.6	405.94	2000	
56	Fe	89	H2	11.525	ppb	3.2	20417.87	100000	
59	Co	89	He	0.199	ppb	9.4	304.47	1000	
60	Ni	89	He	3.991	ppb	4.5	1721.28	1000	
63	Cu	89	He	13.671	ppb	2.1	11906.60	2000	
66	Zn	89	He	35.348	ppb	2.4	4635.39	2000	
75	As	89	He	0.865	ppb	12.9	426.72	1000	
78	Se	89	H2	0.145	ppb	29.6	7.00	1000	
88	Sr	89	He	554.487	ppb	0.8	213819.65	2000	
95	Mo	89	He	0.123	ppb	53.4	121.11	1000	
107	Ag	89	He	0.018	ppb	49.6	48.89	100	
111	Cd	89	He	0.025	ppb	63.9	5.19	1000	
118	Sn	159	He	0.644	ppb	27.7	651.17	1000	
121	Sb	159	No Gas	0.050	ppb	32.8	297.00	1000	
137	Ba	159	No Gas	35.899	ppb	3.5	40055.18	2000	
182	W	159	No Gas	0.040	ppb	30.4	140.16	1000	
205	Tl	209	No Gas	-0.066	ppb	N/A	256.96	1000	
208	Pb	209	No Gas	0.701	ppb	2.8	6451.25	2000	
232	Th	209	No Gas	0.090	ppb	27.7	847.66	1000	
238	U	209	No Gas	0.702	ppb	2.8	3921.68	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4291575.23	2.3	4285305.73	100.15	29.5	120.4	
Sc	45	No Gas	8536218.84	2.2	8716701.08	97.93	29.5	120.4	
Sc	45	H2	1011704.32	1.7	1073440.43	94.25	29.5	120.4	
Sc	45	He	271689.39	0.7	283880.71	95.71	29.5	120.4	
Ge	72	No Gas	1702978.84	1.7	1715165.05	99.29	29.5	120.4	
Ge	72	H2	318827.68	1.7	363056.55	87.82	29.5	120.4	
Ge	72	He	171329.39	1.2	177772.18	96.38	29.5	120.4	
Y	89	H2	5272251.81	1.9	5502376.66	95.82	29.5	120.4	
Y	89	He	1419764.30	1.7	1468553.09	96.68	29.5	120.4	
Tb	159	No Gas	15841424.07	2.9	15204271.44	104.19	29.5	120.4	
Tb	159	He	5786629.50	0.7	5847670.12	98.96	29.5	120.4	
Bi	209	No Gas	7340108.39	2.2	6985104.03	105.08	29.5	120.4	

Sample Report

Sample Name SO4724-002R

File Name 040SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:37:24

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	-0.004	ppb	N/A	16.66	100	
11	B	6	No Gas	10.289	ppb	3.1	9996.01	1000	
23	Na	45	He	19009.848	ppb	1.0	1360586.28	200000	
24	Mg	45	He	7005.803	ppb	1.1	298305.43	200000	
27	Al	45	He	8.839	ppb	21.4	203.35	200000	
28	Si	45	H2	2514.343	ppb	1.9	70931.56	10000	
39	K	45	He	1299.365	ppb	2.1	62449.10	200000	
40	Ca	45	H2	87728.078	ppb	0.8	21355003.99	200000	
51	V	89	He	0.472	ppb	17.5	580.04	1000	
52	Cr	89	He	0.806	ppb	22.6	1231.33	2000	
55	Mn	89	He	1.268	ppb	14.6	559.24	2000	
56	Fe	89	H2	34.454	ppb	1.9	38686.75	100000	
59	Co	89	He	0.037	ppb	26.4	124.45	1000	
60	Ni	89	He	0.397	ppb	39.4	640.04	1000	
63	Cu	89	He	7.838	ppb	2.2	7198.77	2000	
66	Zn	89	He	6.008	ppb	0.7	1274.56	2000	
75	As	89	He	0.461	ppb	24.6	385.38	1000	
78	Se	89	H2	0.104	ppb	7.3	5.33	1000	
88	Sr	89	He	566.495	ppb	1.0	215693.13	2000	
95	Mo	89	He	0.141	ppb	37.1	127.79	1000	
107	Ag	89	He	0.007	ppb	169.2	34.45	100	
111	Cd	89	He	0.007	ppb	149.0	1.85	1000	
118	Sn	159	He	0.401	ppb	27.6	561.15	1000	
121	Sb	159	No Gas	0.017	ppb	51.2	196.89	1000	
137	Ba	159	No Gas	47.243	ppb	3.1	52840.75	2000	
182	W	159	No Gas	0.044	ppb	52.0	150.17	1000	
205	Tl	209	No Gas	-0.079	ppb	N/A	196.89	1000	
208	Pb	209	No Gas	0.321	ppb	10.9	4001.41	2000	
232	Th	209	No Gas	0.070	ppb	16.3	727.52	1000	
238	U	209	No Gas	0.187	ppb	11.4	1047.89	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4288195.49	1.9	4285305.73	100.07	29.5	120.4	
Sc	45	No Gas	8575532.94	1.8	8716701.08	98.38	29.5	120.4	
Sc	45	H2	1008481.74	0.4	1073440.43	93.95	29.5	120.4	
Sc	45	He	272149.79	0.7	283880.71	95.87	29.5	120.4	
Ge	72	No Gas	1721590.73	1.5	1715165.05	100.37	29.5	120.4	
Ge	72	H2	321233.64	1.5	363056.55	88.48	29.5	120.4	
Ge	72	He	169636.78	0.6	177772.18	95.42	29.5	120.4	
Y	89	H2	5247667.43	1.0	5502376.66	95.37	29.5	120.4	
Y	89	He	1401760.85	0.8	1468553.09	95.45	29.5	120.4	
Tb	159	No Gas	15885725.18	2.5	15204271.44	104.48	29.5	120.4	
Tb	159	He	5782036.51	0.4	5847670.12	98.88	29.5	120.4	
Bi	209	No Gas	7267380.61	2.6	6985104.03	104.04	29.5	120.4	

Sample Report

Sample Name SO4724-002RA

File Name 041SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:40:02

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	9.831	ppb	3.7	9560.12	100	
11	B	6	No Gas	203.531	ppb	3.7	130609.96	1000	
23	Na	45	He	29812.757	ppb	0.9	2084654.92	200000	
24	Mg	45	He	8084.725	ppb	0.6	337946.47	200000	
27	Al	45	He	1021.198	ppb	2.2	15646.82	200000	
28	Si	45	H2	7222.893	ppb	1.5	194053.33	10000	
39	K	45	He	12486.056	ppb	0.8	431609.35	200000	
40	Ca	45	H2	88068.187	ppb	1.0	21452039.82	200000	
51	V	89	He	52.300	ppb	1.3	29182.18	1000	
52	Cr	89	He	52.994	ppb	1.9	37664.54	2000	
55	Mn	89	He	21.274	ppb	1.3	6819.75	2000	
56	Fe	89	H2	1048.042	ppb	1.3	860881.76	100000	
59	Co	89	He	10.376	ppb	4.3	11205.29	1000	
60	Ni	89	He	21.142	ppb	1.6	6695.18	1000	
63	Cu	89	He	40.679	ppb	0.7	32533.28	2000	
66	Zn	89	He	108.985	ppb	1.5	12748.49	2000	
75	As	89	He	51.743	ppb	1.5	4912.41	1000	
78	Se	89	H2	48.836	ppb	2.5	1934.88	1000	
88	Sr	89	He	610.082	ppb	0.5	230125.03	2000	
95	Mo	89	He	53.531	ppb	0.6	22927.70	1000	
107	Ag	89	He	8.773	ppb	2.8	11772.17	100	
111	Cd	89	He	10.394	ppb	1.9	1816.07	1000	
118	Sn	159	He	51.662	ppb	0.9	19120.84	1000	
121	Sb	159	No Gas	9.803	ppb	3.3	29522.11	1000	
137	Ba	159	No Gas	66.398	ppb	0.5	73502.12	2000	
182	W	159	No Gas	51.715	ppb	1.4	117334.66	1000	
205	Tl	209	No Gas	10.814	ppb	2.2	46239.12	1000	
208	Pb	209	No Gas	10.474	ppb	0.9	67911.13	2000	
232	Th	209	No Gas	10.513	ppb	2.5	60098.75	1000	
238	U	209	No Gas	11.164	ppb	4.9	61605.17	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4238049.41	3.1	4285305.73	98.9	29.5	120.4	
Sc	45	No Gas	8525682.89	2.1	8716701.08	97.81	29.5	120.4	
Sc	45	H2	1009151.61	0.4	1073440.43	94.01	29.5	120.4	
Sc	45	He	267197.24	1.0	283880.71	94.12	29.5	120.4	
Ge	72	No Gas	1713351.59	2.3	1715165.05	99.89	29.5	120.4	
Ge	72	H2	322820.70	0.6	363056.55	88.92	29.5	120.4	
Ge	72	He	168513.06	1.0	177772.18	94.79	29.5	120.4	
Y	89	H2	5313515.93	0.3	5502376.66	96.57	29.5	120.4	
Y	89	He	1388714.77	1.1	1468553.09	94.56	29.5	120.4	
Tb	159	No Gas	15726219.21	1.7	15204271.44	103.43	29.5	120.4	
Tb	159	He	5717024.22	0.9	5847670.12	97.77	29.5	120.4	
Bi	209	No Gas	7283811.99	2.7	6985104.03	104.28	29.5	120.4	

Sample Report

Sample Name	RINSE
File Name	042SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 10:42:36
Sample Type	Sample
Total Dilution	1.0000
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.002	ppb	43.2	32.22	100	
11	B	6	No Gas	0.301	ppb	20.3	4529.74	1000	
23	Na	45	He	-7.768	ppb	N/A	15422.03	200000	
24	Mg	45	He	0.264	ppb	59.0	317.81	200000	
27	Al	45	He	0.704	ppb	60.6	118.90	200000	
28	Si	45	H2	-0.440	ppb	N/A	5206.67	10000	
39	K	45	He	3.848	ppb	135.7	19004.24	200000	
40	Ca	45	H2	4.750	ppb	2.6	9985.01	200000	
51	V	89	He	-0.021	ppb	N/A	260.01	1000	
52	Cr	89	He	0.046	ppb	105.6	829.46	2000	
55	Mn	89	He	-0.006	ppb	N/A	150.64	2000	
56	Fe	89	H2	0.103	ppb	59.1	11550.98	100000	
59	Co	89	He	-0.001	ppb	N/A	77.78	1000	
60	Ni	89	He	-0.060	ppb	N/A	437.80	1000	
63	Cu	89	He	0.170	ppb	12.9	1759.07	2000	
66	Zn	89	He	-0.037	ppb	N/A	582.25	2000	
75	As	89	He	0.040	ppb	28.1	365.05	1000	
78	Se	89	H2	0.016	ppb	83.4	4.33	1000	
88	Sr	89	He	0.018	ppb	19.0	51.12	2000	
95	Mo	89	He	0.014	ppb	98.6	96.67	1000	
107	Ag	89	He	0.001	ppb	165.0	32.22	100	
111	Cd	89	He	0.001	ppb	82.1	1.48	1000	
118	Sn	159	He	0.008	ppb	298.3	431.13	1000	
121	Sb	159	No Gas	0.003	ppb	42.5	186.88	1000	
137	Ba	159	No Gas	0.013	ppb	90.6	176.87	2000	
182	W	159	No Gas	0.020	ppb	40.7	276.98	1000	
205	Tl	209	No Gas	-0.017	ppb	N/A	190.21	1000	
208	Pb	209	No Gas	-0.011	ppb	N/A	1715.31	2000	
232	Th	209	No Gas	0.011	ppb	19.6	660.75	1000	
238	U	209	No Gas	0.003	ppb	65.9	93.44	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4373297.26	1.9	4285305.73	102.05	29.5	120.4	
Sc	45	No Gas	8538218.44	1.5	8716701.08	97.95	29.5	120.4	
Sc	45	H2	1011827.05	0.9	1073440.43	94.26	29.5	120.4	
Sc	45	He	268145.40	0.4	283880.71	94.46	29.5	120.4	
Ge	72	No Gas	1709628.64	1.7	1715165.05	99.68	29.5	120.4	
Ge	72	H2	329772.90	2.8	363056.55	90.83	29.5	120.4	
Ge	72	He	169332.57	1.2	177772.18	95.25	29.5	120.4	
Y	89	H2	5264857.17	2.1	5502376.66	95.68	29.5	120.4	
Y	89	He	1412774.72	1.0	1468553.09	96.2	29.5	120.4	
Tb	159	No Gas	15940406.99	1.1	15204271.44	104.84	29.5	120.4	
Tb	159	He	5816883.73	0.3	5847670.12	99.47	29.5	120.4	
Bi	209	No Gas	7576043.69	1.9	6985104.03	108.46	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	043_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 10:45:16
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	24.434	ppb	3.2	121746.12	25	97.74	89.8	110.2	
11	B	6	No Gas	24.319	ppb	3.9	81543.78	25	97.28	89.8	110.2	
23	Na	45	He	5430.470	ppb	1.2	1882353.12	5000	108.61	89.8	110.2	
24	Mg	45	He	5360.885	ppb	0.7	1109272.41	5000	107.22	89.8	110.2	
27	Al	45	He	508.740	ppb	0.4	38515.11	500	101.75	89.8	110.2	
28	Si	45	H2	480.059	ppb	0.5	68108.18	500	96.01	89.8	110.2	
39	K	45	He	5181.820	ppb	0.5	867685.98	5000	103.64	89.8	110.2	
40	Ca	45	H2	5066.162	ppb	0.3	6183214.70	5000	101.32	89.8	110.2	
51	V	89	He	25.112	ppb	0.7	71023.32	25	100.45	89.8	110.2	
52	Cr	89	He	25.346	ppb	1.3	90971.24	25	101.38	89.8	110.2	
55	Mn	89	He	24.708	ppb	0.6	39631.62	25	98.83	89.8	110.2	
56	Fe	89	H2	4965.661	ppb	2.4	20066874.71	5000	99.31	89.8	110.2	
59	Co	89	He	25.453	ppb	1.1	139294.25	25	101.81	89.8	110.2	
60	Ni	89	He	25.698	ppb	1.2	38831.57	25	102.79	89.8	110.2	
63	Cu	89	He	25.840	ppb	0.6	103038.61	25	103.36	89.8	110.2	
66	Zn	89	He	25.417	ppb	2.5	15066.40	25	101.67	89.8	110.2	
75	As	89	He	25.014	ppb	0.7	11620.78	25	100.06	89.8	110.2	
78	Se	89	H2	24.438	ppb	1.9	4822.79	25	97.75	89.8	110.2	
88	Sr	89	He	24.754	ppb	0.3	47645.85	25	99.02	89.8	110.2	
95	Mo	89	He	25.534	ppb	1.8	55694.27	25	102.14	89.8	110.2	
107	Ag	89	He	26.267	ppb	0.6	179477.24	25	105.07	89.8	110.2	
111	Cd	89	He	26.248	ppb	0.2	23386.59	25	104.99	89.8	110.2	
118	Sn	159	He	24.875	ppb	1.6	45859.17	25	99.5	89.8	110.2	
121	Sb	159	No Gas	24.274	ppb	4.1	370512.63	25	97.1	89.8	110.2	
137	Ba	159	No Gas	24.543	ppb	4.0	138195.49	25	98.17	89.8	110.2	
182	W	159	No Gas	25.149	ppb	4.3	290339.88	25	100.6	89.8	110.2	
205	Tl	209	No Gas	27.369	ppb	2.6	588205.84	25	109.48	89.8	110.2	
208	Pb	209	No Gas	25.113	ppb	2.6	804800.65	25	100.45	89.8	110.2	
232	Th	209	No Gas	26.785	ppb	3.2	773967.84	25	107.14	89.8	110.2	
238	U	209	No Gas	27.576	ppb	2.3	773369.87	25	110.3	89.8	110.2	> +/- 10%

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4351736.17	3.1	4285305.73	101.55	29.5	120.4	
Sc	45	No Gas	8491346.26	2.6	8716701.08	97.41	29.5	120.4	
Sc	45	H2	1010805.40	1.3	1073440.43	94.17	29.5	120.4	
Sc	45	He	264669.73	0.2	283880.71	93.23	29.5	120.4	
Ge	72	No Gas	1689647.21	3.0	1715165.05	98.51	29.5	120.4	
Ge	72	H2	325874.71	0.8	363056.55	89.76	29.5	120.4	
Ge	72	He	169812.89	1.0	177772.18	95.52	29.5	120.4	
Y	89	H2	5295571.84	1.7	5502376.66	96.24	29.5	120.4	
Y	89	He	1416828.12	0.6	1468553.09	96.48	29.5	120.4	
Tb	159	No Gas	16022037.40	3.3	15204271.44	105.38	29.5	120.4	
Tb	159	He	5767831.58	0.5	5847670.12	98.63	29.5	120.4	
Bi	209	No Gas	7402509.54	3.1	6985104.03	105.98	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	044_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 10:47:50
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.028	ppb	13.9	158.90	0.2	
11	B	6	No Gas	0.271	ppb	20.6	4400.82	4	
23	Na	45	He	-8.517	ppb	N/A	15101.42	200	
24	Mg	45	He	0.737	ppb	18.4	415.60	20	
27	Al	45	He	0.375	ppb	26.9	93.34	20	
28	Si	45	H2	-2.021	ppb	N/A	5013.29	100	
39	K	45	He	6.428	ppb	70.2	19354.38	200	
40	Ca	45	H2	1.711	ppb	26.4	6292.75	20	
51	V	89	He	-0.045	ppb	N/A	192.23	1	
52	Cr	89	He	0.045	ppb	56.8	824.07	1	
55	Mn	89	He	-0.017	ppb	N/A	131.31	0.4	
56	Fe	89	H2	2.267	ppb	30.2	20558.78	20	
59	Co	89	He	0.008	ppb	71.7	126.68	0.2	
60	Ni	89	He	-0.008	ppb	N/A	513.36	0.4	
63	Cu	89	He	0.128	ppb	16.6	1589.04	0.6	
66	Zn	89	He	-0.166	ppb	N/A	507.81	2	
75	As	89	He	-0.006	ppb	N/A	343.37	1	
78	Se	89	H2	0.028	ppb	9.2	6.83	1	
88	Sr	89	He	0.004	ppb	89.1	23.33	1	
95	Mo	89	He	0.047	ppb	30.5	170.01	1	
107	Ag	89	He	0.005	ppb	19.6	58.89	0.2	
111	Cd	89	He	0.003	ppb	75.2	2.96	0.2	
118	Sn	159	He	0.041	ppb	26.9	485.58	1	
121	Sb	159	No Gas	0.033	ppb	12.9	650.74	0.2	
137	Ba	159	No Gas	0.017	ppb	29.7	200.23	0.4	
182	W	159	No Gas	0.069	ppb	12.8	840.97	1	
205	Tl	209	No Gas	0.013	ppb	77.6	827.63	0.2	
208	Pb	209	No Gas	0.017	ppb	35.8	2583.00	0.2	
232	Th	209	No Gas	0.242	ppb	6.8	7317.11	1	
238	U	209	No Gas	0.037	ppb	28.1	1057.91	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4341769.17	2.8	4285305.73	101.32	29.5	120.4	
Sc	45	No Gas	8512155.82	1.6	8716701.08	97.65	29.5	120.4	
Sc	45	H2	1014550.94	0.6	1073440.43	94.51	29.5	120.4	
Sc	45	He	267131.01	1.3	283880.71	94.1	29.5	120.4	
Ge	72	No Gas	1701079.52	2.2	1715165.05	99.18	29.5	120.4	
Ge	72	H2	329494.66	1.9	363056.55	90.76	29.5	120.4	
Ge	72	He	168269.32	1.3	177772.18	94.65	29.5	120.4	
Y	89	H2	5344227.63	1.1	5502376.66	97.13	29.5	120.4	
Y	89	He	1409174.49	0.8	1468553.09	95.96	29.5	120.4	
Tb	159	No Gas	15841264.21	1.1	15204271.44	104.19	29.5	120.4	
Tb	159	He	5731229.22	1.4	5847670.12	98.01	29.5	120.4	
Bi	209	No Gas	7391961.02	1.8	6985104.03	105.82	29.5	120.4	

Sample Report

Sample Name SO4724-002RL

File Name 045SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:50:29

Sample Type Sample

Total Dilution 25.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.061	ppb	108.9	33.33	100	
11	B	6	No Gas	11.296	ppb	7.0	4956.57	1000	
23	Na	45	He	20186.252	ppb	0.9	299072.11	200000	
24	Mg	45	He	7084.017	ppb	0.9	59667.67	200000	
27	Al	45	He	21.578	ppb	50.8	131.12	200000	
28	Si	45	H2	2641.196	ppb	1.8	19364.77	10000	
39	K	45	He	1339.570	ppb	2.9	27273.75	200000	
40	Ca	45	H2	88162.333	ppb	1.4	4367312.68	200000	
51	V	89	He	-0.472	ppb	N/A	263.35	1000	
52	Cr	89	He	1.756	ppb	72.6	908.33	2000	
55	Mn	89	He	1.115	ppb	17.5	227.96	2000	
56	Fe	89	H2	43.039	ppb	5.4	18158.77	100000	
59	Co	89	He	0.104	ppb	109.1	106.68	1000	
60	Ni	89	He	0.578	ppb	225.7	554.47	1000	
63	Cu	89	He	9.334	ppb	8.2	2528.10	2000	
66	Zn	89	He	7.496	ppb	37.8	763.38	2000	
75	As	89	He	0.986	ppb	81.9	360.71	1000	
78	Se	89	H2	0.428	ppb	21.7	4.67	1000	
88	Sr	89	He	571.419	ppb	1.0	43365.05	2000	
95	Mo	89	He	0.462	ppb	83.5	106.67	1000	
107	Ag	89	He	0.017	ppb	81.8	28.89	100	
111	Cd	89	He	0.064	ppb	30.0	2.96	1000	
118	Sn	159	He	1.590	ppb	12.3	532.26	1000	
121	Sb	159	No Gas	0.131	ppb	115.7	223.59	1000	
137	Ba	159	No Gas	47.878	ppb	2.1	10693.01	2000	
182	W	159	No Gas	0.313	ppb	36.4	190.22	1000	
205	Tl	209	No Gas	-0.420	ppb	N/A	176.87	1000	
208	Pb	209	No Gas	0.254	ppb	90.0	2312.67	2000	
232	Th	209	No Gas	1.629	ppb	12.6	2179.28	1000	
238	U	209	No Gas	0.266	ppb	14.3	310.35	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4322589.62	2.1	4285305.73	100.87	29.5	120.4	
Sc	45	No Gas	8348367.97	1.4	8716701.08	95.77	29.5	120.4	
Sc	45	H2	1025354.15	1.2	1073440.43	95.52	29.5	120.4	
Sc	45	He	268206.42	0.9	283880.71	94.48	29.5	120.4	
Ge	72	No Gas	1687870.13	2.8	1715165.05	98.41	29.5	120.4	
Ge	72	H2	326444.33	0.9	363056.55	89.92	29.5	120.4	
Ge	72	He	169693.52	1.3	177772.18	95.46	29.5	120.4	
Y	89	H2	5296423.74	0.6	5502376.66	96.26	29.5	120.4	
Y	89	He	1396622.72	1.8	1468553.09	95.1	29.5	120.4	
Tb	159	No Gas	15734804.63	1.4	15204271.44	103.49	29.5	120.4	
Tb	159	He	5795546.93	0.2	5847670.12	99.11	29.5	120.4	
Bi	209	No Gas	7273413.31	1.1	6985104.03	104.13	29.5	120.4	

Sample Report

Sample Name SO4724-002RP

File Name 046SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:53:02

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	47.105	ppb	1.8	46926.84	100	
11	B	6	No Gas	469.545	ppb	1.6	304598.99	1000	
23	Na	45	He	26500.611	ppb	1.9	1867919.52	200000	
24	Mg	45	He	12058.399	ppb	1.9	507403.31	200000	
27	Al	45	He	1984.596	ppb	1.3	30561.34	200000	
28	Si	45	H2	3480.553	ppb	0.5	96815.01	10000	
39	K	45	He	12243.959	ppb	1.2	426568.71	200000	
40	Ca	45	H2	88640.301	ppb	0.9	21722796.34	200000	
51	V	89	He	497.467	ppb	0.3	277925.99	1000	
52	Cr	89	He	199.897	ppb	0.2	141827.12	2000	
55	Mn	89	He	498.896	ppb	0.4	158132.45	2000	
56	Fe	89	H2	1058.552	ppb	1.4	862771.25	100000	
59	Co	89	He	511.311	ppb	1.1	554377.93	1000	
60	Ni	89	He	505.033	ppb	1.0	149730.45	1000	
63	Cu	89	He	259.379	ppb	0.4	203910.21	2000	
66	Zn	89	He	507.930	ppb	0.3	57877.63	2000	
75	As	89	He	100.778	ppb	1.8	9347.16	1000	
78	Se	89	H2	97.014	ppb	0.4	3812.52	1000	
88	Sr	89	He	1033.983	ppb	0.3	394347.74	2000	
95	Mo	89	He	101.142	ppb	0.3	43739.87	1000	
107	Ag	89	He	51.830	ppb	0.8	70210.30	100	
111	Cd	89	He	251.400	ppb	0.5	44396.33	1000	
118	Sn	159	He	495.010	ppb	0.3	180695.06	1000	
121	Sb	159	No Gas	98.096	ppb	0.8	289909.76	1000	
137	Ba	159	No Gas	1815.071	ppb	0.2	1977240.91	2000	
182	W	159	No Gas	101.354	ppb	2.5	226515.23	1000	
205	Tl	209	No Gas	109.090	ppb	1.8	454732.54	1000	
208	Pb	209	No Gas	102.742	ppb	1.2	638851.52	2000	
232	Th	209	No Gas	107.756	ppb	1.9	603885.05	1000	
238	U	209	No Gas	110.668	ppb	2.0	601784.86	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4346638.31	1.3	4285305.73	101.43	29.5	120.4	
Sc	45	No Gas	8373374.43	1.0	8716701.08	96.06	29.5	120.4	
Sc	45	H2	1015246.30	0.6	1073440.43	94.58	29.5	120.4	
Sc	45	He	269085.24	1.5	283880.71	94.79	29.5	120.4	
Ge	72	No Gas	1679086.69	2.1	1715165.05	97.9	29.5	120.4	
Ge	72	H2	316678.43	2.2	363056.55	87.23	29.5	120.4	
Ge	72	He	169195.06	1.0	177772.18	95.18	29.5	120.4	
Y	89	H2	5272075.17	1.6	5502376.66	95.81	29.5	120.4	
Y	89	He	1404106.52	0.4	1468553.09	95.61	29.5	120.4	
Tb	159	No Gas	15495980.60	1.3	15204271.44	101.92	29.5	120.4	
Tb	159	He	5748743.25	0.9	5847670.12	98.31	29.5	120.4	
Bi	209	No Gas	7174077.26	1.0	6985104.03	102.71	29.5	120.4	

Sample Report

Sample Name SO4724-002RS

File Name 047SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:55:39

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	47.478	ppb	3.5	47381.83	100	
11	B	6	No Gas	476.657	ppb	3.2	309738.19	1000	
23	Na	45	He	26705.131	ppb	1.1	1883092.58	200000	
24	Mg	45	He	12004.201	ppb	0.8	505369.93	200000	
27	Al	45	He	1985.406	ppb	1.2	30588.01	200000	
28	Si	45	H2	3469.635	ppb	1.3	95330.76	10000	
39	K	45	He	12252.678	ppb	0.4	427034.98	200000	
40	Ca	45	H2	87764.613	ppb	0.3	21241166.49	200000	
51	V	89	He	504.739	ppb	0.6	280374.36	1000	
52	Cr	89	He	201.923	ppb	1.2	142433.42	2000	
55	Mn	89	He	504.178	ppb	0.7	158888.53	2000	
56	Fe	89	H2	1054.005	ppb	1.4	850129.37	100000	
59	Co	89	He	515.562	ppb	0.5	555802.12	1000	
60	Ni	89	He	513.230	ppb	0.6	151283.11	1000	
63	Cu	89	He	264.378	ppb	0.4	206634.31	2000	
66	Zn	89	He	507.414	ppb	0.1	57490.32	2000	
75	As	89	He	101.651	ppb	1.5	9370.85	1000	
78	Se	89	H2	96.962	ppb	1.5	3771.01	1000	
88	Sr	89	He	1041.626	ppb	0.2	394992.06	2000	
95	Mo	89	He	103.119	ppb	1.9	44336.25	1000	
107	Ag	89	He	52.637	ppb	1.0	70893.62	100	
111	Cd	89	He	254.082	ppb	0.8	44615.94	1000	
118	Sn	159	He	499.158	ppb	0.2	182646.60	1000	
121	Sb	159	No Gas	98.623	ppb	1.5	295685.29	1000	
137	Ba	159	No Gas	1826.058	ppb	2.1	2017825.46	2000	
182	W	159	No Gas	101.347	ppb	2.1	229807.13	1000	
205	Tl	209	No Gas	108.687	ppb	0.8	455586.99	1000	
208	Pb	209	No Gas	102.764	ppb	1.7	642473.89	2000	
232	Th	209	No Gas	110.456	ppb	2.3	622403.20	1000	
238	U	209	No Gas	111.287	ppb	1.8	608498.25	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4356414.49	2.5	4285305.73	101.66	29.5	120.4	
Sc	45	No Gas	8398475.26	1.4	8716701.08	96.35	29.5	120.4	
Sc	45	H2	1002654.28	1.0	1073440.43	93.41	29.5	120.4	
Sc	45	He	269176.69	0.8	283880.71	94.82	29.5	120.4	
Ge	72	No Gas	1690778.05	2.8	1715165.05	98.58	29.5	120.4	
Ge	72	H2	316146.55	0.8	363056.55	87.08	29.5	120.4	
Ge	72	He	168924.21	0.8	177772.18	95.02	29.5	120.4	
Y	89	H2	5218273.19	1.9	5502376.66	94.84	29.5	120.4	
Y	89	He	1396096.94	0.7	1468553.09	95.07	29.5	120.4	
Tb	159	No Gas	15720502.27	0.7	15204271.44	103.4	29.5	120.4	
Tb	159	He	5762598.32	0.7	5847670.12	98.55	29.5	120.4	
Bi	209	No Gas	7213215.46	0.7	6985104.03	103.27	29.5	120.4	

Sample Report

Sample Name RINSE

File Name 048SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 10:58:12

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.010	ppb	22.2	68.89	100	
11	B	6	No Gas	1.164	ppb	10.1	7278.75	1000	
23	Na	45	He	-8.325	ppb	N/A	15228.16	200000	
24	Mg	45	He	0.433	ppb	22.0	353.36	200000	
27	Al	45	He	0.340	ppb	56.6	91.11	200000	
28	Si	45	H2	-1.705	ppb	N/A	5066.55	10000	
39	K	45	He	4.302	ppb	97.1	19075.87	200000	
40	Ca	45	H2	8.905	ppb	43.8	15136.18	200000	
51	V	89	He	-0.020	ppb	N/A	262.23	1000	
52	Cr	89	He	0.024	ppb	38.6	753.25	2000	
55	Mn	89	He	0.002	ppb	352.5	162.64	2000	
56	Fe	89	H2	0.092	ppb	177.6	11611.57	100000	
59	Co	89	He	0.022	ppb	27.4	206.69	1000	
60	Ni	89	He	0.022	ppb	145.7	560.03	1000	
63	Cu	89	He	0.174	ppb	16.3	1772.40	2000	
66	Zn	89	He	-0.042	ppb	N/A	578.92	2000	
75	As	89	He	0.004	ppb	1157.4	348.71	1000	
78	Se	89	H2	0.028	ppb	13.7	6.83	1000	
88	Sr	89	He	0.034	ppb	37.8	81.11	2000	
95	Mo	89	He	0.031	ppb	36.9	134.45	1000	
107	Ag	89	He	0.003	ppb	45.0	46.67	100	
111	Cd	89	He	0.010	ppb	12.8	10.00	1000	
118	Sn	159	He	0.073	ppb	43.4	560.04	1000	
121	Sb	159	No Gas	0.029	ppb	34.6	584.00	1000	
137	Ba	159	No Gas	0.296	ppb	27.5	1745.40	2000	
182	W	159	No Gas	0.048	ppb	5.7	594.01	1000	
205	Tl	209	No Gas	0.005	ppb	156.7	637.40	1000	
208	Pb	209	No Gas	0.004	ppb	126.1	2132.44	2000	
232	Th	209	No Gas	0.273	ppb	9.0	8201.96	1000	
238	U	209	No Gas	0.024	ppb	39.3	694.14	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4350456.03	2.6	4285305.73	101.52	29.5	120.4	
Sc	45	No Gas	8434018.82	1.5	8716701.08	96.76	29.5	120.4	
Sc	45	H2	1016949.32	0.3	1073440.43	94.74	29.5	120.4	
Sc	45	He	268125.19	1.3	283880.71	94.45	29.5	120.4	
Ge	72	No Gas	1706583.89	1.4	1715165.05	99.5	29.5	120.4	
Ge	72	H2	331046.54	0.8	363056.55	91.18	29.5	120.4	
Ge	72	He	169311.68	1.4	177772.18	95.24	29.5	120.4	
Y	89	H2	5314492.85	0.2	5502376.66	96.59	29.5	120.4	
Y	89	He	1412305.52	0.9	1468553.09	96.17	29.5	120.4	
Tb	159	No Gas	15734691.16	2.6	15204271.44	103.49	29.5	120.4	
Tb	159	He	5898825.54	0.3	5847670.12	100.87	29.5	120.4	
Bi	209	No Gas	7377013.37	1.4	6985104.03	105.61	29.5	120.4	

Sample Report

Sample Name SO4724-003R

File Name 049SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 11:00:52

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.015	ppb	30.0	35.56	100	
11	B	6	No Gas	2.986	ppb	7.7	5375.63	1000	
23	Na	45	He	19237.654	ppb	0.6	1349638.85	200000	
24	Mg	45	He	7003.428	ppb	0.9	292350.68	200000	
27	Al	45	He	20.883	ppb	14.7	383.35	200000	
28	Si	45	H2	2525.986	ppb	1.7	71447.56	10000	
39	K	45	He	1306.922	ppb	3.5	61460.34	200000	
40	Ca	45	H2	86964.460	ppb	1.3	21231401.49	200000	
51	V	89	He	0.537	ppb	12.0	616.71	1000	
52	Cr	89	He	0.294	ppb	22.7	869.22	2000	
55	Mn	89	He	0.476	ppb	10.1	308.62	2000	
56	Fe	89	H2	3.793	ppb	15.6	14376.87	100000	
59	Co	89	He	0.107	ppb	28.6	200.02	1000	
60	Ni	89	He	1.371	ppb	14.0	926.73	1000	
63	Cu	89	He	11.844	ppb	2.5	10320.83	2000	
66	Zn	89	He	34.784	ppb	4.1	4510.88	2000	
75	As	89	He	0.200	ppb	49.3	362.05	1000	
78	Se	89	H2	0.139	ppb	7.7	6.83	1000	
88	Sr	89	He	557.184	ppb	0.8	212047.94	2000	
95	Mo	89	He	0.077	ppb	75.9	100.01	1000	
107	Ag	89	He	0.012	ppb	24.9	40.00	100	
111	Cd	89	He	0.015	ppb	86.3	3.33	1000	
118	Sn	159	He	0.720	ppb	13.7	674.49	1000	
121	Sb	159	No Gas	0.038	ppb	90.3	256.96	1000	
137	Ba	159	No Gas	43.008	ppb	1.2	47169.58	2000	
182	W	159	No Gas	0.061	ppb	18.2	183.54	1000	
205	Tl	209	No Gas	-0.076	ppb	N/A	210.24	1000	
208	Pb	209	No Gas	0.446	ppb	13.1	4762.40	2000	
232	Th	209	No Gas	0.750	ppb	12.6	4559.29	1000	
238	U	209	No Gas	0.244	ppb	11.1	1351.58	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4288267.13	2.4	4285305.73	100.07	29.5	120.4	
Sc	45	No Gas	8320030.47	0.9	8716701.08	95.45	29.5	120.4	
Sc	45	H2	1011440.00	0.9	1073440.43	94.22	29.5	120.4	
Sc	45	He	266797.75	1.3	283880.71	93.98	29.5	120.4	
Ge	72	No Gas	1681854.89	1.6	1715165.05	98.06	29.5	120.4	
Ge	72	H2	324387.92	1.2	363056.55	89.35	29.5	120.4	
Ge	72	He	168096.14	1.8	177772.18	94.56	29.5	120.4	
Y	89	H2	5339462.14	2.2	5502376.66	97.04	29.5	120.4	
Y	89	He	1401166.82	1.6	1468553.09	95.41	29.5	120.4	
Tb	159	No Gas	15569413.66	0.8	15204271.44	102.4	29.5	120.4	
Tb	159	He	5749996.65	0.8	5847670.12	98.33	29.5	120.4	
Bi	209	No Gas	7238668.10	3.0	6985104.03	103.63	29.5	120.4	

Sample Report

Sample Name SO4724-004R

File Name 050SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 11:03:25

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.008	ppb	22.5	28.89	100	
11	B	6	No Gas	57.700	ppb	2.1	40087.52	1000	
23	Na	45	He	15270.721	ppb	1.4	1082006.02	200000	
24	Mg	45	He	26040.693	ppb	0.5	1093418.32	200000	
27	Al	45	He	10.466	ppb	18.4	225.57	200000	
28	Si	45	H2	4009.126	ppb	1.4	108868.65	10000	
39	K	45	He	767.179	ppb	0.6	43917.56	200000	
40	Ca	45	H2	61279.256	ppb	1.4	14768358.67	200000	
51	V	89	He	0.761	ppb	68.2	742.27	1000	
52	Cr	89	He	0.687	ppb	32.2	1148.56	2000	
55	Mn	89	He	0.709	ppb	75.1	383.27	2000	
56	Fe	89	H2	13.348	ppb	7.1	21948.60	100000	
59	Co	89	He	0.383	ppb	103.3	500.06	1000	
60	Ni	89	He	0.616	ppb	76.2	705.60	1000	
63	Cu	89	He	21.448	ppb	2.8	17850.88	2000	
66	Zn	89	He	21.211	ppb	4.9	2990.44	2000	
75	As	89	He	0.309	ppb	48.5	372.38	1000	
78	Se	89	H2	0.192	ppb	19.5	8.83	1000	
88	Sr	89	He	1212.520	ppb	1.2	462328.31	2000	
95	Mo	89	He	0.210	ppb	53.2	157.78	1000	
107	Ag	89	He	0.041	ppb	77.8	80.01	100	
111	Cd	89	He	0.176	ppb	147.3	31.85	1000	
118	Sn	159	He	0.764	ppb	69.0	688.93	1000	
121	Sb	159	No Gas	0.063	ppb	30.0	330.37	1000	
137	Ba	159	No Gas	50.342	ppb	2.4	55206.62	2000	
182	W	159	No Gas	0.041	ppb	39.5	140.16	1000	
205	Tl	209	No Gas	-0.083	ppb	N/A	180.20	1000	
208	Pb	209	No Gas	0.398	ppb	2.8	4478.64	2000	
232	Th	209	No Gas	0.348	ppb	11.3	2302.79	1000	
238	U	209	No Gas	0.096	ppb	22.3	547.30	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4298938.68	1.3	4285305.73	100.32	29.5	120.4	
Sc	45	No Gas	8293989.95	0.8	8716701.08	95.15	29.5	120.4	
Sc	45	H2	998351.30	2.2	1073440.43	93	29.5	120.4	
Sc	45	He	268541.52	0.8	283880.71	94.6	29.5	120.4	
Ge	72	No Gas	1682952.28	1.9	1715165.05	98.12	29.5	120.4	
Ge	72	H2	322138.07	0.8	363056.55	88.73	29.5	120.4	
Ge	72	He	168900.13	1.6	177772.18	95.01	29.5	120.4	
Y	89	H2	5285579.72	1.0	5502376.66	96.06	29.5	120.4	
Y	89	He	1403800.81	0.1	1468553.09	95.59	29.5	120.4	
Tb	159	No Gas	15574646.85	1.7	15204271.44	102.44	29.5	120.4	
Tb	159	He	5741595.19	0.6	5847670.12	98.19	29.5	120.4	
Bi	209	No Gas	7250081.49	1.5	6985104.03	103.79	29.5	120.4	

Sample Report

Sample Name SO4724-005R

File Name 051SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 11:06:02

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.001	ppb	1330.0	22.22	100	
11	B	6	No Gas	43.473	ppb	3.8	30847.17	1000	
23	Na	45	He	16060.816	ppb	1.1	1135337.50	200000	
24	Mg	45	He	26254.574	ppb	1.7	1100666.98	200000	
27	Al	45	He	8.738	ppb	19.0	198.90	200000	
28	Si	45	H2	3735.616	ppb	0.8	102847.63	10000	
39	K	45	He	764.097	ppb	2.7	43746.91	200000	
40	Ca	45	H2	60820.943	ppb	1.6	14808235.47	200000	
51	V	89	He	0.488	ppb	11.1	588.92	1000	
52	Cr	89	He	0.502	ppb	23.7	1015.94	2000	
55	Mn	89	He	1.402	ppb	3.7	601.24	2000	
56	Fe	89	H2	112.909	ppb	0.6	102114.55	100000	
59	Co	89	He	0.086	ppb	32.4	177.79	1000	
60	Ni	89	He	0.688	ppb	21.6	725.60	1000	
63	Cu	89	He	12.207	ppb	4.7	10604.40	2000	
66	Zn	89	He	7.609	ppb	4.3	1454.58	2000	
75	As	89	He	0.068	ppb	434.7	350.38	1000	
78	Se	89	H2	0.213	ppb	26.8	9.67	1000	
88	Sr	89	He	1542.679	ppb	1.6	587142.62	2000	
95	Mo	89	He	0.121	ppb	27.0	118.90	1000	
107	Ag	89	He	0.011	ppb	167.7	38.89	100	
111	Cd	89	He	0.021	ppb	52.0	4.45	1000	
118	Sn	159	He	0.592	ppb	11.5	633.37	1000	
121	Sb	159	No Gas	0.056	ppb	44.2	310.35	1000	
137	Ba	159	No Gas	49.277	ppb	0.7	54371.52	2000	
182	W	159	No Gas	0.038	ppb	42.1	133.49	1000	
205	Tl	209	No Gas	-0.098	ppb	N/A	120.14	1000	
208	Pb	209	No Gas	0.342	ppb	3.4	4158.27	2000	
232	Th	209	No Gas	0.231	ppb	5.4	1645.28	1000	
238	U	209	No Gas	0.422	ppb	7.8	2352.85	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4271608.70	3.5	4285305.73	99.68	29.5	120.4	
Sc	45	No Gas	8331169.94	2.1	8716701.08	95.58	29.5	120.4	
Sc	45	H2	1008671.34	0.9	1073440.43	93.97	29.5	120.4	
Sc	45	He	268119.07	0.2	283880.71	94.45	29.5	120.4	
Ge	72	No Gas	1681917.47	3.6	1715165.05	98.06	29.5	120.4	
Ge	72	H2	323781.42	1.6	363056.55	89.18	29.5	120.4	
Ge	72	He	170158.94	0.3	177772.18	95.72	29.5	120.4	
Y	89	H2	5279402.03	0.5	5502376.66	95.95	29.5	120.4	
Y	89	He	1401381.98	1.0	1468553.09	95.43	29.5	120.4	
Tb	159	No Gas	15666280.60	1.2	15204271.44	103.04	29.5	120.4	
Tb	159	He	5800455.96	0.5	5847670.12	99.19	29.5	120.4	
Bi	209	No Gas	7300430.64	1.3	6985104.03	104.51	29.5	120.4	

Sample Report

Sample Name SO4724-006R

File Name 052SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 11:08:34

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.002	ppb	257.9	23.33	100	
11	B	6	No Gas	42.692	ppb	4.2	30143.24	1000	
23	Na	45	He	15517.423	ppb	0.9	1106536.93	200000	
24	Mg	45	He	25531.886	ppb	1.3	1079187.77	200000	
27	Al	45	He	10.930	ppb	16.8	234.46	200000	
28	Si	45	H2	3697.646	ppb	1.4	101522.01	10000	
39	K	45	He	738.756	ppb	3.4	43250.52	200000	
40	Ca	45	H2	60028.316	ppb	1.5	14568113.81	200000	
51	V	89	He	0.645	ppb	10.2	676.71	1000	
52	Cr	89	He	0.457	ppb	30.6	985.26	2000	
55	Mn	89	He	1.525	ppb	1.5	640.57	2000	
56	Fe	89	H2	101.492	ppb	0.8	93065.98	100000	
59	Co	89	He	0.057	ppb	55.5	146.68	1000	
60	Ni	89	He	2.668	ppb	8.6	1310.11	1000	
63	Cu	89	He	18.521	ppb	2.3	15541.41	2000	
66	Zn	89	He	19.226	ppb	4.4	2763.71	2000	
75	As	89	He	0.131	ppb	350.5	356.05	1000	
78	Se	89	H2	0.149	ppb	33.9	7.17	1000	
88	Sr	89	He	1514.797	ppb	0.6	576788.19	2000	
95	Mo	89	He	0.131	ppb	32.9	123.34	1000	
107	Ag	89	He	0.017	ppb	50.7	47.78	100	
111	Cd	89	He	0.031	ppb	92.8	6.29	1000	
118	Sn	159	He	0.590	ppb	34.4	628.93	1000	
121	Sb	159	No Gas	0.064	ppb	15.2	333.71	1000	
137	Ba	159	No Gas	49.157	ppb	0.7	53879.21	2000	
182	W	159	No Gas	0.016	ppb	32.1	83.43	1000	
205	Tl	209	No Gas	-0.081	ppb	N/A	186.88	1000	
208	Pb	209	No Gas	2.365	ppb	4.9	16616.28	2000	
232	Th	209	No Gas	0.139	ppb	3.9	1104.62	1000	
238	U	209	No Gas	0.422	ppb	6.6	2316.12	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4241443.32	2.9	4285305.73	98.98	29.5	120.4	
Sc	45	No Gas	8390213.57	0.9	8716701.08	96.25	29.5	120.4	
Sc	45	H2	1005479.55	2.4	1073440.43	93.67	29.5	120.4	
Sc	45	He	270304.72	0.7	283880.71	95.22	29.5	120.4	
Ge	72	No Gas	1684882.17	1.9	1715165.05	98.23	29.5	120.4	
Ge	72	H2	322081.16	1.8	363056.55	88.71	29.5	120.4	
Ge	72	He	169108.29	0.3	177772.18	95.13	29.5	120.4	
Y	89	H2	5287953.24	1.8	5502376.66	96.1	29.5	120.4	
Y	89	He	1401926.87	1.3	1468553.09	95.46	29.5	120.4	
Tb	159	No Gas	15562107.55	1.8	15204271.44	102.35	29.5	120.4	
Tb	159	He	5771801.58	1.2	5847670.12	98.7	29.5	120.4	
Bi	209	No Gas	7176736.12	3.0	6985104.03	102.74	29.5	120.4	

Sample Report

Sample Name RINSE

File Name 053SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 11:11:11

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	-0.001	ppb	N/A	14.44	100	
11	B	6	No Gas	0.109	ppb	34.2	3909.56	1000	
23	Na	45	He	-5.062	ppb	N/A	16001.08	200000	
24	Mg	45	He	8.186	ppb	105.2	1927.56	200000	
27	Al	45	He	0.411	ppb	17.4	94.45	200000	
28	Si	45	H2	-3.624	ppb	N/A	4796.16	10000	
39	K	45	He	5.168	ppb	19.5	18812.25	200000	
40	Ca	45	H2	2.028	ppb	17.1	6668.47	200000	
51	V	89	He	-0.010	ppb	N/A	288.90	1000	
52	Cr	89	He	0.299	ppb	158.0	1713.61	2000	
55	Mn	89	He	-0.003	ppb	N/A	153.31	2000	
56	Fe	89	H2	0.033	ppb	308.3	11385.54	100000	
59	Co	89	He	0.023	ppb	124.0	206.69	1000	
60	Ni	89	He	0.008	ppb	113.2	534.47	1000	
63	Cu	89	He	0.139	ppb	29.4	1623.49	2000	
66	Zn	89	He	-0.069	ppb	N/A	558.92	2000	
75	As	89	He	-0.004	ppb	N/A	342.38	1000	
78	Se	89	H2	0.004	ppb	132.4	2.17	1000	
88	Sr	89	He	0.520	ppb	103.8	1001.38	2000	
95	Mo	89	He	0.015	ppb	14.2	98.89	1000	
107	Ag	89	He	0.003	ppb	84.2	47.78	100	
111	Cd	89	He	0.006	ppb	162.3	6.30	1000	
118	Sn	159	He	0.004	ppb	644.9	422.25	1000	
121	Sb	159	No Gas	-0.001	ppb	N/A	136.82	1000	
137	Ba	159	No Gas	0.005	ppb	324.3	130.15	2000	
182	W	159	No Gas	0.005	ppb	62.7	106.79	1000	
205	Tl	209	No Gas	-0.019	ppb	N/A	140.16	1000	
208	Pb	209	No Gas	-0.011	ppb	N/A	1681.92	2000	
232	Th	209	No Gas	0.004	ppb	59.9	437.17	1000	
238	U	209	No Gas	0.000	ppb	907.8	20.02	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4375490.02	2.5	4285305.73	102.1	29.5	120.4	
Sc	45	No Gas	8337205.14	1.0	8716701.08	95.65	29.5	120.4	
Sc	45	H2	1013218.97	1.5	1073440.43	94.39	29.5	120.4	
Sc	45	He	262398.46	1.0	283880.71	92.43	29.5	120.4	
Ge	72	No Gas	1675953.17	2.2	1715165.05	97.71	29.5	120.4	
Ge	72	H2	326633.08	1.1	363056.55	89.97	29.5	120.4	
Ge	72	He	168498.55	0.5	177772.18	94.78	29.5	120.4	
Y	89	H2	5319206.52	0.4	5502376.66	96.67	29.5	120.4	
Y	89	He	1400835.78	0.6	1468553.09	95.39	29.5	120.4	
Tb	159	No Gas	15665826.85	1.7	15204271.44	103.04	29.5	120.4	
Tb	159	He	5789459.29	0.8	5847670.12	99	29.5	120.4	
Bi	209	No Gas	7378176.41	1.7	6985104.03	105.63	29.5	120.4	

Sample Report

Sample Name	RINSE
File Name	054SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 11:13:47
Sample Type	Sample
Total Dilution	1.0000
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.000	ppb	N/A	20.00	100	
11	B	6	No Gas	0.072	ppb	70.1	3785.07	1000	
23	Na	45	He	-12.581	ppb	N/A	13431.21	200000	
24	Mg	45	He	-0.037	ppb	N/A	248.91	200000	
27	Al	45	He	0.487	ppb	25.3	100.00	200000	
28	Si	45	H2	-1.604	ppb	N/A	5046.60	10000	
39	K	45	He	5.254	ppb	96.1	18795.63	200000	
40	Ca	45	H2	0.711	ppb	9.8	5038.85	200000	
51	V	89	He	-0.016	ppb	N/A	272.24	1000	
52	Cr	89	He	0.089	ppb	149.6	971.62	2000	
55	Mn	89	He	-0.015	ppb	N/A	133.98	2000	
56	Fe	89	H2	0.077	ppb	87.0	11547.64	100000	
59	Co	89	He	0.001	ppb	518.3	91.12	1000	
60	Ni	89	He	-0.005	ppb	N/A	513.36	1000	
63	Cu	89	He	0.076	ppb	24.8	1373.45	2000	
66	Zn	89	He	-0.166	ppb	N/A	503.36	2000	
75	As	89	He	-0.009	ppb	N/A	339.04	1000	
78	Se	89	H2	0.001	ppb	632.6	1.50	1000	
88	Sr	89	He	0.013	ppb	22.7	40.00	2000	
95	Mo	89	He	0.008	ppb	72.3	84.45	1000	
107	Ag	89	He	0.001	ppb	273.9	28.89	100	
111	Cd	89	He	0.000	ppb	1911.8	0.74	1000	
118	Sn	159	He	0.003	ppb	919.9	415.58	1000	
121	Sb	159	No Gas	0.002	ppb	139.7	176.86	1000	
137	Ba	159	No Gas	0.000	ppb	N/A	103.45	2000	
182	W	159	No Gas	0.003	ppb	36.0	83.43	1000	
205	Tl	209	No Gas	-0.018	ppb	N/A	153.51	1000	
208	Pb	209	No Gas	-0.005	ppb	N/A	1878.82	2000	
232	Th	209	No Gas	0.002	ppb	105.5	387.11	1000	
238	U	209	No Gas	0.001	ppb	107.2	53.39	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4366372.83	2.5	4285305.73	101.89	29.5	120.4	
Sc	45	No Gas	8306257.21	1.2	8716701.08	95.29	29.5	120.4	
Sc	45	H2	1009051.03	2.2	1073440.43	94	29.5	120.4	
Sc	45	He	262021.41	0.9	283880.71	92.3	29.5	120.4	
Ge	72	No Gas	1673438.22	2.3	1715165.05	97.57	29.5	120.4	
Ge	72	H2	333160.48	0.4	363056.55	91.77	29.5	120.4	
Ge	72	He	166186.72	0.6	177772.18	93.48	29.5	120.4	
Y	89	H2	5311447.15	0.8	5502376.66	96.53	29.5	120.4	
Y	89	He	1397831.16	0.9	1468553.09	95.18	29.5	120.4	
Tb	159	No Gas	15795067.54	1.7	15204271.44	103.89	29.5	120.4	
Tb	159	He	5724317.55	0.9	5847670.12	97.89	29.5	120.4	
Bi	209	No Gas	7465060.42	2.0	6985104.03	106.87	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	055_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 11:16:27
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	24.422	ppb	2.4	121449.88	25	97.69	89.8	110.2	
11	B	6	No Gas	23.768	ppb	1.0	79638.69	25	95.07	89.8	110.2	
23	Na	45	He	5436.191	ppb	1.2	1852510.52	5000	108.72	89.8	110.2	
24	Mg	45	He	5329.483	ppb	0.6	1084226.69	5000	106.59	89.8	110.2	
27	Al	45	He	508.210	ppb	1.7	37831.20	500	101.64	89.8	110.2	
28	Si	45	H2	478.727	ppb	0.7	66770.62	500	95.75	89.8	110.2	
39	K	45	He	5152.715	ppb	0.4	848399.21	5000	103.05	89.8	110.2	
40	Ca	45	H2	5130.626	ppb	0.8	6154286.71	5000	102.61	89.8	110.2	
51	V	89	He	25.499	ppb	1.0	70048.23	25	102	89.8	110.2	
52	Cr	89	He	25.396	ppb	0.2	88550.95	25	101.58	89.8	110.2	
55	Mn	89	He	25.141	ppb	0.5	39172.43	25	100.56	89.8	110.2	
56	Fe	89	H2	4983.880	ppb	1.0	19888222.31	5000	99.68	89.8	110.2	
59	Co	89	He	25.481	ppb	1.8	135453.06	25	101.92	89.8	110.2	
60	Ni	89	He	25.889	ppb	2.0	38003.78	25	103.56	89.8	110.2	
63	Cu	89	He	25.890	ppb	0.7	100288.64	25	103.56	89.8	110.2	
66	Zn	89	He	25.368	ppb	1.7	14608.12	25	101.47	89.8	110.2	
75	As	89	He	25.402	ppb	1.4	11458.30	25	101.61	89.8	110.2	
78	Se	89	H2	25.046	ppb	0.8	4879.97	25	100.18	89.8	110.2	
88	Sr	89	He	24.737	ppb	0.7	46254.45	25	98.95	89.8	110.2	
95	Mo	89	He	25.802	ppb	1.1	54664.78	25	103.21	89.8	110.2	
107	Ag	89	He	26.648	ppb	0.7	176878.19	25	106.59	89.8	110.2	
111	Cd	89	He	26.363	ppb	0.8	22817.11	25	105.45	89.8	110.2	
118	Sn	159	He	24.371	ppb	0.6	44665.02	25	97.48	89.8	110.2	
121	Sb	159	No Gas	24.455	ppb	2.2	364801.46	25	97.82	89.8	110.2	
137	Ba	159	No Gas	24.700	ppb	1.8	135922.15	25	98.8	89.8	110.2	
182	W	159	No Gas	25.317	ppb	1.3	285678.33	25	101.27	89.8	110.2	
205	Tl	209	No Gas	27.119	ppb	2.2	584437.27	25	108.48	89.8	110.2	
208	Pb	209	No Gas	25.379	ppb	1.8	815576.48	25	101.52	89.8	110.2	
232	Th	209	No Gas	26.766	ppb	1.6	775636.31	25	107.06	89.8	110.2	
238	U	209	No Gas	27.613	ppb	1.4	776539.08	25	110.45	89.8	110.2	> +/- 10%

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4341101.47	1.1	4285305.73	101.3	29.5	120.4	
Sc	45	No Gas	8188059.96	1.0	8716701.08	93.94	29.5	120.4	
Sc	45	H2	993451.07	1.9	1073440.43	92.55	29.5	120.4	
Sc	45	He	260227.79	1.7	283880.71	91.67	29.5	120.4	
Ge	72	No Gas	1642429.07	0.6	1715165.05	95.76	29.5	120.4	
Ge	72	H2	324099.48	2.2	363056.55	89.27	29.5	120.4	
Ge	72	He	165083.71	1.5	177772.18	92.86	29.5	120.4	
Y	89	H2	5228161.73	1.6	5502376.66	95.02	29.5	120.4	
Y	89	He	1376349.88	1.2	1468553.09	93.72	29.5	120.4	
Tb	159	No Gas	15647405.88	1.4	15204271.44	102.91	29.5	120.4	
Tb	159	He	5732219.36	1.3	5847670.12	98.03	29.5	120.4	
Bi	209	No Gas	7420217.87	1.4	6985104.03	106.23	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	056_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 11:19:00
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.030	ppb	31.0	172.23	0.2	
11	B	6	No Gas	0.228	ppb	38.7	4266.33	4	
23	Na	45	He	-9.121	ppb	N/A	14657.27	200	
24	Mg	45	He	2.294	ppb	82.8	729.02	20	
27	Al	45	He	0.529	ppb	54.7	103.34	20	
28	Si	45	H2	-1.735	ppb	N/A	5039.98	100	
39	K	45	He	6.858	ppb	66.1	19110.96	200	
40	Ca	45	H2	3.108	ppb	89.7	8023.05	20	
51	V	89	He	-0.038	ppb	N/A	211.12	1	
52	Cr	89	He	0.041	ppb	115.1	802.70	1	
55	Mn	89	He	-0.005	ppb	N/A	149.97	0.4	
56	Fe	89	H2	3.713	ppb	80.9	26187.38	20	
59	Co	89	He	0.007	ppb	76.2	122.23	0.2	
60	Ni	89	He	-0.014	ppb	N/A	500.02	0.4	
63	Cu	89	He	0.074	ppb	28.6	1360.12	0.6	
66	Zn	89	He	-0.150	ppb	N/A	511.14	2	
75	As	89	He	-0.028	ppb	N/A	329.71	1	
78	Se	89	H2	0.034	ppb	25.3	8.00	1	
88	Sr	89	He	0.026	ppb	70.8	65.56	1	
95	Mo	89	He	0.054	ppb	33.8	181.12	1	
107	Ag	89	He	0.015	ppb	68.4	124.45	0.2	
111	Cd	89	He	0.011	ppb	115.4	10.37	0.2	
118	Sn	159	He	0.068	ppb	17.8	538.92	1	
121	Sb	159	No Gas	0.035	ppb	22.0	667.43	0.2	
137	Ba	159	No Gas	0.023	ppb	57.5	226.92	0.4	
182	W	159	No Gas	0.069	ppb	24.7	824.29	1	
205	Tl	209	No Gas	0.012	ppb	124.9	804.26	0.2	
208	Pb	209	No Gas	0.017	ppb	88.1	2572.99	0.2	
232	Th	209	No Gas	0.229	ppb	3.5	6993.08	1	
238	U	209	No Gas	0.035	ppb	29.0	1004.50	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4344466.09	0.5	4285305.73	101.38	29.5	120.4	
Sc	45	No Gas	8218208.65	1.3	8716701.08	94.28	29.5	120.4	
Sc	45	H2	1012112.77	1.9	1073440.43	94.29	29.5	120.4	
Sc	45	He	262787.30	1.1	283880.71	92.57	29.5	120.4	
Ge	72	No Gas	1661962.26	1.2	1715165.05	96.9	29.5	120.4	
Ge	72	H2	328945.04	1.6	363056.55	90.6	29.5	120.4	
Ge	72	He	166654.21	1.2	177772.18	93.75	29.5	120.4	
Y	89	H2	5286913.03	0.5	5502376.66	96.08	29.5	120.4	
Y	89	He	1393246.84	1.1	1468553.09	94.87	29.5	120.4	
Tb	159	No Gas	15714801.15	2.7	15204271.44	103.36	29.5	120.4	
Tb	159	He	5778116.09	1.0	5847670.12	98.81	29.5	120.4	
Bi	209	No Gas	7453698.02	2.3	6985104.03	106.71	29.5	120.4	

Prep Blank (PB) Report

Sample Name	PBSOI15IMS2
File Name	057_PB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 11:21:39
Sample Type	PB
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	6	No Gas	-0.001	ppb	N/A	20.00	0.5	
B	11	6	No Gas	1.147	ppb	17.5	4172.97	10	
Na	23	45	He	-3.779	ppb	N/A	17703.88	500	
Mg	24	45	He	12.144	ppb	10.8	764.52	50	
Al	27	45	He	10.473	ppb	15.8	223.34	50	
Si	28	45	H2	-12.975	ppb	N/A	4879.79	250	
K	39	45	He	59.842	ppb	22.8	20175.26	500	
Ca	40	45	H2	79.325	ppb	0.9	23336.59	50	PB 6020 Fails DoD
V	51	89	He	0.476	ppb	25.1	578.92	2.5	
Cr	52	89	He	0.837	ppb	15.3	1243.84	2.5	
Mn	55	89	He	0.399	ppb	3.6	282.62	1	
Fe	56	89	H2	26.445	ppb	2.9	32119.53	50	
Co	59	89	He	0.051	ppb	103.2	140.01	0.5	
Ni	60	89	He	0.147	ppb	55.0	562.25	1	
Cu	63	89	He	3.461	ppb	3.3	3757.31	1.5	PB 6020 Fails DoD PB 6020 Fails Non-DoD
Zn	66	89	He	3.849	ppb	17.9	1024.52	5	
As	75	89	He	0.124	ppb	70.0	353.04	2.5	
Se	78	89	H2	0.074	ppb	18.6	4.17	2.5	
Sr	88	89	He	0.167	ppb	8.1	78.89	2.5	
Mo	95	89	He	0.133	ppb	29.3	123.34	2.5	
Ag	107	89	He	0.005	ppb	122.8	31.11	0.5	
Cd	111	89	He	0.009	ppb	146.0	2.22	0.5	
Sn	118	159	He	41.824	ppb	0.6	15620.73	2.5	PB 6020 Fails DoD PB 6020 Fails Non-DoD
Sb	121	159	No Gas	0.044	ppb	7.2	276.98	0.5	
Ba	137	159	No Gas	0.288	ppb	12.2	420.48	1	
W	182	159	No Gas	0.072	ppb	21.2	210.24	2.5	
Tl	205	209	No Gas	-0.069	ppb	N/A	240.27	0.5	
Pb	208	209	No Gas	-0.023	ppb	N/A	1838.78	0.5	
Th	232	209	No Gas	0.709	ppb	11.9	4332.30	2.5	
U	238	209	No Gas	0.018	ppb	6.7	116.80	0.5	

QC ISTD Table

Prep Blank (PB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4248554.08	2.6	4285305.73	99.14	29.5	120.4	
Sc	45	No Gas	8303671.09	2.4	8716701.08	95.26	29.5	120.4	
Sc	45	H2	1002447.37	1.1	1073440.43	93.39	29.5	120.4	
Sc	45	He	265812.16	1.0	283880.71	93.64	29.5	120.4	
Ge	72	No Gas	1641822.18	2.3	1715165.05	95.72	29.5	120.4	
Ge	72	H2	320185.99	2.4	363056.55	88.19	29.5	120.4	
Ge	72	He	166300.15	0.9	177772.18	93.55	29.5	120.4	
Y	89	H2	5223554.36	1.2	5502376.66	94.93	29.5	120.4	
Y	89	He	1392570.24	1.4	1468553.09	94.83	29.5	120.4	
Tb	159	No Gas	15672556.43	2.3	15204271.44	103.08	29.5	120.4	
Tb	159	He	5740228.18	1.8	5847670.12	98.16	29.5	120.4	
Bi	209	No Gas	7241045.27	1.5	6985104.03	103.66	29.5	120.4	

Laboratory Control Sample (LCS) Report

Sample Name	LCSOOI15IMS2
File Name	058LCSO.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 11:24:14
Sample Type	LCSO
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	6	No Gas	46.034	ppb	2.7	45810.08	50	18.41	79.5	120.4	
B	11	6	No Gas	456.298	ppb	1.8	295841.18	500	18.25	79.5	120.4	
Na	23	45	He	8752.536	ppb	1.5	617401.06	7500	23.34	79.5	120.4	
Mg	24	45	He	5238.364	ppb	1.5	216466.53	5000	20.95	79.5	120.4	
Al	27	45	He	1967.194	ppb	1.9	29728.44	2000	19.67	79.5	120.4	
Si	28	45	H2	901.735	ppb	0.9	28587.21	1000	18.03	79.5	120.4	
K	39	45	He	11088.102	ppb	1.8	380773.52	10000	22.18	79.5	120.4	
Ca	40	45	H2	2463.935	ppb	0.8	599289.06	2500	19.71	79.5	120.4	
V	51	89	He	485.906	ppb	1.8	269117.96	500	19.44	79.5	120.4	
Cr	52	89	He	197.424	ppb	1.0	138873.55	200	19.74	79.5	120.4	
Mn	55	89	He	493.283	ppb	1.5	154995.81	500	19.73	79.5	120.4	
Fe	56	89	H2	1053.811	ppb	4.5	853410.87	1000	21.08	79.5	120.4	
Co	59	89	He	510.664	ppb	1.9	548851.20	500	20.43	79.5	120.4	
Ni	60	89	He	512.035	ppb	1.1	150490.90	500	20.48	79.5	120.4	
Cu	63	89	He	259.466	ppb	1.1	202214.69	250	20.76	79.5	120.4	
Zn	66	89	He	495.245	ppb	1.5	55957.79	500	19.81	79.5	120.4	
As	75	89	He	98.506	ppb	1.3	9064.61	100	19.7	79.5	120.4	
Se	78	89	H2	95.157	ppb	2.1	3716.83	100	19.03	79.5	120.4	
Sr	88	89	He	482.721	ppb	0.4	182534.59	500	19.31	79.5	120.4	
Mo	95	89	He	99.721	ppb	1.8	42750.15	100	19.94	79.5	120.4	
Ag	107	89	He	51.821	ppb	2.3	69581.45	50	20.73	79.5	120.4	
Cd	111	89	He	251.007	ppb	1.2	43943.74	250	20.08	79.5	120.4	
Sn	118	159	He	529.086	ppb	0.1	193463.24	500	21.16	79.5	120.4	
Sb	121	159	No Gas	96.476	ppb	3.9	288881.93	100	19.3	79.5	120.4	
Ba	137	159	No Gas	1771.005	ppb	3.3	1954756.04	2000	17.71	79.5	120.4	
W	182	159	No Gas	99.504	ppb	2.2	225398.28	100	19.9	79.5	120.4	
Tl	205	209	No Gas	108.315	ppb	4.1	457486.24	100	21.66	79.5	120.4	
[Pb]	206	209	No Gas	101.342	ppb	4.6	160333.91	100	20.27	79.5	120.4	
[Pb]	207	209	No Gas	100.455	ppb	2.0	138689.66	100	20.09	79.5	120.4	
Pb	208	209	No Gas	100.697	ppb	2.6	634599.78	100	20.14	79.5	120.4	
Th	232	209	No Gas	105.104	ppb	3.2	596927.04	100	21.02	79.5	120.4	
U	238	209	No Gas	108.276	ppb	3.9	596587.27	100	21.66	79.5	120.4	

QC ISTD Table

Laboratory Control Sample (LCS) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4343021.04	2.0	4285305.73	101.35	29.5	120.4	
Sc	45	No Gas	8327938.69	1.2	8716701.08	95.54	29.5	120.4	
Sc	45	H2	1000943.80	2.1	1073440.43	93.25	29.5	120.4	
Sc	45	He	264064.45	1.4	283880.71	93.02	29.5	120.4	
Ge	72	No Gas	1669565.36	1.6	1715165.05	97.34	29.5	120.4	
Ge	72	H2	316299.13	1.3	363056.55	87.12	29.5	120.4	
Ge	72	He	166156.25	1.3	177772.18	93.47	29.5	120.4	
Y	89	H2	5239704.00	1.1	5502376.66	95.23	29.5	120.4	
Y	89	He	1392148.12	1.7	1468553.09	94.8	29.5	120.4	
Tb	159	No Gas	15708098.52	2.3	15204271.44	103.31	29.5	120.4	
Tb	159	He	5759308.66	0.6	5847670.12	98.49	29.5	120.4	
Bi	209	No Gas	7273014.58	2.5	6985104.03	104.12	29.5	120.4	

Sample Report

Sample Name SO5599-001

File Name 059SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 11:26:54

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	4.983	ppb	3.8	4769.85	100	
11	B	6	No Gas	16.712	ppb	3.5	13642.42	1000	
23	Na	45	He	1740.954	ppb	1.0	139541.48	200000	
24	Mg	45	He	73528.999	ppb	0.7	3089452.53	200000	
27	Al	45	He	180672.541	ppb	1.2	2773394.30	200000	
28	Si	45	H2	2350.639	ppb	1.9	67101.35	10000	
39	K	45	He	37195.617	ppb	0.5	1256843.40	200000	
40	Ca	45	H2	26997.639	ppb	1.1	6619194.41	200000	
51	V	89	He	545.712	ppb	0.5	315645.16	1000	
52	Cr	89	He	260.578	ppb	0.8	191222.30	2000	
55	Mn	89	He	7401.011	ppb	0.5	2426571.31	2000	
56	Fe	89	H2	243087.282	ppb	0.9	202309118.66	100000	
59	Co	89	He	131.295	ppb	0.8	147459.00	1000	
60	Ni	89	He	241.485	ppb	0.2	74411.95	1000	
63	Cu	89	He	257.011	ppb	0.9	209218.58	2000	
66	Zn	89	He	536.856	ppb	0.3	63303.51	2000	
75	As	89	He	437.943	ppb	0.4	40860.16	1000	
78	Se	89	H2	4.032	ppb	5.4	165.16	1000	
88	Sr	89	He	108.224	ppb	1.1	42753.07	2000	
95	Mo	89	He	11.399	ppb	5.7	5165.61	1000	
107	Ag	89	He	3.006	ppb	6.2	4239.72	100	
111	Cd	89	He	1.191	ppb	1.4	218.52	1000	
118	Sn	159	He	47.630	ppb	2.9	17487.54	1000	
121	Sb	159	No Gas	1.875	ppb	1.9	5747.63	1000	
137	Ba	159	No Gas	975.968	ppb	2.4	1075207.67	2000	
182	W	159	No Gas	2.404	ppb	0.2	5483.96	1000	
205	Tl	209	No Gas	2.271	ppb	1.3	9804.84	1000	
208	Pb	209	No Gas	215.516	ppb	3.0	1314099.53	2000	
232	Th	209	No Gas	56.063	ppb	4.6	308664.34	1000	
238	U	209	No Gas	15.059	ppb	6.1	80396.68	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4161763.49	2.3	4285305.73	97.12	29.5	120.4	
Sc	45	No Gas	8361659.60	2.0	8716701.08	95.93	29.5	120.4	
Sc	45	H2	1015301.72	0.4	1073440.43	94.58	29.5	120.4	
Sc	45	He	268746.84	1.7	283880.71	94.67	29.5	120.4	
Ge	72	No Gas	1627738.07	1.8	1715165.05	94.9	29.5	120.4	
Ge	72	H2	313924.97	0.3	363056.55	86.47	29.5	120.4	
Ge	72	He	167089.16	1.1	177772.18	93.99	29.5	120.4	
Y	89	H2	5454184.83	0.5	5502376.66	99.12	29.5	120.4	
Y	89	He	1453808.10	0.7	1468553.09	99	29.5	120.4	
Tb	159	No Gas	15676077.82	2.2	15204271.44	103.1	29.5	120.4	
Tb	159	He	5661774.22	1.5	5847670.12	96.82	29.5	120.4	
Bi	209	No Gas	7049979.52	3.0	6985104.03	100.93	29.5	120.4	

Sample Report

Sample Name SO5599-002

File Name 060SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 11:29:29

Sample Type Sample

Total Dilution 5.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	5.369	ppb	3.8	5188.90	100	
11	B	6	No Gas	14.560	ppb	6.3	12442.46	1000	
23	Na	45	He	1719.332	ppb	1.3	143082.23	200000	
24	Mg	45	He	68795.099	ppb	0.4	2995900.48	200000	
27	Al	45	He	163399.136	ppb	0.6	2599634.25	200000	
28	Si	45	H2	2230.084	ppb	0.7	65818.36	10000	
39	K	45	He	22015.583	ppb	2.9	778759.77	200000	
40	Ca	45	H2	24005.619	ppb	1.6	6058954.91	200000	
51	V	89	He	368.070	ppb	0.3	214947.58	1000	
52	Cr	89	He	316.335	ppb	0.6	234100.02	2000	
55	Mn	89	He	5904.570	ppb	0.8	1953630.58	2000	
56	Fe	89	H2	211027.481	ppb	1.9	178659329.70	100000	
59	Co	89	He	114.393	ppb	0.5	129660.56	1000	
60	Ni	89	He	256.938	ppb	0.1	79862.11	1000	
63	Cu	89	He	188.555	ppb	0.8	155186.02	2000	
66	Zn	89	He	506.523	ppb	0.4	60308.20	2000	
75	As	89	He	315.575	ppb	1.1	29811.71	1000	
78	Se	89	H2	3.838	ppb	3.9	159.99	1000	
88	Sr	89	He	100.683	ppb	0.4	40136.31	2000	
95	Mo	89	He	8.160	ppb	2.7	3751.76	1000	
107	Ag	89	He	4.287	ppb	4.4	6090.47	100	
111	Cd	89	He	1.279	ppb	3.5	236.67	1000	
118	Sn	159	He	49.952	ppb	0.9	18518.90	1000	
121	Sb	159	No Gas	1.935	ppb	3.3	5911.29	1000	
137	Ba	159	No Gas	538.221	ppb	2.0	591850.85	2000	
182	W	159	No Gas	1.874	ppb	7.4	4275.51	1000	
205	Tl	209	No Gas	2.059	ppb	3.7	8913.11	1000	
208	Pb	209	No Gas	199.482	ppb	2.1	1212377.14	2000	
232	Th	209	No Gas	58.004	ppb	3.3	318354.49	1000	
238	U	209	No Gas	15.770	ppb	2.5	83956.00	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4204504.05	2.5	4285305.73	98.11	29.5	120.4	
Sc	45	No Gas	8589909.61	1.8	8716701.08	98.55	29.5	120.4	
Sc	45	H2	1045283.75	1.9	1073440.43	97.38	29.5	120.4	
Sc	45	He	278553.63	0.7	283880.71	98.12	29.5	120.4	
Ge	72	No Gas	1671940.59	2.4	1715165.05	97.48	29.5	120.4	
Ge	72	H2	323572.97	2.0	363056.55	89.12	29.5	120.4	
Ge	72	He	171583.49	0.8	177772.18	96.52	29.5	120.4	
Y	89	H2	5549166.10	1.3	5502376.66	100.85	29.5	120.4	
Y	89	He	1467082.93	0.6	1468553.09	99.9	29.5	120.4	
Tb	159	No Gas	15643751.99	1.8	15204271.44	102.89	29.5	120.4	
Tb	159	He	5721910.96	1.2	5847670.12	97.85	29.5	120.4	
Bi	209	No Gas	7024368.03	2.4	6985104.03	100.56	29.5	120.4	

Sample Report

Sample Name RINSE

File Name 061SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 11:32:09

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.002	ppb	68.0	28.89	100	
11	B	6	No Gas	0.117	ppb	46.5	3836.20	1000	
23	Na	45	He	-17.839	ppb	N/A	12045.24	200000	
24	Mg	45	He	16.520	ppb	121.5	3783.49	200000	
27	Al	45	He	39.287	ppb	112.7	3121.41	200000	
28	Si	45	H2	0.829	ppb	295.7	5470.62	10000	
39	K	45	He	8.623	ppb	102.6	20005.55	200000	
40	Ca	45	H2	4.273	ppb	120.1	9577.31	200000	
51	V	89	He	0.080	ppb	241.9	558.96	1000	
52	Cr	89	He	0.144	ppb	74.7	1206.63	2000	
55	Mn	89	He	1.650	ppb	118.5	2864.19	2000	
56	Fe	89	H2	38.986	ppb	110.5	175327.49	100000	
59	Co	89	He	0.063	ppb	109.2	442.29	1000	
60	Ni	89	He	0.052	ppb	331.2	618.94	1000	
63	Cu	89	He	0.137	ppb	64.1	1669.07	2000	
66	Zn	89	He	-0.015	ppb	N/A	608.93	2000	
75	As	89	He	0.094	ppb	144.9	398.72	1000	
78	Se	89	H2	0.002	ppb	316.4	1.67	1000	
88	Sr	89	He	0.080	ppb	122.4	174.46	2000	
95	Mo	89	He	0.013	ppb	73.6	97.78	1000	
107	Ag	89	He	0.013	ppb	105.6	115.56	100	
111	Cd	89	He	0.022	ppb	140.3	20.37	1000	
118	Sn	159	He	0.041	ppb	181.6	495.59	1000	
121	Sb	159	No Gas	0.004	ppb	149.7	210.24	1000	
137	Ba	159	No Gas	0.053	ppb	12.1	397.12	2000	
182	W	159	No Gas	0.005	ppb	49.9	100.11	1000	
205	Tl	209	No Gas	-0.017	ppb	N/A	176.87	1000	
208	Pb	209	No Gas	0.024	ppb	13.8	2769.89	2000	
232	Th	209	No Gas	0.082	ppb	5.7	2673.30	1000	
238	U	209	No Gas	0.004	ppb	3.2	116.79	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4263991.76	1.9	4285305.73	99.5	29.5	120.4	
Sc	45	No Gas	8433105.20	1.2	8716701.08	96.75	29.5	120.4	
Sc	45	H2	1030499.40	0.7	1073440.43	96	29.5	120.4	
Sc	45	He	270910.81	1.6	283880.71	95.43	29.5	120.4	
Ge	72	No Gas	1689246.96	2.0	1715165.05	98.49	29.5	120.4	
Ge	72	H2	337448.36	2.1	363056.55	92.95	29.5	120.4	
Ge	72	He	171991.40	0.8	177772.18	96.75	29.5	120.4	
Y	89	H2	5485886.42	1.3	5502376.66	99.7	29.5	120.4	
Y	89	He	1445967.56	0.6	1468553.09	98.46	29.5	120.4	
Tb	159	No Gas	15741527.82	1.4	15204271.44	103.53	29.5	120.4	
Tb	159	He	5871795.40	1.0	5847670.12	100.41	29.5	120.4	
Bi	209	No Gas	7316436.34	2.2	6985104.03	104.74	29.5	120.4	

Sample Report

Sample Name RINSE

File Name 062SMPL.d

Data Path Name D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b

Acq Time 9/24/2021 11:34:44

Sample Type Sample

Total Dilution 1.0000

Sample QC Pass/Fial Pass

ISTD QC Pass/Fail Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	-0.001	ppb	N/A	16.66	100	
11	B	6	No Gas	0.075	ppb	18.0	3761.73	1000	
23	Na	45	He	-18.695	ppb	N/A	11761.23	200000	
24	Mg	45	He	-0.131	ppb	N/A	237.80	200000	
27	Al	45	He	1.215	ppb	34.0	160.01	200000	
28	Si	45	H2	-2.117	ppb	N/A	5136.65	10000	
39	K	45	He	0.541	ppb	141.4	18678.81	200000	
40	Ca	45	H2	0.030	ppb	162.5	4350.83	200000	
51	V	89	He	-0.056	ppb	N/A	165.56	1000	
52	Cr	89	He	0.015	ppb	164.9	729.95	2000	
55	Mn	89	He	0.012	ppb	75.7	181.30	2000	
56	Fe	89	H2	1.464	ppb	14.5	17654.20	100000	
59	Co	89	He	0.005	ppb	113.6	113.34	1000	
60	Ni	89	He	-0.033	ppb	N/A	484.47	1000	
63	Cu	89	He	0.094	ppb	14.5	1477.92	2000	
66	Zn	89	He	-0.166	ppb	N/A	515.58	2000	
75	As	89	He	0.033	ppb	131.5	366.38	1000	
78	Se	89	H2	-0.003	ppb	N/A	0.67	1000	
88	Sr	89	He	0.004	ppb	164.5	24.45	2000	
95	Mo	89	He	-0.003	ppb	N/A	61.12	1000	
107	Ag	89	He	0.001	ppb	175.2	34.45	100	
111	Cd	89	He	0.000	ppb	287.7	1.11	1000	
118	Sn	159	He	0.011	ppb	149.3	443.36	1000	
121	Sb	159	No Gas	0.000	ppb	N/A	143.50	1000	
137	Ba	159	No Gas	0.001	ppb	418.5	110.12	2000	
182	W	159	No Gas	0.003	ppb	15.4	83.43	1000	
205	Tl	209	No Gas	-0.016	ppb	N/A	193.55	1000	
208	Pb	209	No Gas	-0.003	ppb	N/A	1898.85	2000	
232	Th	209	No Gas	0.019	ppb	21.5	861.00	1000	
238	U	209	No Gas	0.000	ppb	123.2	26.69	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4331638.36	1.9	4285305.73	101.08	29.5	120.4	
Sc	45	No Gas	8441737.37	1.6	8716701.08	96.85	29.5	120.4	
Sc	45	H2	1042802.48	2.2	1073440.43	97.15	29.5	120.4	
Sc	45	He	271380.18	0.7	283880.71	95.6	29.5	120.4	
Ge	72	No Gas	1688271.82	1.8	1715165.05	98.43	29.5	120.4	
Ge	72	H2	340900.65	2.0	363056.55	93.9	29.5	120.4	
Ge	72	He	172338.94	1.5	177772.18	96.94	29.5	120.4	
Y	89	H2	5462162.65	2.3	5502376.66	99.27	29.5	120.4	
Y	89	He	1431411.72	0.2	1468553.09	97.47	29.5	120.4	
Tb	159	No Gas	15593732.27	1.5	15204271.44	102.56	29.5	120.4	
Tb	159	He	5891374.22	0.4	5847670.12	100.75	29.5	120.4	
Bi	209	No Gas	7276226.44	1.1	6985104.03	104.17	29.5	120.4	

Prep Blank (PB) Report

Sample Name	PBWOI23IMW2
File Name	063_PB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 11:37:24
Sample Type	PB
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
Be	9	6	No Gas	-0.006	ppb	N/A	15.56	0.5	
B	11	6	No Gas	0.375	ppb	34.4	3728.38	10	
Na	23	45	He	-67.090	ppb	N/A	13671.80	500	
Mg	24	45	He	4.959	ppb	14.9	477.82	50	
Al	27	45	He	7.027	ppb	14.8	175.56	50	
Si	28	45	H2	-4.131	ppb	N/A	5193.41	250	
K	39	45	He	16.900	ppb	126.5	19226.04	500	
Ca	40	45	H2	17.006	ppb	7.7	8397.27	50	
V	51	89	He	0.150	ppb	39.9	406.69	2.5	
Cr	52	89	He	0.284	ppb	34.8	875.88	2.5	
Mn	55	89	He	0.519	ppb	14.5	327.28	1	
Fe	56	89	H2	27.375	ppb	57.1	33757.37	50	
Co	59	89	He	0.009	ppb	149.7	95.56	0.5	
Ni	60	89	He	-0.063	ppb	N/A	512.25	1	
Cu	63	89	He	2.889	ppb	2.5	3387.20	1.5	PB 6020 Fails DoD
Zn	66	89	He	0.878	ppb	18.6	707.83	5	
As	75	89	He	0.146	ppb	286.0	362.71	2.5	
Se	78	89	H2	0.001	ppb	5537.1	1.33	2.5	
Sr	88	89	He	0.033	ppb	60.4	28.89	2.5	
Mo	95	89	He	0.025	ppb	152.5	78.89	2.5	
Ag	107	89	He	0.016	ppb	56.6	46.67	0.5	
Cd	111	89	He	-0.002	ppb	N/A	0.37	0.5	
Sn	118	159	He	0.356	ppb	46.7	547.81	2.5	
Sb	121	159	No Gas	0.014	ppb	42.5	183.54	0.5	
Ba	137	159	No Gas	0.108	ppb	31.3	220.25	1	
W	182	159	No Gas	0.024	ppb	87.4	100.12	2.5	
Tl	205	209	No Gas	-0.082	ppb	N/A	180.20	0.5	
Pb	208	209	No Gas	0.006	ppb	629.8	1995.64	0.5	
Th	232	209	No Gas	0.211	ppb	19.3	1501.77	2.5	
U	238	209	No Gas	0.004	ppb	75.9	40.05	0.5	

QC ISTD Table

Prep Blank (PB) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4291286.97	2.3	4285305.73	100.14	29.5	120.4	
Sc	45	No Gas	8372630.36	1.1	8716701.08	96.05	29.5	120.4	
Sc	45	H2	1019120.74	0.6	1073440.43	94.94	29.5	120.4	
Sc	45	He	272416.00	1.2	283880.71	95.96	29.5	120.4	
Ge	72	No Gas	1666651.58	1.5	1715165.05	97.17	29.5	120.4	
Ge	72	H2	331504.72	0.2	363056.55	91.31	29.5	120.4	
Ge	72	He	171658.66	0.4	177772.18	96.56	29.5	120.4	
Y	89	H2	5378131.74	1.1	5502376.66	97.74	29.5	120.4	
Y	89	He	1423384.92	1.2	1468553.09	96.92	29.5	120.4	
Tb	159	No Gas	15518692.41	1.1	15204271.44	102.07	29.5	120.4	
Tb	159	He	5809135.40	0.9	5847670.12	99.34	29.5	120.4	
Bi	209	No Gas	7145096.46	0.6	6985104.03	102.29	29.5	120.4	

Laboratory Control Sample (LCS) Report

Sample Name	LCSWOI23IMW2
File Name	064LCSW.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 11:39:58
Sample Type	LCSW
Total Dilution	5.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
Be	9	6	No Gas	48.545	ppb	2.9	48379.45	50	19.42	79.5	120.4	
B	11	6	No Gas	474.920	ppb	2.9	308176.93	500	19	79.5	120.4	
Na	23	45	He	8871.371	ppb	0.8	649809.13	7500	23.66	79.5	120.4	DoD
Mg	24	45	He	5372.667	ppb	0.8	230623.65	5000	21.49	79.5	120.4	
Al	27	45	He	2057.312	ppb	0.5	32296.22	2000	20.57	79.5	120.4	
Si	28	45	H2	954.008	ppb	3.8	30610.04	1000	19.08	0	200	
K	39	45	He	11408.763	ppb	0.3	406471.42	10000	22.82	79.5	120.4	
Ca	40	45	H2	2574.225	ppb	2.7	639784.36	2500	20.59	79.5	120.4	
V	51	89	He	510.857	ppb	1.0	290880.87	500	20.43	79.5	120.4	
Cr	52	89	He	205.201	ppb	1.0	148365.24	200	20.52	79.5	120.4	
Mn	55	89	He	514.773	ppb	1.0	166293.79	500	20.59	79.5	120.4	
Fe	56	89	H2	1054.283	ppb	2.2	875864.73	1000	21.09	79.5	120.4	
Co	59	89	He	528.781	ppb	0.3	584370.04	500	21.15	79.5	120.4	
Ni	60	89	He	527.367	ppb	1.0	159330.94	500	21.09	79.5	120.4	
Cu	63	89	He	269.742	ppb	1.0	216083.86	250	21.58	79.5	120.4	
Zn	66	89	He	521.984	ppb	0.4	60609.10	500	20.88	79.5	120.4	
As	75	89	He	103.513	ppb	0.5	9776.17	100	20.7	79.5	120.4	
Se	78	89	H2	100.910	ppb	2.6	4042.41	100	20.18	79.5	120.4	
Sr	88	89	He	503.924	ppb	0.7	195893.98	500	20.16	79.5	120.4	
Mo	95	89	He	104.974	ppb	0.5	46270.51	100	21	79.5	120.4	
Ag	107	89	He	53.148	ppb	1.1	73375.98	50	21.26	79.5	120.4	
Cd	111	89	He	259.053	ppb	1.0	46626.37	250	20.72	79.5	120.4	
Sn	118	159	He	510.086	ppb	0.8	186709.80	500	20.4	79.5	120.4	
Sb	121	159	No Gas	101.640	ppb	2.3	301112.87	100	20.33	79.5	120.4	
Ba	137	159	No Gas	1866.656	ppb	2.1	2038352.16	2000	18.67	79.5	120.4	
W	182	159	No Gas	102.205	ppb	2.4	229010.56	100	20.44	79.5	120.4	
Tl	205	209	No Gas	112.082	ppb	2.7	464432.05	100	22.42	79.5	120.4	
[Pb]	206	209	No Gas	105.511	ppb	2.0	163792.54	100	21.1	79.5	120.4	
[Pb]	207	209	No Gas	105.630	ppb	2.9	143002.52	100	21.13	79.5	120.4	
Pb	208	209	No Gas	105.435	ppb	2.2	651698.67	100	21.09	79.5	120.4	
Th	232	209	No Gas	109.870	ppb	3.4	612052.90	100	21.97	79.5	120.4	
U	238	209	No Gas	111.653	ppb	3.3	603507.99	100	22.33	79.5	120.4	

QC ISTD Table

Laboratory Control Sample (LCS) Report

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4349342.83	1.8	4285305.73	101.49	29.5	120.4	
Sc	45	No Gas	8444507.96	1.0	8716701.08	96.88	29.5	120.4	
Sc	45	H2	1023323.94	1.9	1073440.43	95.33	29.5	120.4	
Sc	45	He	274284.97	1.0	283880.71	96.62	29.5	120.4	
Ge	72	No Gas	1689718.51	1.4	1715165.05	98.52	29.5	120.4	
Ge	72	H2	327272.10	1.5	363056.55	90.14	29.5	120.4	
Ge	72	He	171637.38	0.6	177772.18	96.55	29.5	120.4	
Y	89	H2	5376256.80	2.5	5502376.66	97.71	29.5	120.4	
Y	89	He	1431171.07	1.3	1468553.09	97.45	29.5	120.4	
Tb	159	No Gas	15538231.30	2.2	15204271.44	102.2	29.5	120.4	
Tb	159	He	5764907.55	1.0	5847670.12	98.58	29.5	120.4	
Bi	209	No Gas	7133408.78	2.0	6985104.03	102.12	29.5	120.4	

Sample Report

Sample Name	RINSE
File Name	065SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 11:42:38
Sample Type	Sample
Total Dilution	1.0000
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	0.008	ppb	7.8	62.22	100	
11	B	6	No Gas	0.887	ppb	8.7	6387.20	1000	
23	Na	45	He	-19.757	ppb	N/A	11540.77	200000	
24	Mg	45	He	-0.166	ppb	N/A	233.35	200000	
27	Al	45	He	0.069	ppb	463.0	72.22	200000	
28	Si	45	H2	-1.070	ppb	N/A	5216.77	10000	
39	K	45	He	2.467	ppb	117.8	19255.93	200000	
40	Ca	45	H2	0.244	ppb	127.3	4560.91	200000	
51	V	89	He	-0.045	ppb	N/A	200.01	1000	
52	Cr	89	He	0.005	ppb	246.9	703.23	2000	
55	Mn	89	He	0.032	ppb	41.7	216.63	2000	
56	Fe	89	H2	0.526	ppb	25.4	13732.42	100000	
59	Co	89	He	0.016	ppb	38.6	175.57	1000	
60	Ni	89	He	-0.002	ppb	N/A	538.92	1000	
63	Cu	89	He	0.136	ppb	2.5	1669.05	2000	
66	Zn	89	He	-0.099	ppb	N/A	562.25	2000	
75	As	89	He	0.013	ppb	198.7	362.71	1000	
78	Se	89	H2	0.026	ppb	113.2	6.67	1000	
88	Sr	89	He	0.015	ppb	61.1	46.67	2000	
95	Mo	89	He	0.029	ppb	67.4	133.34	1000	
107	Ag	89	He	0.002	ppb	56.6	37.78	100	
111	Cd	89	He	0.011	ppb	74.6	11.11	1000	
118	Sn	159	He	0.070	ppb	41.1	552.26	1000	
121	Sb	159	No Gas	0.022	ppb	43.5	473.87	1000	
137	Ba	159	No Gas	0.253	ppb	71.3	1498.48	2000	
182	W	159	No Gas	0.037	ppb	10.2	467.20	1000	
205	Tl	209	No Gas	0.001	ppb	2118.7	550.63	1000	
208	Pb	209	No Gas	0.009	ppb	122.2	2292.67	2000	
232	Th	209	No Gas	0.193	ppb	8.7	5851.63	1000	
238	U	209	No Gas	0.019	ppb	73.5	533.95	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4348332.50	2.7	4285305.73	101.47	29.5	120.4	
Sc	45	No Gas	8569171.27	2.4	8716701.08	98.31	29.5	120.4	
Sc	45	H2	1030319.61	1.8	1073440.43	95.98	29.5	120.4	
Sc	45	He	275020.02	0.7	283880.71	96.88	29.5	120.4	
Ge	72	No Gas	1709502.01	1.9	1715165.05	99.67	29.5	120.4	
Ge	72	H2	341269.42	1.1	363056.55	94	29.5	120.4	
Ge	72	He	172980.16	0.2	177772.18	97.3	29.5	120.4	
Y	89	H2	5457675.87	0.4	5502376.66	99.19	29.5	120.4	
Y	89	He	1452840.12	0.5	1468553.09	98.93	29.5	120.4	
Tb	159	No Gas	15607855.74	2.0	15204271.44	102.65	29.5	120.4	
Tb	159	He	5875607.34	0.8	5847670.12	100.48	29.5	120.4	
Bi	209	No Gas	7319558.36	1.6	6985104.03	104.79	29.5	120.4	

Sample Report

Sample Name	RINSE
File Name	066SMPL.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 11:45:14
Sample Type	Sample
Total Dilution	1.0000
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	LDR	QC Flag
9	Be	6	No Gas	-0.002	ppb	N/A	13.33	100	
11	B	6	No Gas	0.202	ppb	12.6	4265.21	1000	
23	Na	45	He	-19.265	ppb	N/A	11701.19	200000	
24	Mg	45	He	-0.371	ppb	N/A	188.90	200000	
27	Al	45	He	0.469	ppb	51.6	103.34	200000	
28	Si	45	H2	-1.585	ppb	N/A	5157.01	10000	
39	K	45	He	0.959	ppb	236.1	18970.77	200000	
40	Ca	45	H2	-0.025	ppb	N/A	4237.44	200000	
51	V	89	He	-0.044	ppb	N/A	200.01	1000	
52	Cr	89	He	0.005	ppb	430.4	700.62	2000	
55	Mn	89	He	-0.003	ppb	N/A	157.97	2000	
56	Fe	89	H2	0.108	ppb	151.2	11985.22	100000	
59	Co	89	He	0.005	ppb	66.9	117.79	1000	
60	Ni	89	He	0.008	ppb	110.8	551.14	1000	
63	Cu	89	He	0.095	ppb	2.4	1496.80	2000	
66	Zn	89	He	-0.148	ppb	N/A	531.14	2000	
75	As	89	He	-0.004	ppb	N/A	353.37	1000	
78	Se	89	H2	0.007	ppb	106.9	2.67	1000	
88	Sr	89	He	0.004	ppb	105.3	24.44	2000	
95	Mo	89	He	0.013	ppb	12.4	97.78	1000	
107	Ag	89	He	0.000	ppb	N/A	22.22	100	
111	Cd	89	He	0.003	ppb	85.4	3.33	1000	
118	Sn	159	He	0.036	ppb	24.3	488.92	1000	
121	Sb	159	No Gas	0.000	ppb	N/A	136.82	1000	
137	Ba	159	No Gas	0.015	ppb	26.1	183.54	2000	
182	W	159	No Gas	0.005	ppb	75.5	106.79	1000	
205	Tl	209	No Gas	-0.018	ppb	N/A	146.83	1000	
208	Pb	209	No Gas	-0.005	ppb	N/A	1865.49	2000	
232	Th	209	No Gas	0.032	ppb	21.4	1264.83	1000	
238	U	209	No Gas	0.002	ppb	85.3	73.42	1000	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4432105.23	1.8	4285305.73	103.43	29.5	120.4	
Sc	45	No Gas	8432701.15	2.1	8716701.08	96.74	29.5	120.4	
Sc	45	H2	1032432.32	1.4	1073440.43	96.18	29.5	120.4	
Sc	45	He	274616.32	1.0	283880.71	96.74	29.5	120.4	
Ge	72	No Gas	1686363.78	2.3	1715165.05	98.32	29.5	120.4	
Ge	72	H2	338433.86	2.1	363056.55	93.22	29.5	120.4	
Ge	72	He	172045.20	0.8	177772.18	96.78	29.5	120.4	
Y	89	H2	5457346.90	1.8	5502376.66	99.18	29.5	120.4	
Y	89	He	1445812.39	0.3	1468553.09	98.45	29.5	120.4	
Tb	159	No Gas	15581988.24	3.0	15204271.44	102.48	29.5	120.4	
Tb	159	He	5885944.43	1.1	5847670.12	100.65	29.5	120.4	
Bi	209	No Gas	7391033.17	2.8	6985104.03	105.81	29.5	120.4	

Continuing Calibration Verification (CCV) Report

Sample Name	CCV
File Name	067_CCV.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 11:47:54
Sample Type	CCV
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	ExpVal	% Rec	%Low	%High	QC Flag
9	Be	6	No Gas	24.829	ppb	3.5	122825.76	25	99.32	89.8	110.2	
11	B	6	No Gas	24.472	ppb	2.4	81466.36	25	97.89	89.8	110.2	
23	Na	45	He	5389.423	ppb	0.4	1942260.72	5000	107.79	89.8	110.2	
24	Mg	45	He	5256.079	ppb	2.0	1130676.96	5000	105.12	89.8	110.2	
27	Al	45	He	504.592	ppb	2.5	39715.07	500	100.92	89.8	110.2	
28	Si	45	H2	476.486	ppb	2.5	70066.84	500	95.3	89.8	110.2	
39	K	45	He	5190.049	ppb	2.9	903451.74	5000	103.8	89.8	110.2	
40	Ca	45	H2	5145.884	ppb	1.8	6505476.91	5000	102.92	89.8	110.2	
51	V	89	He	25.479	ppb	1.8	72919.62	25	101.92	89.8	110.2	
52	Cr	89	He	25.499	ppb	1.7	92616.58	25	102	89.8	110.2	
55	Mn	89	He	25.533	ppb	1.1	41441.80	25	102.13	89.8	110.2	
56	Fe	89	H2	5024.378	ppb	0.5	20899189.49	5000	100.49	89.8	110.2	
59	Co	89	He	25.786	ppb	1.6	142816.49	25	103.14	89.8	110.2	
60	Ni	89	He	25.880	ppb	1.5	39573.67	25	103.52	89.8	110.2	
63	Cu	89	He	26.220	ppb	1.4	105790.04	25	104.88	89.8	110.2	
66	Zn	89	He	25.555	ppb	2.5	15325.61	25	102.22	89.8	110.2	
75	As	89	He	25.444	ppb	2.4	11956.11	25	101.78	89.8	110.2	
78	Se	89	H2	25.104	ppb	0.5	5098.53	25	100.42	89.8	110.2	
88	Sr	89	He	25.209	ppb	2.1	49102.19	25	100.84	89.8	110.2	
95	Mo	89	He	25.600	ppb	0.8	56508.96	25	102.4	89.8	110.2	
107	Ag	89	He	26.308	ppb	1.3	181916.42	25	105.23	89.8	110.2	
111	Cd	89	He	26.049	ppb	1.1	23487.51	25	104.2	89.8	110.2	
118	Sn	159	He	24.938	ppb	1.9	46964.00	25	99.75	89.8	110.2	
121	Sb	159	No Gas	24.837	ppb	2.1	367833.60	25	99.35	89.8	110.2	
137	Ba	159	No Gas	24.981	ppb	2.1	136469.98	25	99.92	89.8	110.2	
182	W	159	No Gas	25.409	ppb	0.8	284720.44	25	101.64	89.8	110.2	
205	Tl	209	No Gas	27.629	ppb	2.3	578014.04	25	110.52	89.8	110.2	> +/- 10%
208	Pb	209	No Gas	25.470	ppb	1.2	794536.31	25	101.88	89.8	110.2	
232	Th	209	No Gas	27.393	ppb	1.6	770555.38	25	109.57	89.8	110.2	
238	U	209	No Gas	27.843	ppb	2.0	759984.13	25	111.37	89.8	110.2	> +/- 10%

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4319422.24	1.9	4285305.73	100.8	29.5	120.4	
Sc	45	No Gas	8527031.21	2.0	8716701.08	97.82	29.5	120.4	
Sc	45	H2	1047204.73	2.1	1073440.43	97.56	29.5	120.4	
Sc	45	He	275151.22	0.2	283880.71	96.92	29.5	120.4	
Ge	72	No Gas	1691334.02	1.6	1715165.05	98.61	29.5	120.4	
Ge	72	H2	336523.84	2.8	363056.55	92.69	29.5	120.4	
Ge	72	He	172117.38	0.6	177772.18	96.82	29.5	120.4	
Y	89	H2	5449580.22	1.5	5502376.66	99.04	29.5	120.4	
Y	89	He	1433841.54	0.3	1468553.09	97.64	29.5	120.4	
Tb	159	No Gas	15535665.18	1.9	15204271.44	102.18	29.5	120.4	
Tb	159	He	5891810.19	0.2	5847670.12	100.75	29.5	120.4	
Bi	209	No Gas	7203094.04	1.9	6985104.03	103.12	29.5	120.4	

Continuing Calibration Blank (CCB) Report

Sample Name	CCB
File Name	068_CCB.d
Data Path Name	D:\Agilent\ICPMH\1\DATA\2021\09-SEP\LOI24A.b
Acq Time	9/24/2021 11:50:28
Sample Type	CCB
Total Dilution	1.0000
Comment	---
ISTD Ref FileName	006CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**admin**

QC Analyte Table

Mass	Name	ISTD	Tune	Conc.	Units	RSD	CPS	Limit	QC Flag
9	Be	6	No Gas	0.035	ppb	35.5	200.01	0.2	
11	B	6	No Gas	0.274	ppb	14.6	4498.63	4	
23	Na	45	He	-16.999	ppb	N/A	12449.12	200	
24	Mg	45	He	0.484	ppb	40.2	371.15	20	
27	Al	45	He	0.274	ppb	29.9	87.78	20	
28	Si	45	H2	-1.605	ppb	N/A	5260.20	100	
39	K	45	He	5.070	ppb	103.5	19581.43	200	
40	Ca	45	H2	1.704	ppb	71.3	6513.17	20	
51	V	89	He	-0.055	ppb	N/A	168.90	1	
52	Cr	89	He	0.018	ppb	120.8	749.28	1	
55	Mn	89	He	-0.018	ppb	N/A	134.64	0.4	
56	Fe	89	H2	2.743	ppb	42.8	23338.74	20	
59	Co	89	He	0.008	ppb	72.2	133.35	0.2	
60	Ni	89	He	-0.040	ppb	N/A	478.92	0.4	
63	Cu	89	He	0.081	ppb	28.2	1443.47	0.6	
66	Zn	89	He	-0.126	ppb	N/A	544.47	2	
75	As	89	He	0.026	ppb	193.0	367.38	1	
78	Se	89	H2	0.027	ppb	36.9	7.00	1	
88	Sr	89	He	0.005	ppb	85.2	25.56	1	
95	Mo	89	He	0.041	ppb	5.1	161.12	1	
107	Ag	89	He	0.007	ppb	41.1	73.34	0.2	
111	Cd	89	He	0.004	ppb	59.5	4.44	0.2	
118	Sn	159	He	0.044	ppb	77.0	503.36	1	
121	Sb	159	No Gas	0.038	ppb	30.6	704.14	0.2	
137	Ba	159	No Gas	0.024	ppb	54.7	230.26	0.4	
182	W	159	No Gas	0.075	ppb	11.6	881.01	1	
205	Tl	209	No Gas	0.018	ppb	63.2	917.74	0.2	
208	Pb	209	No Gas	0.020	ppb	60.6	2619.72	0.2	
232	Th	209	No Gas	0.212	ppb	7.7	6338.79	1	
238	U	209	No Gas	0.037	ppb	25.3	1031.22	0.2	

QC ISTD Table

Name	Mass	Tune Mode	CPS	CPS RSD	Ref CPS	% Rec	%QC Low	%QC High	QC Flag
Li	6	No Gas	4429869.04	2.3	4285305.73	103.37	29.5	120.4	
Sc	45	No Gas	8475327.84	1.5	8716701.08	97.23	29.5	120.4	
Sc	45	H2	1053394.69	1.2	1073440.43	98.13	29.5	120.4	
Sc	45	He	273375.43	0.8	283880.71	96.3	29.5	120.4	
Ge	72	No Gas	1682495.29	2.6	1715165.05	98.1	29.5	120.4	
Ge	72	H2	341898.25	1.7	363056.55	94.17	29.5	120.4	
Ge	72	He	172531.47	0.7	177772.18	97.05	29.5	120.4	
Y	89	H2	5555013.46	1.4	5502376.66	100.96	29.5	120.4	
Y	89	He	1447205.05	0.6	1468553.09	98.55	29.5	120.4	
Tb	159	No Gas	15404487.55	2.3	15204271.44	101.32	29.5	120.4	
Tb	159	He	5878336.51	0.5	5847670.12	100.52	29.5	120.4	
Bi	209	No Gas	7256788.57	1.4	6985104.03	103.89	29.5	120.4	

Logbooks and Supporting Documents

Katahdin Analytical Services, Inc. | **Metals Preparation Benchsheet**

Reagents and Consumables Information: | **Method:** 7470

HNO3: MSr238 H2SO4: Mr239 Digestion Vessles: 20030143-90-0318-MF

KMNO4: Mr3074 K2S2O8: Mr3068 NH2OH-HCl: MC3048

Standards/Spiking Information:

1ppm A : MW80353

Pipet 1ppm B : MW20888

MW LCSW = 125uL of 1ppm A to 25mL

MW Spike(S/P) = 25uL of 1ppm A to 25mL

MW ICV = 600uL of 1ppm B to 100 mL

MW S10.0 = 1000uL of 1ppm A to 100 mL

Heat Source ID : C

Start Time: 8:50 /Temp. 90 °C

End Time: 10:50 /Temp. 90 °C

Thermometer ID/Pos: DIG76 1,45

Sample ID	Batch ID	Initial Wt/Vol	Initial Units	Final Vol	Final Units	MX	Meth	Anal.	Date	Bottle	pH <2
LCSWOG27HGW2	OG27HGW2	0.025	L	0.025	L	AQ	HG	SF	07/27/2021	~	~
PBWOG27HGW2	OG27HGW2		L		L	AQ	HG	SF	07/27/2021	~	~
SO4698-001	OG27HGW2		L		L	AQ	HG	SF	07/27/2021	G	✓
SO4698-002	OG27HGW2		L		L	AQ	HG	SF	07/27/2021	G	
SO4699-001	OG27HGW2		L		L	AQ	HG	SF	07/27/2021	G	
SO4723-001	OG27HGW2		L		L	AQ	HG	SF	07/27/2021	P	
SO4723-001P	OG27HGW2		L		L	AQ	HG	SF	07/27/2021	P	
SO4723-001S	OG27HGW2		L		L	AQ	HG	SF	07/27/2021	P	
SO4723-002	OG27HGW2		L		L	AQ	HG	SF	07/27/2021	F	
SO4723-003	OG27HGW2		L		L	AQ	HG	SF	07/27/2021		
SO4723-004	OG27HGW2		L		L	AQ	HG	SF	07/27/2021		
SO4723-005	OG27HGW2		L		L	AQ	HG	SF	07/27/2021		
SO4723-006	OG27HGW2		L		L	AQ	HG	SF	07/27/2021	~	
SO4723-008	OG27HGW2	"	L	"	L	AQ	HG	SF	07/27/2021	"	
										~	

SF 7/27/21 SO4725-001

client IDs verified-SF

REVIEWED

CD 7-28-21

KATAHDIN ANALYTICAL METALS SECTION

Katahdin Analytical Services 4000238

Katahdin Analytical Services, Inc.

Metals Preparation Benchsheet

Reagents and Consumables Information:

Method: 3010-MS

HNO3: MSC 842 **HCL:** MSC 841 **Digestion Vessels:** ML0005000034

1:1 HNO3: MC 3090 **1:1 HCL:** MC 3082

Pipet **LCS/Spiking Information:**

MA1 **CLPP-SPK-1 (ID/Vol):** MS2338 / 0.05 mL

MA1 **CLPP-SPK-INT1 (ID/Vol):** MW80357 / 0.5 mL

MA1 **CLPP-SPK-INT2 (ID/Vol):** MW80358 / 0.5 mL

— — **Spike (ID/Vol):** — / — mL

Heat Source ID : A

Start Time: 0952 **/Temp.** 90 °C

End Time: 1625 **/Temp.** 95 °C

Thermometer ID/Pos: IAIC 30 / 1.2

Sample ID	Batch ID	Initial Wt/Vol	Initial Units	Final Vol	Final Units	MX	Meth	Anal.	Date	Bottle	pH <2
LCSWOG29IMW2	OG29IMW2	0.05	L	0.05	L	AQ	IM	CD	07/29/2021	-	✓
PBWOG29IMW2	OG29IMW2		L		L	AQ	IM	CD	07/29/2021	-	
SO4723-001	OG29IMW2		L		L	AQ	IM	CD	07/29/2021	Q	
SO4723-001P	OG29IMW2		L		L	AQ	IM	CD	07/29/2021	↓	
SO4723-001S	OG29IMW2		L		L	AQ	IM	CD	07/29/2021	↓	
SO4723-002	OG29IMW2		L		L	AQ	IM	CD	07/29/2021	F	
SO4723-003	OG29IMW2		L		L	AQ	IM	CD	07/29/2021		
SO4723-004	OG29IMW2		L		L	AQ	IM	CD	07/29/2021		
SO4723-005	OG29IMW2		L		L	AQ	IM	CD	07/29/2021		
SO4723-006	OG29IMW2		L		L	AQ	IM	CD	07/29/2021		
SO4723-008	OG29IMW2		L		L	AQ	IM	CD	07/29/2021	↓	
SO4724-001	OG29IMW2		L		L	AQ	IM	CD	07/29/2021	Q	
SO4724-002	OG29IMW2		L		L	AQ	IM	CD	07/29/2021	↓	
SO4724-002P	OG29IMW2		L		L	AQ	IM	CD	07/29/2021	↓	
SO4724-002S	OG29IMW2		L		L	AQ	IM	CD	07/29/2021	F	
SO4724-003	OG29IMW2		L		L	AQ	IM	CD	07/29/2021		
SO4724-004	OG29IMW2		L		L	AQ	IM	CD	07/29/2021		
SO4724-005	OG29IMW2		L		L	AQ	IM	CD	07/29/2021		
SO4724-006	OG29IMW2	↓	L	↓	L	AQ	IM	CD	07/29/2021	↓	↓

Client ID's verified CD 7-29-21

REVIEWED

EP 8/3/21

KATAHDIN ANALYTICAL

METALS SECTION

Digestion performed by: CD / ~~SF~~ **On:** 7-29-21

CD 7-29-21

Katahdin Analytical Services 4000239

Katahdin Analytical Services, Inc.

Metals Preparation Benchsheet

Reagents and Consumables Information:

Method: 3010-MS

HNO3: MSR249 **HCL:** MSR248 **Digestion Vessels:** MLD02600000110

1:1 HNO3: MR3139 **1:1 HCL:** MR3133

Pipet	LCS/Spiking Information:
M9	CLPP-SPK-1 (ID/Vol): M52328 / 0.05 mL
M21	CLPP-SPK-INT1 (ID/Vol): MW20510 / 0.5 mL
M21	CLPP-SPK-INT2 (ID/Vol): MW20482 / 0.5 mL
—	— Spike (ID/Vol): — / — mL

Heat Source ID : A
Start Time: 1149 **/Temp.** 90 °C
End Time: 1705 **/Temp.** 91 °C
Thermometer ID/Pos: ALC30 / 1,6

Sample ID	Batch ID	Initial Wt/Vol	Initial Units	Final Vol	Final Units	MX	Meth	Anal.	Date	Bottle	pH ≤2
LCSWOI23IMW2	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021	—	✓
PBWOI23IMW2	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021	—	
SO4723-001R	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021	R	
SO4723-001RP	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021	R	
SO4723-001RS	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021	R	
SO4723-002R	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021	F	
SO4723-003R	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021		
SO4723-004R	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021		
SO4723-005R	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021		
SO4723-006R	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021		
SO4723-008R	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021		
SO4724-001R	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021		
SO4724-002R	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021	Q	
SO4724-002RP	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021		
SO4724-002RS	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021		
SO4724-003R	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021	F	
SO4724-004R	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021		
SO4724-005R	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021		
SO4724-006R	OI23IMW2	0.05	L	0.05	L	AQ	IM	JT	09/23/2021		

REVIEWED
EQ 9127121
KATAHDIN ANALYTICAL
METALS SECTION

Client IDs Verified
JT 9-23-21

Digestion performed by: JT **On:** 9-23-21

Katahdin Analytical Services 4000240

ANALYTICAL REPORT

Lab Number:	L2140444
Client:	VERINA CONSULTING GROUP, LLC 011 US Highway 22 Suite 302 Bridgewater, NJ 08807
ATTN:	Robert Gan
Phone:	(908) 864-4400
Project Name:	NIKE 58 - SI IN LAUNCH AREA
Project Number:	D01ME0077-02
Report Date:	08/06/21

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Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02

Lab Number: L2140444
Report Date: 08/06/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2140444-01	AA-01-SUMMER2021	AIR	Not Specified	07/24/21 09:25	07/28/21
L2140444-02	IA-01-SUMMER2021	AIR	Not Specified	07/24/21 09:15	07/28/21
L2140444-03	IA-02-SUMMER2021	AIR	Not Specified	07/24/21 09:00	07/28/21
L2140444-04	IA-FD-SUMMER2021	AIR	Not Specified	07/24/21 10:00	07/28/21
L2140444-05	SV-01-SUMMER2021	SOIL_VAPOR	Not Specified	07/24/21 10:20	07/28/21
L2140444-06	SV-02-SUMMER2021	SOIL_VAPOR	Not Specified	07/24/21 10:25	07/28/21
L2140444-07	SV-03-SUMMER2021	SOIL_VAPOR	Not Specified	07/24/21 10:34	07/28/21
L2140444-08	SV-04-SUMMER2021	SOIL_VAPOR	Not Specified	07/24/21 10:50	07/28/21
L2140444-09	SV-FD-SUMMER2021	SOIL_VAPOR	Not Specified	07/24/21 10:35	07/28/21
L2140444-10	UNUSED CAN #1691	SOIL_VAPOR	Not Specified		07/28/21
L2140444-11	UNUSED CAN #1638	SOIL_VAPOR	Not Specified		07/28/21

Project Name:	NIKE 58 - SI IN LAUNCH AREA	**Lab Number:**	L2140444
Project Number:	D01ME0077-02	**Report Date:**	08/06/21

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	NIKE 58 - SI IN LAUNCH AREA	**Lab Number:**	L2140444
Project Number:	D01ME0077-02	**Report Date:**	08/06/21

Case Narrative (continued)

Volatile Organics in Air

Canisters were released from the laboratory on July 16, 2021. The canister certification results are provided as an addendum.

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

L2140444-02D, -03D2, and -04D2: The samples were re-analyzed on dilution in order to quantitate the results within the calibration range. The result(s) should be considered estimated, and are qualified with an E flag, for any compound(s) that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound(s) that exceeded the calibration range.

L2140444-07D: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

DOD-TO15-SIM The WG1531091-4 LCSD recoveries for chloroform (124%) and ethyl acetate (130%) are outside the DOD acceptance limit.

The WG1531091-4 LCS/LCSD RPD(s), associated with L2140444-01, -02, -02D, -03, -03D, -04, -04D, -05, -06, -07D, -08D, and -09, are above the acceptance criteria for ethyl alcohol (34%).

WG1531091-5: The relative percent difference for 4-ethyl toluene is above the RPD limit of 25%. Since the concentration of both the sample and the associated duplicate is less than 5x the reporting limit, no qualification is required per the method.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 08/06/21

AIR

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-01
Client ID: AA-01-SUMMER2021
Sample Location:

Date Collected: 07/24/21 09:25
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method:
Analytical Date: 08/03/21 16:18
Analyst: RY

	ppbV			ug/m3				
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,1,1-Trichloroethane	ND	0.020	0.008	ND	0.109	0.045		1
1,1,2,2-Tetrachloroethane	ND	0.020	0.006	ND	0.137	0.039		1
1,1,2-Trichloroethane	ND	0.020	0.006	ND	0.109	0.032		1
1,1-Dichloroethane	ND	0.020	0.007	ND	0.081	0.030		1
1,1-Dichloroethene	ND	0.020	0.008	ND	0.079	0.033		1
1,2,4-Trimethylbenzene	ND	0.020	0.004	ND	0.098	0.021		1
1,2-Dibromoethane	ND	0.020	0.008	ND	0.154	0.062		1
1,2-Dichlorobenzene	ND	0.020	0.010	ND	0.120	0.059		1
1,2-Dichloroethane	ND	0.020	0.010	ND	0.081	0.039		1
1,2-Dichloropropane	ND	0.020	0.005	ND	0.092	0.025		1
1,3,5-Trimethybenzene	ND	0.020	0.006	ND	0.098	0.028		1
1,3-Butadiene	ND	0.020	0.010	ND	0.044	0.022		1
1,3-Dichlorobenzene	ND	0.020	0.006	ND	0.120	0.034		1
1,4-Dichlorobenzene	ND	0.020	0.005	ND	0.120	0.032		1
1,4-Dioxane	ND	0.100	0.032	ND	0.360	0.115		1
2,2,4-Trimethylpentane	0.014	0.200	0.006	0.065	0.934	0.029	J	1
2-Hexanone	ND	0.200	0.015	ND	0.820	0.062		1
3-Chloropropene	ND	0.200	0.007	ND	0.626	0.021		1
4-Ethyltoluene	ND	0.020	0.004	ND	0.098	0.021		1
Benzene	0.051	0.100	0.005	0.163	0.319	0.016	J	1
Benzyl chloride	ND	0.200	0.007	ND	1.04	0.037		1
Bromodichloromethane	ND	0.020	0.007	ND	0.134	0.045		1
Bromoform	ND	0.020	0.007	ND	0.207	0.067		1

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02

Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-01
Client ID: AA-01-SUMMER2021
Sample Location:

Date Collected: 07/24/21 09:25
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Bromomethane	0.015	0.020	0.009	0.058	0.078	0.033	J	1
Carbon disulfide	0.057	0.200	0.014	0.178	0.623	0.043	J	1
Carbon tetrachloride	0.062	0.020	0.010	0.390	0.126	0.063		1
Chlorobenzene	ND	0.100	0.006	ND	0.461	0.030		1
Chloroethane	ND	0.100	0.014	ND	0.264	0.036		1
Chloroform	0.029	0.020	0.009	0.142	0.098	0.044		1
Chloromethane	0.384	0.200	0.024	0.793	0.413	0.050		1
cis-1,2-Dichloroethene	ND	0.020	0.010	ND	0.079	0.038		1
trans-1,2-Dichloroethene	ND	0.020	0.008	ND	0.079	0.030		1
cis-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
Cyclohexane	0.014	0.200	0.006	0.048	0.688	0.022	J	1
Dibromochloromethane	ND	0.020	0.009	ND	0.170	0.073		1
Dichlorodifluoromethane	0.432	0.200	0.018	2.14	0.989	0.089		1
Ethanol	12.0	5.00	0.329	22.6	9.42	0.620		1
Ethylbenzene	ND	0.020	0.005	ND	0.087	0.021		1
Freon-113	0.059	0.050	0.009	0.452	0.383	0.067		1
Freon-114	0.013	0.050	0.007	0.091	0.349	0.050	J	1
Methylene chloride	0.448	0.500	0.013	1.56	1.74	0.046	J	1
Methyl tert butyl ether	ND	0.200	0.008	ND	0.721	0.030		1
Naphthalene	ND	0.050	0.035	ND	0.262	0.184		1
p/m-Xylene	0.024	0.040	0.019	0.104	0.174	0.083	J	1
o-Xylene	0.012	0.020	0.007	0.052	0.087	0.029	J	1
Heptane	ND	0.200	0.004	ND	0.820	0.017		1
Propylene	0.175	0.500	0.047	0.301	0.861	0.080	J	1
Styrene	0.019	0.020	0.005	0.081	0.085	0.021	J	1
Tertiary butyl Alcohol	0.021	0.500	0.012	0.064	1.52	0.036	J	1

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-01
Client ID: AA-01-SUMMER2021
Sample Location:

Date Collected: 07/24/21 09:25
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Tetrachloroethene	0.020	0.020	0.008	0.136	0.136	0.053		1
Tetrahydrofuran	0.082	0.500	0.007	0.242	1.47	0.020	J	1
Toluene	0.060	0.050	0.014	0.226	0.188	0.053		1
trans-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
Trichloroethene	ND	0.020	0.006	ND	0.107	0.033		1
1,2,4-Trichlorobenzene	ND	0.050	0.030	ND	0.371	0.223		1
Trichlorofluoromethane	0.202	0.050	0.010	1.14	0.281	0.053		1
Vinyl acetate	ND	1.00	0.011	ND	3.52	0.039		1
Vinyl bromide	ND	0.200	0.010	ND	0.874	0.043		1
Hexachlorobutadiene	ND	0.050	0.017	ND	0.533	0.181		1
Vinyl chloride	ND	0.020	0.007	ND	0.051	0.018		1
Isopropylbenzene	ND	0.200	0.005	ND	0.983	0.026		1
Acetone	1.79	1.00	0.299	4.25	2.38	0.710		1
2-Butanone	0.092	0.500	0.027	0.271	1.47	0.080	J	1
4-Methyl-2-pentanone	ND	0.500	0.012	ND	2.05	0.049		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	96		60-140
bromochloromethane	97		60-140
chlorobenzene-d5	98		60-140

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-02
Client ID: IA-01-SUMMER2021
Sample Location:

Date Collected: 07/24/21 09:15
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method:
Analytical Date: 08/03/21 16:58
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
1,1,1-Trichloroethane	ND	0.020	0.008	ND	0.109	0.045		1
1,1,2,2-Tetrachloroethane	ND	0.020	0.006	ND	0.137	0.039		1
1,1,2-Trichloroethane	ND	0.020	0.006	ND	0.109	0.032		1
1,1-Dichloroethane	ND	0.020	0.007	ND	0.081	0.030		1
1,1-Dichloroethene	ND	0.020	0.008	ND	0.079	0.033		1
1,2,4-Trimethylbenzene	0.082	0.020	0.004	0.403	0.098	0.021		1
1,2-Dibromoethane	ND	0.020	0.008	ND	0.154	0.062		1
1,2-Dichlorobenzene	ND	0.020	0.010	ND	0.120	0.059		1
1,2-Dichloroethane	0.067	0.020	0.010	0.271	0.081	0.039		1
1,2-Dichloropropane	ND	0.020	0.005	ND	0.092	0.025		1
1,3,5-Trimethybenzene	0.025	0.020	0.006	0.123	0.098	0.028		1
1,3-Butadiene	0.011	0.020	0.010	0.024	0.044	0.022	J	1
1,3-Dichlorobenzene	ND	0.020	0.006	ND	0.120	0.034		1
1,4-Dichlorobenzene	ND	0.020	0.005	ND	0.120	0.032		1
1,4-Dioxane	0.111	0.100	0.032	0.400	0.360	0.115		1
2,2,4-Trimethylpentane	ND	0.200	0.006	ND	0.934	0.029		1
2-Hexanone	0.086	0.200	0.015	0.352	0.820	0.062	J	1
3-Chloropropene	ND	0.200	0.007	ND	0.626	0.021		1
4-Ethyltoluene	0.017	0.020	0.004	0.084	0.098	0.021	J	1
Benzene	0.101	0.100	0.005	0.323	0.319	0.016		1
Benzyl chloride	ND	0.200	0.007	ND	1.04	0.037		1
Bromodichloromethane	ND	0.020	0.007	ND	0.134	0.045		1
Bromoform	ND	0.020	0.007	ND	0.207	0.067		1

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-02
Client ID: IA-01-SUMMER2021
Sample Location:

Date Collected: 07/24/21 09:15
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Bromomethane	0.010	0.020	0.009	0.039	0.078	0.033	J	1
Carbon disulfide	0.058	0.200	0.014	0.181	0.623	0.043	J	1
Carbon tetrachloride	0.070	0.020	0.010	0.440	0.126	0.063		1
Chlorobenzene	ND	0.100	0.006	ND	0.461	0.030		1
Chloroethane	ND	0.100	0.014	ND	0.264	0.036		1
Chloroform	0.159	0.020	0.009	0.776	0.098	0.044		1
Chloromethane	0.699	0.200	0.024	1.44	0.413	0.050		1
cis-1,2-Dichloroethene	ND	0.020	0.010	ND	0.079	0.038		1
trans-1,2-Dichloroethene	ND	0.020	0.008	ND	0.079	0.030		1
cis-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
Cyclohexane	0.055	0.200	0.006	0.189	0.688	0.022	J	1
Dibromochloromethane	ND	0.020	0.009	ND	0.170	0.073		1
Dichlorodifluoromethane	0.452	0.200	0.018	2.24	0.989	0.089		1
Ethanol	2810	5.00	0.329	5290	9.42	0.620	E	1
Ethylbenzene	0.092	0.020	0.005	0.400	0.087	0.021		1
Freon-113	0.062	0.050	0.009	0.475	0.383	0.067		1
Freon-114	0.015	0.050	0.007	0.105	0.349	0.050	J	1
Methylene chloride	0.172	0.500	0.013	0.598	1.74	0.046	J	1
Methyl tert butyl ether	ND	0.200	0.008	ND	0.721	0.030		1
Naphthalene	ND	0.050	0.035	ND	0.262	0.184		1
p/m-Xylene	0.295	0.040	0.019	1.28	0.174	0.083		1
o-Xylene	0.138	0.020	0.007	0.599	0.087	0.029		1
Heptane	0.090	0.200	0.004	0.369	0.820	0.017	J	1
Propylene	0.377	0.500	0.047	0.649	0.861	0.080	J	1
Styrene	0.327	0.020	0.005	1.39	0.085	0.021		1
Tertiary butyl Alcohol	3.18	0.500	0.012	9.64	1.52	0.036		1

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-02
Client ID: IA-01-SUMMER2021
Sample Location:

Date Collected: 07/24/21 09:15
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Tetrachloroethene	0.012	0.020	0.008	0.081	0.136	0.053	J	1
Tetrahydrofuran	0.382	0.500	0.007	1.13	1.47	0.020	J	1
Toluene	0.393	0.050	0.014	1.48	0.188	0.053		1
trans-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
Trichloroethene	0.647	0.020	0.006	3.48	0.107	0.033		1
1,2,4-Trichlorobenzene	ND	0.050	0.030	ND	0.371	0.223		1
Trichlorofluoromethane	5.29	0.050	0.010	29.7	0.281	0.053		1
Vinyl acetate	ND	1.00	0.011	ND	3.52	0.039		1
Vinyl bromide	ND	0.200	0.010	ND	0.874	0.043		1
Hexachlorobutadiene	ND	0.050	0.017	ND	0.533	0.181		1
Vinyl chloride	ND	0.020	0.007	ND	0.051	0.018		1
Isopropylbenzene	0.044	0.200	0.005	0.216	0.983	0.026	J	1
Acetone	20.8	1.00	0.299	49.4	2.38	0.710		1
2-Butanone	0.846	0.500	0.027	2.50	1.47	0.080		1
4-Methyl-2-pentanone	0.086	0.500	0.012	0.352	2.05	0.049	J	1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	97		60-140
bromochloromethane	97		60-140
chlorobenzene-d5	97		60-140

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02

Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-02 D
Client ID: IA-01-SUMMER2021
Sample Location:

Date Collected: 07/24/21 09:15
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method:
Analytical Date: 08/04/21 06:07
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Ethanol	4240	366	24.0	7990	690	45.2		73.1

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	93		60-140
bromochloromethane	86		60-140
chlorobenzene-d5	91		60-140

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-03
Client ID: IA-02-SUMMER2021
Sample Location:

Date Collected: 07/24/21 09:00
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method:
Analytical Date: 08/03/21 17:38
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
1,1,1-Trichloroethane	0.018	0.020	0.008	0.098	0.109	0.045	J	1
1,1,2,2-Tetrachloroethane	ND	0.020	0.006	ND	0.137	0.039		1
1,1,2-Trichloroethane	ND	0.020	0.006	ND	0.109	0.032		1
1,1-Dichloroethane	ND	0.020	0.007	ND	0.081	0.030		1
1,1-Dichloroethene	ND	0.020	0.008	ND	0.079	0.033		1
1,2,4-Trimethylbenzene	0.093	0.020	0.004	0.457	0.098	0.021		1
1,2-Dibromoethane	ND	0.020	0.008	ND	0.154	0.062		1
1,2-Dichlorobenzene	ND	0.020	0.010	ND	0.120	0.059		1
1,2-Dichloroethane	0.062	0.020	0.010	0.251	0.081	0.039		1
1,2-Dichloropropane	0.020	0.020	0.005	0.092	0.092	0.025		1
1,3,5-Trimethybenzene	0.029	0.020	0.006	0.143	0.098	0.028		1
1,3-Butadiene	0.013	0.020	0.010	0.029	0.044	0.022	J	1
1,3-Dichlorobenzene	ND	0.020	0.006	ND	0.120	0.034		1
1,4-Dichlorobenzene	0.010	0.020	0.005	0.060	0.120	0.032	J	1
1,4-Dioxane	0.143	0.100	0.032	0.515	0.360	0.115		1
2,2,4-Trimethylpentane	ND	0.200	0.006	ND	0.934	0.029		1
2-Hexanone	0.095	0.200	0.015	0.389	0.820	0.062	J	1
3-Chloropropene	ND	0.200	0.007	ND	0.626	0.021		1
4-Ethyltoluene	0.019	0.020	0.004	0.093	0.098	0.021	J	1
Benzene	0.097	0.100	0.005	0.310	0.319	0.016	J	1
Benzyl chloride	ND	0.200	0.007	ND	1.04	0.037		1
Bromodichloromethane	ND	0.020	0.007	ND	0.134	0.045		1
Bromoform	ND	0.020	0.007	ND	0.207	0.067		1

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-03
Client ID: IA-02-SUMMER2021
Sample Location:

Date Collected: 07/24/21 09:00
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Bromomethane	0.012	0.020	0.009	0.047	0.078	0.033	J	1
Carbon disulfide	0.057	0.200	0.014	0.178	0.623	0.043	J	1
Carbon tetrachloride	0.065	0.020	0.010	0.409	0.126	0.063		1
Chlorobenzene	ND	0.100	0.006	ND	0.461	0.030		1
Chloroethane	0.016	0.100	0.014	0.042	0.264	0.036	J	1
Chloroform	0.145	0.020	0.009	0.708	0.098	0.044		1
Chloromethane	0.689	0.200	0.024	1.42	0.413	0.050		1
cis-1,2-Dichloroethene	ND	0.020	0.010	ND	0.079	0.038		1
trans-1,2-Dichloroethene	ND	0.020	0.008	ND	0.079	0.030		1
cis-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
Cyclohexane	0.071	0.200	0.006	0.244	0.688	0.022	J	1
Dibromochloromethane	ND	0.020	0.009	ND	0.170	0.073		1
Dichlorodifluoromethane	0.392	0.200	0.018	1.94	0.989	0.089		1
Ethanol	2510	5.00	0.329	4730	9.42	0.620	E	1
Ethylbenzene	0.096	0.020	0.005	0.417	0.087	0.021		1
Freon-113	0.051	0.050	0.009	0.391	0.383	0.067		1
Freon-114	0.014	0.050	0.007	0.098	0.349	0.050	J	1
Methylene chloride	0.129	0.500	0.013	0.448	1.74	0.046	J	1
Methyl tert butyl ether	ND	0.200	0.008	ND	0.721	0.030		1
Naphthalene	ND	0.050	0.035	ND	0.262	0.184		1
p/m-Xylene	0.296	0.040	0.019	1.29	0.174	0.083		1
o-Xylene	0.127	0.020	0.007	0.552	0.087	0.029		1
Heptane	0.102	0.200	0.004	0.418	0.820	0.017	J	1
Propylene	0.377	0.500	0.047	0.649	0.861	0.080	J	1
Styrene	0.457	0.020	0.005	1.95	0.085	0.021		1
Tertiary butyl Alcohol	3.10	0.500	0.012	9.40	1.52	0.036		1

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-03
Client ID: IA-02-SUMMER2021
Sample Location:

Date Collected: 07/24/21 09:00
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Tetrachloroethene	ND	0.020	0.008	ND	0.136	0.053		1
Tetrahydrofuran	0.238	0.500	0.007	0.702	1.47	0.020	J	1
Toluene	0.452	0.050	0.014	1.70	0.188	0.053		1
trans-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
Trichloroethene	0.795	0.020	0.006	4.27	0.107	0.033		1
1,2,4-Trichlorobenzene	ND	0.050	0.030	ND	0.371	0.223		1
Trichlorofluoromethane	4.31	0.050	0.010	24.2	0.281	0.053		1
Vinyl acetate	ND	1.00	0.011	ND	3.52	0.039		1
Vinyl bromide	ND	0.200	0.010	ND	0.874	0.043		1
Hexachlorobutadiene	ND	0.050	0.017	ND	0.533	0.181		1
Vinyl chloride	ND	0.020	0.007	ND	0.051	0.018		1
Isopropylbenzene	0.041	0.200	0.005	0.202	0.983	0.026	J	1
Acetone	21.0	1.00	0.299	49.9	2.38	0.710		1
2-Butanone	0.793	0.500	0.027	2.34	1.47	0.080		1
4-Methyl-2-pentanone	0.069	0.500	0.012	0.283	2.05	0.049	J	1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	99		60-140
bromochloromethane	116		60-140
chlorobenzene-d5	98		60-140

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02

Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-03 D
Client ID: IA-02-SUMMER2021
Sample Location:

Date Collected: 07/24/21 09:00
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method:
Analytical Date: 08/04/21 06:43
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Ethanol	4640	376	24.8	8740	708	46.7		75.3

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	95		60-140
bromochloromethane	88		60-140
chlorobenzene-d5	93		60-140

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-04
Client ID: IA-FD-SUMMER2021
Sample Location:

Date Collected: 07/24/21 10:00
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method:
Analytical Date: 08/03/21 18:18
Analyst: RY

	ppbV			ug/m3				
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,1,1-Trichloroethane	ND	0.020	0.008	ND	0.109	0.045		1
1,1,2,2-Tetrachloroethane	ND	0.020	0.006	ND	0.137	0.039		1
1,1,2-Trichloroethane	ND	0.020	0.006	ND	0.109	0.032		1
1,1-Dichloroethane	ND	0.020	0.007	ND	0.081	0.030		1
1,1-Dichloroethene	ND	0.020	0.008	ND	0.079	0.033		1
1,2,4-Trimethylbenzene	0.092	0.020	0.004	0.452	0.098	0.021		1
1,2-Dibromoethane	ND	0.020	0.008	ND	0.154	0.062		1
1,2-Dichlorobenzene	ND	0.020	0.010	ND	0.120	0.059		1
1,2-Dichloroethane	0.055	0.020	0.010	0.223	0.081	0.039		1
1,2-Dichloropropane	0.022	0.020	0.005	0.102	0.092	0.025		1
1,3,5-Trimethybenzene	0.028	0.020	0.006	0.138	0.098	0.028		1
1,3-Butadiene	ND	0.020	0.010	ND	0.044	0.022		1
1,3-Dichlorobenzene	0.016	0.020	0.006	0.096	0.120	0.034	J	1
1,4-Dichlorobenzene	ND	0.020	0.005	ND	0.120	0.032		1
1,4-Dioxane	0.121	0.100	0.032	0.436	0.360	0.115		1
2,2,4-Trimethylpentane	ND	0.200	0.006	ND	0.934	0.029		1
2-Hexanone	0.094	0.200	0.015	0.385	0.820	0.062	J	1
3-Chloropropene	ND	0.200	0.007	ND	0.626	0.021		1
4-Ethyltoluene	0.018	0.020	0.004	0.089	0.098	0.021	J	1
Benzene	0.092	0.100	0.005	0.294	0.319	0.016	J	1
Benzyl chloride	ND	0.200	0.007	ND	1.04	0.037		1
Bromodichloromethane	ND	0.020	0.007	ND	0.134	0.045		1
Bromoform	ND	0.020	0.007	ND	0.207	0.067		1

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-04
Client ID: IA-FD-SUMMER2021
Sample Location:

Date Collected: 07/24/21 10:00
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Bromomethane	ND	0.020	0.009	ND	0.078	0.033		1
Carbon disulfide	0.049	0.200	0.014	0.153	0.623	0.043	J	1
Carbon tetrachloride	0.062	0.020	0.010	0.390	0.126	0.063		1
Chlorobenzene	ND	0.100	0.006	ND	0.461	0.030		1
Chloroethane	0.020	0.100	0.014	0.053	0.264	0.036	J	1
Chloroform	0.136	0.020	0.009	0.664	0.098	0.044		1
Chloromethane	0.609	0.200	0.024	1.26	0.413	0.050		1
cis-1,2-Dichloroethene	ND	0.020	0.010	ND	0.079	0.038		1
trans-1,2-Dichloroethene	ND	0.020	0.008	ND	0.079	0.030		1
cis-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
Cyclohexane	0.059	0.200	0.006	0.203	0.688	0.022	J	1
Dibromochloromethane	ND	0.020	0.009	ND	0.170	0.073		1
Dichlorodifluoromethane	0.387	0.200	0.018	1.91	0.989	0.089		1
Ethanol	2500	5.00	0.329	4710	9.42	0.620	E	1
Ethylbenzene	0.096	0.020	0.005	0.417	0.087	0.021		1
Freon-113	0.055	0.050	0.009	0.422	0.383	0.067		1
Freon-114	0.012	0.050	0.007	0.084	0.349	0.050	J	1
Methylene chloride	0.127	0.500	0.013	0.441	1.74	0.046	J	1
Methyl tert butyl ether	ND	0.200	0.008	ND	0.721	0.030		1
Naphthalene	ND	0.050	0.035	ND	0.262	0.184		1
p/m-Xylene	0.320	0.040	0.019	1.39	0.174	0.083		1
o-Xylene	0.145	0.020	0.007	0.630	0.087	0.029		1
Heptane	0.096	0.200	0.004	0.393	0.820	0.017	J	1
Propylene	0.325	0.500	0.047	0.559	0.861	0.080	J	1
Styrene	0.326	0.020	0.005	1.39	0.085	0.021		1
Tertiary butyl Alcohol	2.72	0.500	0.012	8.25	1.52	0.036		1

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-04
Client ID: IA-FD-SUMMER2021
Sample Location:

Date Collected: 07/24/21 10:00
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Tetrachloroethene	0.014	0.020	0.008	0.095	0.136	0.053	J	1
Tetrahydrofuran	0.353	0.500	0.007	1.04	1.47	0.020	J	1
Toluene	0.483	0.050	0.014	1.82	0.188	0.053		1
trans-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
Trichloroethene	0.637	0.020	0.006	3.42	0.107	0.033		1
1,2,4-Trichlorobenzene	ND	0.050	0.030	ND	0.371	0.223		1
Trichlorofluoromethane	4.47	0.050	0.010	25.1	0.281	0.053		1
Vinyl acetate	ND	1.00	0.011	ND	3.52	0.039		1
Vinyl bromide	ND	0.200	0.010	ND	0.874	0.043		1
Hexachlorobutadiene	ND	0.050	0.017	ND	0.533	0.181		1
Vinyl chloride	ND	0.020	0.007	ND	0.051	0.018		1
Isopropylbenzene	0.044	0.200	0.005	0.216	0.983	0.026	J	1
Acetone	18.5	1.00	0.299	43.9	2.38	0.710		1
2-Butanone	0.802	0.500	0.027	2.37	1.47	0.080		1
4-Methyl-2-pentanone	0.074	0.500	0.012	0.303	2.05	0.049	J	1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	100		60-140
bromochloromethane	116		60-140
chlorobenzene-d5	99		60-140

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02

Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-04 D
Client ID: IA-FD-SUMMER2021
Sample Location:

Date Collected: 07/24/21 10:00
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method:
Analytical Date: 08/04/21 07:19
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Ethanol	5530	380	25.0	10400	716	47.1		75.99

Internal Standard	**% Recovery**	**Qualifier**	**Acceptance Criteria**
1,4-difluorobenzene	96		60-140
bromochloromethane	89		60-140
chlorobenzene-d5	95		60-140

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-05
Client ID: SV-01-SUMMER2021
Sample Location:

Date Collected: 07/24/21 10:20
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method:
Analytical Date: 08/03/21 18:57
Analyst: RY

	ppbV			ug/m3				
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,1,1-Trichloroethane	ND	0.020	0.008	ND	0.109	0.045		1
1,1,2,2-Tetrachloroethane	ND	0.020	0.006	ND	0.137	0.039		1
1,1,2-Trichloroethane	ND	0.020	0.006	ND	0.109	0.032		1
1,1-Dichloroethane	ND	0.020	0.007	ND	0.081	0.030		1
1,1-Dichloroethene	ND	0.020	0.008	ND	0.079	0.033		1
1,2,4-Trimethylbenzene	0.031	0.020	0.004	0.152	0.098	0.021		1
1,2-Dibromoethane	ND	0.020	0.008	ND	0.154	0.062		1
1,2-Dichlorobenzene	ND	0.020	0.010	ND	0.120	0.059		1
1,2-Dichloroethane	ND	0.020	0.010	ND	0.081	0.039		1
1,2-Dichloropropane	ND	0.020	0.005	ND	0.092	0.025		1
1,3,5-Trimethybenzene	ND	0.020	0.006	ND	0.098	0.028		1
1,3-Butadiene	ND	0.020	0.010	ND	0.044	0.022		1
1,3-Dichlorobenzene	0.035	0.020	0.006	0.210	0.120	0.034		1
1,4-Dichlorobenzene	ND	0.020	0.005	ND	0.120	0.032		1
1,4-Dioxane	ND	0.100	0.032	ND	0.360	0.115		1
2,2,4-Trimethylpentane	ND	0.200	0.006	ND	0.934	0.029		1
2-Hexanone	ND	0.200	0.015	ND	0.820	0.062		1
3-Chloropropene	ND	0.200	0.007	ND	0.626	0.021		1
4-Ethyltoluene	ND	0.020	0.004	ND	0.098	0.021		1
Benzene	0.036	0.100	0.005	0.115	0.319	0.016	J	1
Benzyl chloride	ND	0.200	0.007	ND	1.04	0.037		1
Bromodichloromethane	ND	0.020	0.007	ND	0.134	0.045		1
Bromoform	ND	0.020	0.007	ND	0.207	0.067		1

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-05
Client ID: SV-01-SUMMER2021
Sample Location:

Date Collected: 07/24/21 10:20
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Bromomethane	ND	0.020	0.009	ND	0.078	0.033		1
Carbon disulfide	0.025	0.200	0.014	0.078	0.623	0.043	J	1
Carbon tetrachloride	0.067	0.020	0.010	0.421	0.126	0.063		1
Chlorobenzene	ND	0.100	0.006	ND	0.461	0.030		1
Chloroethane	ND	0.100	0.014	ND	0.264	0.036		1
Chloroform	0.067	0.020	0.009	0.327	0.098	0.044		1
Chloromethane	0.210	0.200	0.024	0.434	0.413	0.050		1
cis-1,2-Dichloroethene	ND	0.020	0.010	ND	0.079	0.038		1
trans-1,2-Dichloroethene	ND	0.020	0.008	ND	0.079	0.030		1
cis-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
Cyclohexane	0.156	0.200	0.006	0.537	0.688	0.022	J	1
Dibromochloromethane	ND	0.020	0.009	ND	0.170	0.073		1
Dichlorodifluoromethane	0.686	0.200	0.018	3.39	0.989	0.089		1
Ethanol	41.6	5.00	0.329	78.4	9.42	0.620		1
Ethylbenzene	0.013	0.020	0.005	0.057	0.087	0.021	J	1
Freon-113	0.052	0.050	0.009	0.399	0.383	0.067		1
Freon-114	0.011	0.050	0.007	0.077	0.349	0.050	J	1
Methylene chloride	0.367	0.500	0.013	1.27	1.74	0.046	J	1
Methyl tert butyl ether	ND	0.200	0.008	ND	0.721	0.030		1
Naphthalene	ND	0.050	0.035	ND	0.262	0.184		1
p/m-Xylene	0.040	0.040	0.019	0.174	0.174	0.083		1
o-Xylene	0.019	0.020	0.007	0.083	0.087	0.029	J	1
Heptane	0.019	0.200	0.004	0.078	0.820	0.017	J	1
Propylene	0.151	0.500	0.047	0.260	0.861	0.080	J	1
Styrene	0.026	0.020	0.005	0.111	0.085	0.021		1
Tertiary butyl Alcohol	0.067	0.500	0.012	0.203	1.52	0.036	J	1

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-05
Client ID: SV-01-SUMMER2021
Sample Location:

Date Collected: 07/24/21 10:20
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Tetrachloroethene	0.022	0.020	0.008	0.149	0.136	0.053		1
Tetrahydrofuran	0.288	0.500	0.007	0.849	1.47	0.020	J	1
Toluene	0.066	0.050	0.014	0.249	0.188	0.053		1
trans-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
Trichloroethene	0.452	0.020	0.006	2.43	0.107	0.033		1
1,2,4-Trichlorobenzene	ND	0.050	0.030	ND	0.371	0.223		1
Trichlorofluoromethane	30.9	0.050	0.010	174	0.281	0.053		1
Vinyl acetate	ND	1.00	0.011	ND	3.52	0.039		1
Vinyl bromide	ND	0.200	0.010	ND	0.874	0.043		1
Hexachlorobutadiene	ND	0.050	0.017	ND	0.533	0.181		1
Vinyl chloride	ND	0.020	0.007	ND	0.051	0.018		1
Isopropylbenzene	ND	0.200	0.005	ND	0.983	0.026		1
Acetone	0.837	1.00	0.299	1.99	2.38	0.710	J	1
2-Butanone	0.123	0.500	0.027	0.363	1.47	0.080	J	1
4-Methyl-2-pentanone	0.028	0.500	0.012	0.115	2.05	0.049	J	1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	98		60-140
bromochloromethane	116		60-140
chlorobenzene-d5	99		60-140

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-06
Client ID: SV-02-SUMMER2021
Sample Location:

Date Collected: 07/24/21 10:25
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method:
Analytical Date: 08/03/21 19:35
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
1,1,1-Trichloroethane	0.034	0.020	0.008	0.186	0.109	0.045		1
1,1,2,2-Tetrachloroethane	ND	0.020	0.006	ND	0.137	0.039		1
1,1,2-Trichloroethane	ND	0.020	0.006	ND	0.109	0.032		1
1,1-Dichloroethane	ND	0.020	0.007	ND	0.081	0.030		1
1,1-Dichloroethene	ND	0.020	0.008	ND	0.079	0.033		1
1,2,4-Trimethylbenzene	0.168	0.020	0.004	0.826	0.098	0.021		1
1,2-Dibromoethane	ND	0.020	0.008	ND	0.154	0.062		1
1,2-Dichlorobenzene	ND	0.020	0.010	ND	0.120	0.059		1
1,2-Dichloroethane	ND	0.020	0.010	ND	0.081	0.039		1
1,2-Dichloropropane	ND	0.020	0.005	ND	0.092	0.025		1
1,3,5-Trimethybenzene	0.029	0.020	0.006	0.143	0.098	0.028		1
1,3-Butadiene	0.015	0.020	0.010	0.033	0.044	0.022	J	1
1,3-Dichlorobenzene	0.120	0.020	0.006	0.721	0.120	0.034		1
1,4-Dichlorobenzene	ND	0.020	0.005	ND	0.120	0.032		1
1,4-Dioxane	ND	0.100	0.032	ND	0.360	0.115		1
2,2,4-Trimethylpentane	ND	0.200	0.006	ND	0.934	0.029		1
2-Hexanone	0.020	0.200	0.015	0.082	0.820	0.062	J	1
3-Chloropropene	ND	0.200	0.007	ND	0.626	0.021		1
4-Ethyltoluene	0.020	0.020	0.004	0.098	0.098	0.021		1
Benzene	0.032	0.100	0.005	0.102	0.319	0.016	J	1
Benzyl chloride	ND	0.200	0.007	ND	1.04	0.037		1
Bromodichloromethane	0.042	0.020	0.007	0.281	0.134	0.045		1
Bromoform	ND	0.020	0.007	ND	0.207	0.067		1

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-06
Client ID: SV-02-SUMMER2021
Sample Location:

Date Collected: 07/24/21 10:25
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Bromomethane	ND	0.020	0.009	ND	0.078	0.033		1
Carbon disulfide	0.019	0.200	0.014	0.059	0.623	0.043	J	1
Carbon tetrachloride	0.061	0.020	0.010	0.384	0.126	0.063		1
Chlorobenzene	ND	0.100	0.006	ND	0.461	0.030		1
Chloroethane	ND	0.100	0.014	ND	0.264	0.036		1
Chloroform	2.86	0.020	0.009	14.0	0.098	0.044		1
Chloromethane	0.123	0.200	0.024	0.254	0.413	0.050	J	1
cis-1,2-Dichloroethene	ND	0.020	0.010	ND	0.079	0.038		1
trans-1,2-Dichloroethene	ND	0.020	0.008	ND	0.079	0.030		1
cis-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
Cyclohexane	0.134	0.200	0.006	0.461	0.688	0.022	J	1
Dibromochloromethane	ND	0.020	0.009	ND	0.170	0.073		1
Dichlorodifluoromethane	0.450	0.200	0.018	2.23	0.989	0.089		1
Ethanol	61.9	5.00	0.329	117	9.42	0.620		1
Ethylbenzene	0.032	0.020	0.005	0.139	0.087	0.021		1
Freon-113	0.053	0.050	0.009	0.406	0.383	0.067		1
Freon-114	0.013	0.050	0.007	0.091	0.349	0.050	J	1
Methylene chloride	0.288	0.500	0.013	1.00	1.74	0.046	J	1
Methyl tert butyl ether	ND	0.200	0.008	ND	0.721	0.030		1
Naphthalene	0.038	0.050	0.035	0.199	0.262	0.184	J	1
p/m-Xylene	0.116	0.040	0.019	0.504	0.174	0.083		1
o-Xylene	0.056	0.020	0.007	0.243	0.087	0.029		1
Heptane	0.032	0.200	0.004	0.131	0.820	0.017	J	1
Propylene	0.417	0.500	0.047	0.718	0.861	0.080	J	1
Styrene	0.089	0.020	0.005	0.379	0.085	0.021		1
Tertiary butyl Alcohol	0.134	0.500	0.012	0.406	1.52	0.036	J	1

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-06
Client ID: SV-02-SUMMER2021
Sample Location:

Date Collected: 07/24/21 10:25
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Tetrachloroethene	0.025	0.020	0.008	0.170	0.136	0.053		1
Tetrahydrofuran	0.250	0.500	0.007	0.737	1.47	0.020	J	1
Toluene	0.098	0.050	0.014	0.369	0.188	0.053		1
trans-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
Trichloroethene	1.55	0.020	0.006	8.33	0.107	0.033		1
1,2,4-Trichlorobenzene	ND	0.050	0.030	ND	0.371	0.223		1
Trichlorofluoromethane	14.9	0.050	0.010	83.7	0.281	0.053		1
Vinyl acetate	ND	1.00	0.011	ND	3.52	0.039		1
Vinyl bromide	ND	0.200	0.010	ND	0.874	0.043		1
Hexachlorobutadiene	ND	0.050	0.017	ND	0.533	0.181		1
Vinyl chloride	ND	0.020	0.007	ND	0.051	0.018		1
Isopropylbenzene	0.012	0.200	0.005	0.059	0.983	0.026	J	1
Acetone	1.29	1.00	0.299	3.06	2.38	0.710		1
2-Butanone	0.191	0.500	0.027	0.563	1.47	0.080	J	1
4-Methyl-2-pentanone	0.030	0.500	0.012	0.123	2.05	0.049	J	1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	99		60-140
bromochloromethane	117		60-140
chlorobenzene-d5	100		60-140

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-07 D
Client ID: SV-03-SUMMER2021
Sample Location:

Date Collected: 07/24/21 10:34
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method:
Analytical Date: 08/03/21 20:53
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
1,1,1-Trichloroethane	0.213	0.029	0.012	1.16	0.156	0.064		1.429
1,1,2,2-Tetrachloroethane	ND	0.029	0.008	ND	0.196	0.055		1.429
1,1,2-Trichloroethane	ND	0.029	0.008	ND	0.156	0.045		1.429
1,1-Dichloroethane	ND	0.029	0.010	ND	0.116	0.042		1.429
1,1-Dichloroethene	ND	0.029	0.012	ND	0.113	0.048		1.429
1,2,4-Trimethylbenzene	1.38	0.029	0.006	6.78	0.141	0.030		1.429
1,2-Dibromoethane	ND	0.029	0.011	ND	0.220	0.088		1.429
1,2-Dichlorobenzene	ND	0.029	0.014	ND	0.172	0.084		1.429
1,2-Dichloroethane	ND	0.029	0.014	ND	0.116	0.056		1.429
1,2-Dichloropropane	ND	0.029	0.008	ND	0.132	0.036		1.429
1,3,5-Trimethybenzene	0.404	0.029	0.008	1.99	0.141	0.039		1.429
1,3-Butadiene	ND	0.029	0.014	ND	0.063	0.031		1.429
1,3-Dichlorobenzene	0.240	0.029	0.008	1.44	0.172	0.048		1.429
1,4-Dichlorobenzene	ND	0.029	0.008	ND	0.172	0.046		1.429
1,4-Dioxane	0.066	0.143	0.046	0.237	0.515	0.165	J	1.429
2,2,4-Trimethylpentane	ND	0.286	0.009	ND	1.34	0.042		1.429
2-Hexanone	0.133	0.286	0.021	0.545	1.17	0.088	J	1.429
3-Chloropropene	ND	0.286	0.010	ND	0.895	0.030		1.429
4-Ethyltoluene	0.110	0.029	0.006	0.541	0.141	0.030		1.429
Benzene	0.266	0.143	0.007	0.850	0.457	0.023		1.429
Benzyl chloride	ND	0.286	0.010	ND	1.48	0.053		1.429
Bromodichloromethane	ND	0.029	0.010	ND	0.192	0.064		1.429
Bromoform	ND	0.029	0.009	ND	0.296	0.096		1.429

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-07 D
Client ID: SV-03-SUMMER2021
Sample Location:

Date Collected: 07/24/21 10:34
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Bromomethane	ND	0.029	0.012	ND	0.111	0.047		1.429
Carbon disulfide	0.030	0.286	0.020	0.093	0.891	0.061	J	1.429
Carbon tetrachloride	0.084	0.029	0.014	0.530	0.180	0.090		1.429
Chlorobenzene	ND	0.143	0.009	ND	0.659	0.042		1.429
Chloroethane	ND	0.143	0.019	ND	0.377	0.051		1.429
Chloroform	0.206	0.029	0.013	1.01	0.140	0.062		1.429
Chloromethane	ND	0.286	0.034	ND	0.591	0.071		1.429
cis-1,2-Dichloroethene	ND	0.029	0.014	ND	0.113	0.054		1.429
trans-1,2-Dichloroethene	ND	0.029	0.011	ND	0.113	0.043		1.429
cis-1,3-Dichloropropene	ND	0.029	0.010	ND	0.130	0.045		1.429
Cyclohexane	0.104	0.286	0.009	0.358	0.984	0.032	J	1.429
Dibromochloromethane	ND	0.029	0.012	ND	0.244	0.105		1.429
Dichlorodifluoromethane	0.892	0.286	0.026	4.41	1.41	0.127		1.429
Ethanol	308	7.14	0.470	580	13.5	0.886		1.429
Ethylbenzene	0.191	0.029	0.007	0.830	0.124	0.030		1.429
Freon-113	0.074	0.071	0.013	0.569	0.547	0.097		1.429
Freon-114	0.020	0.071	0.010	0.140	0.499	0.072	J	1.429
Methylene chloride	1.04	0.714	0.019	3.61	2.48	0.065		1.429
Methyl tert butyl ether	ND	0.286	0.012	ND	1.03	0.043		1.429
Naphthalene	0.181	0.071	0.050	0.949	0.374	0.262		1.429
p/m-Xylene	0.558	0.057	0.027	2.42	0.248	0.118		1.429
o-Xylene	0.284	0.029	0.010	1.23	0.124	0.042		1.429
Heptane	0.070	0.286	0.006	0.287	1.17	0.024	J	1.429
Propylene	0.204	0.714	0.066	0.351	1.23	0.114	J	1.429
Styrene	0.544	0.029	0.007	2.32	0.122	0.030		1.429
Tertiary butyl Alcohol	5.03	0.714	0.017	15.2	2.16	0.052		1.429

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-07 D
Client ID: SV-03-SUMMER2021
Sample Location:

Date Collected: 07/24/21 10:34
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Tetrachloroethene	0.316	0.029	0.011	2.14	0.194	0.075		1.429
Tetrahydrofuran	1.18	0.714	0.009	3.48	2.11	0.028		1.429
Toluene	2.18	0.071	0.020	8.22	0.269	0.075		1.429
trans-1,3-Dichloropropene	ND	0.029	0.010	ND	0.130	0.045		1.429
Trichloroethene	37.0	0.029	0.009	199	0.154	0.048		1.429
1,2,4-Trichlorobenzene	ND	0.071	0.043	ND	0.530	0.318		1.429
Trichlorofluoromethane	1.06	0.071	0.014	5.96	0.401	0.076		1.429
Vinyl acetate	ND	1.43	0.016	ND	5.04	0.056		1.429
Vinyl bromide	ND	0.286	0.014	ND	1.25	0.062		1.429
Hexachlorobutadiene	ND	0.071	0.024	ND	0.762	0.259		1.429
Vinyl chloride	ND	0.029	0.010	ND	0.073	0.026		1.429
Isopropylbenzene	1.36	0.286	0.008	6.69	1.41	0.037		1.429
Acetone	8.34	1.43	0.427	19.8	3.40	1.01		1.429
2-Butanone	1.12	0.714	0.039	3.30	2.11	0.114		1.429
4-Methyl-2-pentanone	0.063	0.714	0.017	0.257	2.93	0.070	J	1.429

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	101		60-140
bromochloromethane	116		60-140
chlorobenzene-d5	98		60-140

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-08 D
Client ID: SV-04-SUMMER2021
Sample Location:

Date Collected: 07/24/21 10:50
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method:
Analytical Date: 08/03/21 21:34
Analyst: RY

	ppbV			ug/m3				Dilution
Parameter	Results	RL	MDL	Results	RL	MDL	Qualifier	Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,1,1-Trichloroethane	2.39	0.025	0.010	13.0	0.136	0.057		1.25
1,1,2,2-Tetrachloroethane	ND	0.025	0.007	ND	0.172	0.048		1.25
1,1,2-Trichloroethane	ND	0.025	0.007	ND	0.136	0.040		1.25
1,1-Dichloroethane	ND	0.025	0.009	ND	0.101	0.037		1.25
1,1-Dichloroethene	ND	0.025	0.011	ND	0.099	0.042		1.25
1,2,4-Trimethylbenzene	1.04	0.025	0.005	5.11	0.123	0.026		1.25
1,2-Dibromoethane	ND	0.025	0.010	ND	0.192	0.077		1.25
1,2-Dichlorobenzene	ND	0.025	0.012	ND	0.150	0.073		1.25
1,2-Dichloroethane	ND	0.025	0.012	ND	0.101	0.049		1.25
1,2-Dichloropropane	ND	0.025	0.007	ND	0.116	0.031		1.25
1,3,5-Trimethybenzene	0.205	0.025	0.007	1.01	0.123	0.034		1.25
1,3-Butadiene	ND	0.025	0.012	ND	0.055	0.027		1.25
1,3-Dichlorobenzene	0.389	0.025	0.007	2.34	0.150	0.042		1.25
1,4-Dichlorobenzene	ND	0.025	0.007	ND	0.150	0.040		1.25
1,4-Dioxane	0.105	0.125	0.040	0.378	0.450	0.144	J	1.25
2,2,4-Trimethylpentane	ND	0.250	0.008	ND	1.17	0.037		1.25
2-Hexanone	0.245	0.250	0.019	1.00	1.02	0.077	J	1.25
3-Chloropropene	ND	0.250	0.008	ND	0.783	0.026		1.25
4-Ethyltoluene	0.146	0.025	0.005	0.718	0.123	0.026		1.25
Benzene	0.139	0.125	0.006	0.444	0.399	0.020		1.25
Benzyl chloride	ND	0.250	0.009	ND	1.29	0.047		1.25
Bromodichloromethane	0.015	0.025	0.008	0.100	0.167	0.056	J	1.25
Bromoform	ND	0.025	0.008	ND	0.258	0.084		1.25

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-08 D
Client ID: SV-04-SUMMER2021
Sample Location:

Date Collected: 07/24/21 10:50
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Bromomethane	ND	0.025	0.011	ND	0.097	0.041		1.25
Carbon disulfide	0.060	0.250	0.017	0.187	0.779	0.054	J	1.25
Carbon tetrachloride	0.026	0.025	0.013	0.165	0.157	0.079		1.25
Chlorobenzene	ND	0.125	0.008	ND	0.576	0.037		1.25
Chloroethane	ND	0.125	0.017	ND	0.330	0.045		1.25
Chloroform	0.048	0.025	0.011	0.232	0.122	0.054		1.25
Chloromethane	ND	0.250	0.030	ND	0.516	0.062		1.25
cis-1,2-Dichloroethene	ND	0.025	0.012	ND	0.099	0.048		1.25
trans-1,2-Dichloroethene	ND	0.025	0.010	ND	0.099	0.038		1.25
cis-1,3-Dichloropropene	ND	0.025	0.009	ND	0.113	0.040		1.25
Cyclohexane	0.090	0.250	0.008	0.310	0.861	0.028	J	1.25
Dibromochloromethane	ND	0.025	0.011	ND	0.213	0.092		1.25
Dichlorodifluoromethane	0.621	0.250	0.023	3.07	1.24	0.111		1.25
Ethanol	276	6.25	0.411	520	11.8	0.774		1.25
Ethylbenzene	0.174	0.025	0.006	0.756	0.109	0.027		1.25
Freon-113	0.088	0.063	0.011	0.671	0.479	0.084		1.25
Freon-114	ND	0.063	0.009	ND	0.437	0.063		1.25
Methylene chloride	0.085	0.625	0.016	0.295	2.17	0.057	J	1.25
Methyl tert butyl ether	ND	0.250	0.010	ND	0.901	0.038		1.25
Naphthalene	0.145	0.063	0.044	0.760	0.328	0.230		1.25
p/m-Xylene	0.600	0.050	0.024	2.61	0.217	0.103		1.25
o-Xylene	0.261	0.025	0.008	1.13	0.109	0.036		1.25
Heptane	0.102	0.250	0.005	0.418	1.02	0.021	J	1.25
Propylene	0.359	0.625	0.058	0.618	1.08	0.100	J	1.25
Styrene	0.160	0.025	0.006	0.681	0.106	0.026		1.25
Tertiary butyl Alcohol	4.97	0.625	0.015	15.1	1.89	0.046		1.25

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-08 D
Client ID: SV-04-SUMMER2021
Sample Location:

Date Collected: 07/24/21 10:50
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Tetrachloroethene	0.041	0.025	0.010	0.279	0.170	0.066		1.25
Tetrahydrofuran	1.84	0.625	0.008	5.43	1.84	0.024		1.25
Toluene	0.540	0.063	0.018	2.03	0.236	0.066		1.25
trans-1,3-Dichloropropene	ND	0.025	0.009	ND	0.113	0.040		1.25
Trichloroethene	1.66	0.025	0.008	8.92	0.134	0.042		1.25
1,2,4-Trichlorobenzene	ND	0.063	0.038	ND	0.464	0.278		1.25
Trichlorofluoromethane	0.846	0.063	0.012	4.75	0.351	0.067		1.25
Vinyl acetate	ND	1.25	0.014	ND	4.40	0.049		1.25
Vinyl bromide	ND	0.250	0.012	ND	1.09	0.054		1.25
Hexachlorobutadiene	ND	0.063	0.021	ND	0.667	0.226		1.25
Vinyl chloride	0.039	0.025	0.009	0.099	0.064	0.023		1.25
Isopropylbenzene	0.044	0.250	0.007	0.215	1.23	0.033	J	1.25
Acetone	30.0	1.25	0.374	71.3	2.97	0.888		1.25
2-Butanone	1.66	0.625	0.034	4.90	1.84	0.100		1.25
4-Methyl-2-pentanone	0.168	0.625	0.015	0.688	2.56	0.062	J	1.25

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	104		60-140
bromochloromethane	102		60-140
chlorobenzene-d5	101		60-140

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-09
Client ID: SV-FD-SUMMER2021
Sample Location:

Date Collected: 07/24/21 10:35
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:
Matrix: Soil_Vapor
Anaytical Method:
Analytical Date: 08/03/21 22:13
Analyst: RY

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
1,1,1-Trichloroethane	0.010	0.020	0.008	0.055	0.109	0.045	J	1
1,1,2,2-Tetrachloroethane	ND	0.020	0.006	ND	0.137	0.039		1
1,1,2-Trichloroethane	ND	0.020	0.006	ND	0.109	0.032		1
1,1-Dichloroethane	ND	0.020	0.007	ND	0.081	0.030		1
1,1-Dichloroethene	ND	0.020	0.008	ND	0.079	0.033		1
1,2,4-Trimethylbenzene	0.044	0.020	0.004	0.216	0.098	0.021		1
1,2-Dibromoethane	ND	0.020	0.008	ND	0.154	0.062		1
1,2-Dichlorobenzene	ND	0.020	0.010	ND	0.120	0.059		1
1,2-Dichloroethane	ND	0.020	0.010	ND	0.081	0.039		1
1,2-Dichloropropane	ND	0.020	0.005	ND	0.092	0.025		1
1,3,5-Trimethybenzene	ND	0.020	0.006	ND	0.098	0.028		1
1,3-Butadiene	ND	0.020	0.010	ND	0.044	0.022		1
1,3-Dichlorobenzene	0.046	0.020	0.006	0.277	0.120	0.034		1
1,4-Dichlorobenzene	ND	0.020	0.005	ND	0.120	0.032		1
1,4-Dioxane	ND	0.100	0.032	ND	0.360	0.115		1
2,2,4-Trimethylpentane	ND	0.200	0.006	ND	0.934	0.029		1
2-Hexanone	ND	0.200	0.015	ND	0.820	0.062		1
3-Chloropropene	ND	0.200	0.007	ND	0.626	0.021		1
4-Ethyltoluene	ND	0.020	0.004	ND	0.098	0.021		1
Benzene	0.029	0.100	0.005	0.093	0.319	0.016	J	1
Benzyl chloride	ND	0.200	0.007	ND	1.04	0.037		1
Bromodichloromethane	ND	0.020	0.007	ND	0.134	0.045		1
Bromoform	ND	0.020	0.007	ND	0.207	0.067		1

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-09
Client ID: SV-FD-SUMMER2021
Sample Location:

Date Collected: 07/24/21 10:35
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Bromomethane	ND	0.020	0.009	ND	0.078	0.033		1
Carbon disulfide	0.027	0.200	0.014	0.084	0.623	0.043	J	1
Carbon tetrachloride	0.064	0.020	0.010	0.403	0.126	0.063		1
Chlorobenzene	ND	0.100	0.006	ND	0.461	0.030		1
Chloroethane	ND	0.100	0.014	ND	0.264	0.036		1
Chloroform	0.069	0.020	0.009	0.337	0.098	0.044		1
Chloromethane	ND	0.200	0.024	ND	0.413	0.050		1
cis-1,2-Dichloroethene	ND	0.020	0.010	ND	0.079	0.038		1
trans-1,2-Dichloroethene	ND	0.020	0.008	ND	0.079	0.030		1
cis-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
Cyclohexane	0.188	0.200	0.006	0.647	0.688	0.022	J	1
Dibromochloromethane	ND	0.020	0.009	ND	0.170	0.073		1
Dichlorodifluoromethane	0.704	0.200	0.018	3.48	0.989	0.089		1
Ethanol	34.7	5.00	0.329	65.4	9.42	0.620		1
Ethylbenzene	0.015	0.020	0.005	0.065	0.087	0.021	J	1
Freon-113	0.054	0.050	0.009	0.414	0.383	0.067		1
Freon-114	0.011	0.050	0.007	0.077	0.349	0.050	J	1
Methylene chloride	0.092	0.500	0.013	0.320	1.74	0.046	J	1
Methyl tert butyl ether	ND	0.200	0.008	ND	0.721	0.030		1
Naphthalene	ND	0.050	0.035	ND	0.262	0.184		1
p/m-Xylene	0.050	0.040	0.019	0.217	0.174	0.083		1
o-Xylene	0.023	0.020	0.007	0.10	0.087	0.029		1
Heptane	0.015	0.200	0.004	0.062	0.820	0.017	J	1
Propylene	0.163	0.500	0.047	0.281	0.861	0.080	J	1
Styrene	0.031	0.020	0.005	0.132	0.085	0.021		1
Tertiary butyl Alcohol	0.048	0.500	0.012	0.146	1.52	0.036	J	1

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

SAMPLE RESULTS

Lab ID: L2140444-09
Client ID: SV-FD-SUMMER2021
Sample Location:

Date Collected: 07/24/21 10:35
Date Received: 07/28/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Tetrachloroethene	0.022	0.020	0.008	0.149	0.136	0.053		1
Tetrahydrofuran	0.098	0.500	0.007	0.289	1.47	0.020	J	1
Toluene	0.046	0.050	0.014	0.173	0.188	0.053	J	1
trans-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
Trichloroethene	0.512	0.020	0.006	2.75	0.107	0.033		1
1,2,4-Trichlorobenzene	ND	0.050	0.030	ND	0.371	0.223		1
Trichlorofluoromethane	35.1	0.050	0.010	197	0.281	0.053		1
Vinyl acetate	ND	1.00	0.011	ND	3.52	0.039		1
Vinyl bromide	ND	0.200	0.010	ND	0.874	0.043		1
Hexachlorobutadiene	ND	0.050	0.017	ND	0.533	0.181		1
Vinyl chloride	ND	0.020	0.007	ND	0.051	0.018		1
Isopropylbenzene	ND	0.200	0.005	ND	0.983	0.026		1
Acetone	0.451	1.00	0.299	1.07	2.38	0.710	J	1
2-Butanone	0.107	0.500	0.027	0.316	1.47	0.080	J	1
4-Methyl-2-pentanone	ND	0.500	0.012	ND	2.05	0.049		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	101		60-140
bromochloromethane	118		60-140
chlorobenzene-d5	96		60-140

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

Method Blank Analysis
Batch Quality Control

Analytical Method:
Analytical Date: 08/03/21 15:07

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-09 Batch: WG1531091-7								
1,1,1-Trichloroethane	ND	0.020	0.008	ND	0.109	0.045		1
1,1,2,2-Tetrachloroethane	ND	0.020	0.006	ND	0.137	0.039		1
1,1,2-Trichloroethane	ND	0.020	0.006	ND	0.109	0.032		1
1,1-Dichloroethane	ND	0.020	0.007	ND	0.081	0.030		1
1,1-Dichloroethene	ND	0.020	0.008	ND	0.079	0.033		1
1,2,4-Trimethylbenzene	ND	0.020	0.004	ND	0.098	0.021		1
1,2-Dibromoethane	ND	0.020	0.008	ND	0.154	0.062		1
1,2-Dichlorobenzene	ND	0.020	0.010	ND	0.120	0.059		1
1,2-Dichloroethane	ND	0.020	0.010	ND	0.081	0.039		1
1,2-Dichloropropane	ND	0.020	0.005	ND	0.092	0.025		1
1,3,5-Trimethybenzene	ND	0.020	0.006	ND	0.098	0.028		1
1,3-Butadiene	ND	0.020	0.010	ND	0.044	0.022		1
1,3-Dichlorobenzene	ND	0.020	0.006	ND	0.120	0.034		1
1,4-Dichlorobenzene	ND	0.020	0.005	ND	0.120	0.032		1
1,4-Dioxane	ND	0.100	0.032	ND	0.360	0.115		1
2,2,4-Trimethylpentane	ND	0.200	0.006	ND	0.934	0.029		1
2-Hexanone	ND	0.200	0.015	ND	0.820	0.062		1
3-Chloropropene	ND	0.200	0.007	ND	0.626	0.021		1
4-Ethyltoluene	ND	0.020	0.004	ND	0.098	0.021		1
Benzene	ND	0.100	0.005	ND	0.319	0.016		1
Benzyl chloride	ND	0.200	0.007	ND	1.04	0.037		1
Bromodichloromethane	ND	0.020	0.007	ND	0.134	0.045		1
Bromoform	ND	0.020	0.007	ND	0.207	0.067		1
Bromomethane	ND	0.020	0.009	ND	0.078	0.033		1
Carbon disulfide	ND	0.200	0.014	ND	0.623	0.043		1

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

Method Blank Analysis
Batch Quality Control

Analytical Method:
Analytical Date: 08/03/21 15:07

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-09 Batch: WG1531091-7								
Carbon tetrachloride	ND	0.020	0.010	ND	0.126	0.063		1
Chlorobenzene	ND	0.100	0.006	ND	0.461	0.030		1
Chloroethane	ND	0.100	0.014	ND	0.264	0.036		1
Chloroform	ND	0.020	0.009	ND	0.098	0.044		1
Chloromethane	ND	0.200	0.024	ND	0.413	0.050		1
cis-1,2-Dichloroethene	ND	0.020	0.010	ND	0.079	0.038		1
trans-1,2-Dichloroethene	ND	0.020	0.008	ND	0.079	0.030		1
cis-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
Cyclohexane	ND	0.200	0.006	ND	0.688	0.022		1
Dibromochloromethane	ND	0.020	0.009	ND	0.170	0.073		1
Dichlorodifluoromethane	ND	0.200	0.018	ND	0.989	0.089		1
Ethanol	ND	5.00	0.329	ND	9.42	0.620		1
Ethylbenzene	ND	0.020	0.005	ND	0.087	0.021		1
Freon-113	ND	0.050	0.009	ND	0.383	0.067		1
Freon-114	ND	0.050	0.007	ND	0.349	0.050		1
Methylene chloride	0.021	0.500	0.013	0.073	1.74	0.046	J	1
Methyl tert butyl ether	ND	0.200	0.008	ND	0.721	0.030		1
Naphthalene	ND	0.050	0.035	ND	0.262	0.184		1
p/m-Xylene	ND	0.040	0.019	ND	0.174	0.083		1
o-Xylene	ND	0.020	0.007	ND	0.087	0.029		1
Heptane	ND	0.200	0.004	ND	0.820	0.017		1
Propylene	0.057	0.500	0.047	0.098	0.861	0.080	J	1
Styrene	ND	0.020	0.005	ND	0.085	0.021		1
Tertiary butyl Alcohol	ND	0.500	0.012	ND	1.52	0.036		1
Tetrachloroethene	ND	0.020	0.008	ND	0.136	0.053		1

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02
Lab Number: L2140444
Report Date: 08/06/21

Method Blank Analysis
Batch Quality Control

Analytical Method:
Analytical Date: 08/03/21 15:07

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-09 Batch: WG1531091-7								
Tetrahydrofuran	ND	0.500	0.007	ND	1.47	0.020		1
Toluene	ND	0.050	0.014	ND	0.188	0.053		1
trans-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
Trichloroethene	ND	0.020	0.006	ND	0.107	0.033		1
1,2,4-Trichlorobenzene	ND	0.050	0.030	ND	0.371	0.223		1
Trichlorofluoromethane	ND	0.050	0.010	ND	0.281	0.053		1
Vinyl acetate	ND	1.00	0.011	ND	3.52	0.039		1
Vinyl bromide	ND	0.200	0.010	ND	0.874	0.043		1
Hexachlorobutadiene	ND	0.050	0.017	ND	0.533	0.181		1
Vinyl chloride	ND	0.020	0.007	ND	0.051	0.018		1
Isopropylbenzene	ND	0.200	0.005	ND	0.983	0.026		1
Acetone	ND	1.00	0.299	ND	2.38	0.710		1
2-Butanone	ND	0.500	0.027	ND	1.47	0.080		1
4-Methyl-2-pentanone	ND	0.500	0.012	ND	2.05	0.049		1

Lab Control Sample Analysis

Batch Quality Control

Project Name: NIKE 58 - SI IN LAUNCH AREA

Project Number: D01ME0077-02

Lab Number: L2140444

Report Date: 08/06/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-09 Batch: WG1531091-3 WG1531091-4								
1,1,1-Trichloroethane	87		88		68-125	1		25
1,1,2,2-Tetrachloroethane	103		103		65-127	0		25
1,1,2-Trichloroethane	94		95		73-119	1		25
1,1-Dichloroethane	86		110		68-126	24		25
1,1-Dichloroethene	95		114		61-133	18		25
1,2,3-Trichloropropane[1]	86		85		76-124	1		25
1,2,4-Trimethylbenzene	102		107		66-132	5		25
1,2-Dibromoethane	97		96		74-122	1		25
1,2-Dichlorobenzene	96		98		63-129	2		25
1,2-Dichloroethane	96		120		65-128	22		25
1,2-Dichloropropane	95		95		69-123	0		25
1,3,5-Trimethybenzene	98		101		67-130	3		25
1,3-Butadiene	88		112		66-134	24		25
1,3-Dichlorobenzene	96		99		65-130	3		25
1,4-Dichlorobenzene	94		95		60-131	1		25
1,4-Dioxane	98		96		71-122	2		25
2,2,4-Trimethylpentane	103		104		68-121	1		25
2-Hexanone	89		89		62-128	0		25
3-Chloropropene	108		131		71-131	19		25
4-Ethyltoluene	100		102		67-129	2		25
Benzene	89		91		69-119	2		25
Benzyl chloride	93		95		50-147	2		25
Bromobenzene[1]	88		88		70-130	0		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: NIKE 58 - SI IN LAUNCH AREA

Project Number: D01ME0077-02

Lab Number: L2140444

Report Date: 08/06/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-09 Batch: WG1531091-3 WG1531091-4								
Bromodichloromethane	113		113		72-128	0		25
Bromoform	108		108		66-139	0		25
Bromomethane	83		104		63-134	22		25
Carbon disulfide	82		105		57-134	25		25
Carbon tetrachloride	108		108		68-132	0		25
Chlorobenzene	95		95		70-119	0		25
Chloroethane	88		109		63-127	21		25
Chloroform	100		**124**	Q	68-123	21		25
Chloromethane	79		102		59-132	25		25
cis-1,2-Dichloroethene	85		106		70-121	22		25
trans-1,2-Dichloroethene	85		109		67-124	25		25
cis-1,3-Dichloropropene	91		92		70-128	1		25
Cyclohexane	98		99		70-117	1		25
Dibromochloromethane	112		110		70-130	2		25
Dibromomethane[1]	86		86		70-130	0		25
Dichlorodifluoromethane	85		109		59-128	25		25
Ethanol	76		107		59-125	**34**	Q	25
Ethyl Acetate	107		**130**	Q	65-128	19		25
Ethylbenzene	100		99		70-124	1		25
Freon-113	85		107		66-126	23		25
Freon-114	83		107		63-121	25		25
Methylene chloride	95		114		62-115	18		25
Methyl tert butyl ether	71		90		66-126	24		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: NIKE 58 - SI IN LAUNCH AREA

Project Number: D01ME0077-02

Lab Number: L2140444

Report Date: 08/06/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-09 Batch: WG1531091-3 WG1531091-4								
Naphthalene	82		86		57-138	5		25
p/m-Xylene	99		98		61-134	1		25
o-Xylene	101		100		67-125	1		25
n-Hexane	107		94		63-120	13		25
Propylene	102		130		57-136	24		25
Styrene	97		96		73-127	1		25
Tertiary butyl Alcohol[1]	80		97		24-150	19		25
Tetrachloroethene	88		87		66-124	1		25
Tetrahydrofuran	90		111		64-123	21		25
Toluene	94		93		66-119	1		25
trans-1,3-Dichloropropene	105		105		75-133	0		25
Trichloroethene	92		92		71-123	0		25
1,2,4-Trichlorobenzene	75		77		55-142	3		25
Trichlorofluoromethane	93		113		62-126	19		25
Vinyl acetate	91		116		56-139	24		25
Vinyl bromide	84		104		71-126	21		25
Hexachlorobutadiene	95		97		56-138	2		25
iso-Propyl Alcohol	71		86		40-160	19		25
Vinyl chloride	88		113		64-127	25		25
Acetone	76		93		58-128	20		25
2-Butanone	90		111		67-130	21		25
4-Methyl-2-pentanone	95		95		67-130	0		25
1,2,3-Trichlorobenzene	79		83		70-130	5		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: NIKE 58 - SI IN LAUNCH AREA

Project Number: D01ME0077-02

Lab Number: L2140444

Report Date: 08/06/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab	Associated sample(s): 01-09		Batch: WG1531091-3		WG1531091-4			
Acrolein	80		89		62-126	11		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02

Lab Number: L2140444
Report Date: 08/06/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-09 QC Batch ID: WG1531091-5 QC Sample: L2140444-06 Client ID: SV-02-SUMMER2021						
1,1,1-Trichloroethane	0.034	0.031	ppbV	9		25
1,1,2,2-Tetrachloroethane	ND	ND	ppbV	NC		25
1,1,2-Trichloroethane	ND	ND	ppbV	NC		25
1,1-Dichloroethane	ND	ND	ppbV	NC		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
1,2,4-Trimethylbenzene	0.168	0.166	ppbV	1		25
1,2-Dibromoethane	ND	ND	ppbV	NC		25
1,2-Dichlorobenzene	ND	ND	ppbV	NC		25
1,2-Dichloroethane	ND	ND	ppbV	NC		25
1,2-Dichloropropane	ND	ND	ppbV	NC		25
1,3,5-Trimethybenzene	0.029	0.030	ppbV	3		25
1,3-Butadiene	0.015J	ND	ppbV	NC		25
1,3-Dichlorobenzene	0.120	0.114	ppbV	5		25
1,4-Dichlorobenzene	ND	ND	ppbV	NC		25
1,4-Dioxane	ND	ND	ppbV	NC		25
2,2,4-Trimethylpentane	ND	ND	ppbV	NC		25
2-Hexanone	0.020J	0.020J	ppbV	NC		25
3-Chloropropene	ND	ND	ppbV	NC		25
4-Ethyltoluene	0.020	0.028	ppbV	**33**	Q	25
Benzene	0.032J	0.034J	ppbV	NC		25
Benzyl chloride	ND	ND	ppbV	NC		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02

Lab Number: L2140444
Report Date: 08/06/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-09 QC Batch ID: WG1531091-5 QC Sample: L2140444-06 Client ID: SV-02-SUMMER2021						
Bromodichloromethane	0.042	0.046	ppbV	9		25
Bromoform	ND	ND	ppbV	NC		25
Bromomethane	ND	ND	ppbV	NC		25
Carbon disulfide	0.019J	0.024J	ppbV	NC		25
Carbon tetrachloride	0.061	0.066	ppbV	8		25
Chlorobenzene	ND	ND	ppbV	NC		25
Chloroethane	ND	ND	ppbV	NC		25
Chloroform	2.86	2.79	ppbV	2		25
Chloromethane	0.123J	0.155J	ppbV	NC		25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC		25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC		25
cis-1,3-Dichloropropene	ND	ND	ppbV	NC		25
Cyclohexane	0.134J	0.130J	ppbV	NC		25
Dibromochloromethane	ND	ND	ppbV	NC		25
Dichlorodifluoromethane	0.450	0.540	ppbV	18		25
Ethanol	61.9	72.0	ppbV	15		25
Ethylbenzene	0.032	0.030	ppbV	6		25
Freon-113	0.053	0.068	ppbV	25		25
Freon-114	0.013J	0.016J	ppbV	NC		25
Methylene chloride	0.288J	0.350J	ppbV	NC		25
Methyl tert butyl ether	ND	ND	ppbV	NC		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02

Lab Number: L2140444
Report Date: 08/06/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-09 QC Batch ID: WG1531091-5 QC Sample: L2140444-06 Client ID: SV-02-SUMMER2021						
Naphthalene	0.038J	0.040J	ppbV	NC		25
p/m-Xylene	0.116	0.109	ppbV	6		25
o-Xylene	0.056	0.057	ppbV	2		25
Heptane	0.032J	0.034J	ppbV	NC		25
Propylene	0.417J	0.478J	ppbV	NC		25
Styrene	0.089	0.083	ppbV	7		25
Tertiary butyl Alcohol[1]	0.134J	0.169J	ppbV	NC		25
Tetrachloroethene	0.025	0.020	ppbV	22		25
Tetrahydrofuran	0.250J	0.292J	ppbV	NC		25
Toluene	0.098	0.095	ppbV	3		25
trans-1,3-Dichloropropene	ND	ND	ppbV	NC		25
Trichloroethene	1.55	1.50	ppbV	3		25
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC		25
Trichlorofluoromethane	14.9	18.1	ppbV	19		25
Vinyl acetate	ND	ND	ppbV	NC		25
Vinyl bromide	ND	ND	ppbV	NC		25
Hexachlorobutadiene	ND	ND	ppbV	NC		25
Vinyl chloride	ND	ND	ppbV	NC		25
Isopropylbenzene	0.012J	0.013J	ppbV	NC		25
Acetone	1.29	1.56	ppbV	19		25
2-Butanone	0.191J	0.239J	ppbV	NC		25

Lab Duplicate Analysis
Batch Quality Control

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02

Lab Number: L2140444
Report Date: 08/06/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-09 QC Batch ID: WG1531091-5 QC Sample: L2140444-06 Client ID: SV-02-SUMMER2021						
4-Methyl-2-pentanone	0.030J	0.018J	ppbV	NC		25

Project Name: NIKE 58 - SI IN LAUNCH AREA

Lab Number: L2140444

Project Number: D01ME0077-02

Report Date: 08/06/21

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2140444-01	AA-01-SUMMER2021	0167	Flow 4	07/16/21	357809		-	-	-	Pass	10.0	9.5	5
L2140444-01	AA-01-SUMMER2021	2649	6.0L Can	07/16/21	357809	L2137758-03	Pass	-29.3	-7.8	-	-	-	-
L2140444-02	IA-01-SUMMER2021	01576	Flow 4	07/16/21	357809		-	-	-	Pass	10.0	9.7	3
L2140444-02	IA-01-SUMMER2021	1973	6.0L Can	07/16/21	357809	L2137758-02	Pass	-29.3	-7.8	-	-	-	-
L2140444-03	IA-02-SUMMER2021	01542	Flow 3	07/16/21	357809		-	-	-	Pass	10.0	10.9	9
L2140444-03	IA-02-SUMMER2021	3303	6.0L Can	07/16/21	357809	L2137758-04	Pass	-29.4	-7.2	-	-	-	-
L2140444-04	IA-FD-SUMMER2021	01047	Flow 4	07/16/21	357809		-	-	-	Pass	10.0	10.2	2
L2140444-04	IA-FD-SUMMER2021	1818	6.0L Can	07/16/21	357809	L2137758-06	Pass	-29.3	-7.4	-	-	-	-
L2140444-05	SV-01-SUMMER2021	01632	Flow 4	07/16/21	357809		-	-	-	Pass	10.0	8.8	13
L2140444-05	SV-01-SUMMER2021	2617	6.0L Can	07/16/21	357809	L2137758-01	Pass	-29.4	-6.8	-	-	-	-
L2140444-06	SV-02-SUMMER2021	01653	Flow 4	07/16/21	357809		-	-	-	Pass	10.0	9.6	4
L2140444-06	SV-02-SUMMER2021	1548	6.0L Can	07/16/21	357809	L2137758-01	Pass	-29.6	-7.2	-	-	-	-
L2140444-07	SV-03-SUMMER2021	0258	Flow 4	07/16/21	357809		-	-	-	Pass	10.0	9.4	6
L2140444-07	SV-03-SUMMER2021	2624	6.0L Can	07/16/21	357809	L2137758-01	Pass	-29.6	-7.2	-	-	-	-
L2140444-08	SV-04-SUMMER2021	01772	Flow 4	07/16/21	357809		-	-	-	Pass	10.0	9.6	4

Project Name: NIKE 58 - SI IN LAUNCH AREA

Lab Number: L2140444

Project Number: D01ME0077-02

Report Date: 08/06/21

Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controler Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2140444-08	SV-04-SUMMER2021	2352	6.0L Can	07/16/21	357809	L2137758-01	Pass	-29.6	-7.7	-	-	-	-
L2140444-09	SV-FD-SUMMER2021	01170	Flow 4	07/16/21	357809		-	-	-	Pass	10.0	9.5	5
L2140444-09	SV-FD-SUMMER2021	1782	6.0L Can	07/16/21	357809	L2137758-01	Pass	-29.1	-7.1	-	-	-	-
L2140444-10	UNUSED CAN #1691	01671	Flow 4	07/16/21	357809		-	-	-	Pass	10.0	9.6	4
L2140444-10	UNUSED CAN #1691	1691	6.0L Can	07/16/21	357809	L2137758-05	Pass	-29.4	-29.2	-	-	-	-
L2140444-11	UNUSED CAN #1638	01655	Flow 4	07/16/21	357809		-	-	-	Pass	10.0	9.4	6
L2140444-11	UNUSED CAN #1638	1638	6.0L Can	07/16/21	357809	L2137758-01	Pass	-29.3	-29.1	-	-	-	-

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2137758
Report Date: 08/06/21

Air Canister Certification Results

Lab ID: L2137758-01
Client ID: CAN 2352 SHELF 42
Sample Location:

Date Collected: 07/14/21 09:00
Date Received: 07/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 07/15/21 00:03
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Propylene	ND	0.500	0.047	ND	0.861	0.080		1
Dichlorodifluoromethane	ND	0.200	0.018	ND	0.989	0.089		1
Chloromethane	ND	0.200	0.024	ND	0.413	0.050		1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.050	0.007	ND	0.349	0.050		1
Vinyl chloride	ND	0.020	0.007	ND	0.051	0.018		1
1,3-Butadiene	ND	0.020	0.010	ND	0.044	0.022		1
Bromomethane	ND	0.020	0.009	ND	0.078	0.033		1
Chloroethane	ND	0.100	0.014	ND	0.264	0.036		1
Ethyl Alcohol	ND	5.00	0.329	ND	9.42	0.620		1
Vinyl bromide	ND	0.200	0.010	ND	0.874	0.043		1
Acrolein	ND	0.050	0.039	ND	0.115	0.089		1
Acetone	ND	1.00	0.299	ND	2.38	0.710		1
Trichlorofluoromethane	ND	0.050	0.010	ND	0.281	0.053		1
iso-Propyl Alcohol	ND	0.500	0.179	ND	1.23	0.440		1
Acrylonitrile	ND	0.500	0.025	ND	1.09	0.053		1
1,2-Dichloroethene (total)	ND	0.020	0.008	ND	0.079	0.030		1
1,1-Dichloroethene	ND	0.020	0.008	ND	0.079	0.033		1
1,3-Dichloropropene, Total	ND	0.020	0.007	ND	0.091	0.032		1
tert-Butyl Alcohol	ND	0.500	0.012	ND	1.52	0.036		1
Methylene chloride	ND	0.500	0.013	ND	1.74	0.046		1
3-Chloropropene	ND	0.200	0.007	ND	0.626	0.021		1
Carbon disulfide	ND	0.200	0.014	ND	0.623	0.043		1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.050	0.009	ND	0.383	0.067		1
trans-1,2-Dichloroethene	ND	0.020	0.008	ND	0.079	0.030		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2137758
Report Date: 08/06/21

Air Canister Certification Results

Lab ID: L2137758-01
Client ID: CAN 2352 SHELF 42
Sample Location:

Date Collected: 07/14/21 09:00
Date Received: 07/14/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,1-Dichloroethane	ND	0.020	0.007	ND	0.081	0.030		1
Methyl tert butyl ether	ND	0.200	0.008	ND	0.721	0.030		1
Vinyl acetate	ND	1.00	0.011	ND	3.52	0.039		1
2-Butanone	ND	0.500	0.027	ND	1.47	0.080		1
cis-1,2-Dichloroethene	ND	0.020	0.010	ND	0.079	0.038		1
Ethyl Acetate	ND	0.500	0.031	ND	1.80	0.111		1
Chloroform	ND	0.020	0.009	ND	0.098	0.044		1
Tetrahydrofuran	ND	0.500	0.007	ND	1.47	0.020		1
1,2-Dichloroethane	ND	0.020	0.010	ND	0.081	0.039		1
n-Hexane	ND	0.200	0.005	ND	0.705	0.017		1
1,1,1-Trichloroethane	ND	0.020	0.008	ND	0.109	0.045		1
Benzene	ND	0.100	0.005	ND	0.319	0.016		1
Carbon tetrachloride	ND	0.020	0.010	ND	0.126	0.063		1
Cyclohexane	ND	0.200	0.006	ND	0.688	0.022		1
Dibromomethane	ND	0.200	0.018	ND	1.42	0.128		1
1,2-Dichloropropane	ND	0.020	0.005	ND	0.092	0.025		1
Bromodichloromethane	ND	0.020	0.007	ND	0.134	0.045		1
1,4-Dioxane	ND	0.100	0.032	ND	0.360	0.115		1
Trichloroethene	ND	0.020	0.006	ND	0.107	0.033		1
2,2,4-Trimethylpentane	ND	0.200	0.006	ND	0.934	0.029		1
Heptane	ND	0.200	0.004	ND	0.820	0.017		1
cis-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
4-Methyl-2-pentanone	ND	0.500	0.012	ND	2.05	0.049		1
trans-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
1,1,2-Trichloroethane	ND	0.020	0.006	ND	0.109	0.032		1
Toluene	ND	0.050	0.014	ND	0.188	0.053		1
2-Hexanone	ND	0.200	0.015	ND	0.820	0.062		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2137758
Report Date: 08/06/21

Air Canister Certification Results

Lab ID: L2137758-01
Client ID: CAN 2352 SHELF 42
Sample Location:

Date Collected: 07/14/21 09:00
Date Received: 07/14/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Dibromochloromethane	ND	0.020	0.009	ND	0.170	0.073		1
1,2-Dibromoethane	ND	0.020	0.008	ND	0.154	0.062		1
Xylene (Total)	ND	0.020	0.007	ND	0.087	0.029		1
Tetrachloroethene	ND	0.020	0.008	ND	0.136	0.053		1
1,1,1,2-Tetrachloroethane	ND	0.020	0.005	ND	0.137	0.036		1
Chlorobenzene	ND	0.100	0.006	ND	0.461	0.030		1
Ethylbenzene	ND	0.020	0.005	ND	0.087	0.021		1
p/m-Xylene	ND	0.040	0.019	ND	0.174	0.083		1
Bromoform	ND	0.020	0.007	ND	0.207	0.067		1
Styrene	ND	0.020	0.005	ND	0.085	0.021		1
1,1,2,2-Tetrachloroethane	ND	0.020	0.006	ND	0.137	0.039		1
o-Xylene	ND	0.020	0.007	ND	0.087	0.029		1
1,2,3-Trichloropropane	ND	0.020	0.005	ND	0.121	0.033		1
Isopropylbenzene	ND	0.200	0.005	ND	0.983	0.026		1
Bromobenzene	ND	0.200	0.006	ND	0.793	0.025		1
4-Ethyltoluene	ND	0.020	0.004	ND	0.098	0.021		1
1,3,5-Trimethylbenzene	ND	0.020	0.006	ND	0.098	0.028		1
1,2,4-Trimethylbenzene	ND	0.020	0.004	ND	0.098	0.021		1
Benzyl chloride	ND	0.200	0.007	ND	1.04	0.037		1
1,3-Dichlorobenzene	ND	0.020	0.006	ND	0.120	0.034		1
1,4-Dichlorobenzene	ND	0.020	0.005	ND	0.120	0.032		1
sec-Butylbenzene	ND	0.200	0.003	ND	1.10	0.018		1
p-Isopropyltoluene	ND	0.200	0.005	ND	1.10	0.025		1
1,2-Dichlorobenzene	ND	0.020	0.010	ND	0.120	0.059		1
n-Butylbenzene	ND	0.200	0.005	ND	1.10	0.026		1
1,2-Dibromo-3-chloropropane	ND	0.020	0.006	ND	0.193	0.054		1
1,2,4-Trichlorobenzene	ND	0.050	0.030	ND	0.371	0.223		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2137758
Report Date: 08/06/21

Air Canister Certification Results

Lab ID: L2137758-01
Client ID: CAN 2352 SHELF 42
Sample Location:

Date Collected: 07/14/21 09:00
Date Received: 07/14/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Naphthalene	ND	0.050	0.035	ND	0.262	0.184		1
1,2,3-Trichlorobenzene	ND	0.050	0.013	ND	0.371	0.100		1
Hexachlorobutadiene	ND	0.050	0.017	ND	0.533	0.181		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	92		60-140
bromochloromethane	92		60-140
chlorobenzene-d5	98		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2137758
Report Date: 08/06/21

Air Canister Certification Results

Lab ID: L2137758-02
Client ID: CAN 1973
Sample Location:

Date Collected: 07/14/21 09:00
Date Received: 07/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 07/15/21 00:42
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Propylene	ND	0.500	0.047	ND	0.861	0.080		1
Dichlorodifluoromethane	ND	0.200	0.018	ND	0.989	0.089		1
Chloromethane	ND	0.200	0.024	ND	0.413	0.050		1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.050	0.007	ND	0.349	0.050		1
Vinyl chloride	ND	0.020	0.007	ND	0.051	0.018		1
1,3-Butadiene	ND	0.020	0.010	ND	0.044	0.022		1
Bromomethane	ND	0.020	0.009	ND	0.078	0.033		1
Chloroethane	ND	0.100	0.014	ND	0.264	0.036		1
Ethyl Alcohol	ND	5.00	0.329	ND	9.42	0.620		1
Vinyl bromide	ND	0.200	0.010	ND	0.874	0.043		1
Acrolein	ND	0.050	0.039	ND	0.115	0.089		1
Acetone	ND	1.00	0.299	ND	2.38	0.710		1
Trichlorofluoromethane	ND	0.050	0.010	ND	0.281	0.053		1
iso-Propyl Alcohol	ND	0.500	0.179	ND	1.23	0.440		1
1,2-Dichloroethene (total)	ND	0.020	0.008	ND	0.079	0.030		1
Acrylonitrile	ND	0.500	0.025	ND	1.09	0.053		1
1,1-Dichloroethene	ND	0.020	0.008	ND	0.079	0.033		1
1,3-Dichloropropene, Total	ND	0.020	0.007	ND	0.091	0.032		1
tert-Butyl Alcohol	ND	0.500	0.012	ND	1.52	0.036		1
Methylene chloride	ND	0.500	0.013	ND	1.74	0.046		1
3-Chloropropene	ND	0.200	0.007	ND	0.626	0.021		1
Carbon disulfide	ND	0.200	0.014	ND	0.623	0.043		1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.050	0.009	ND	0.383	0.067		1
trans-1,2-Dichloroethene	ND	0.020	0.008	ND	0.079	0.030		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2137758
Report Date: 08/06/21

Air Canister Certification Results

Lab ID: L2137758-02
Client ID: CAN 1973
Sample Location:

Date Collected: 07/14/21 09:00
Date Received: 07/14/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,1-Dichloroethane	ND	0.020	0.007	ND	0.081	0.030		1
Methyl tert butyl ether	ND	0.200	0.008	ND	0.721	0.030		1
Vinyl acetate	ND	1.00	0.011	ND	3.52	0.039		1
2-Butanone	ND	0.500	0.027	ND	1.47	0.080		1
cis-1,2-Dichloroethene	ND	0.020	0.010	ND	0.079	0.038		1
Ethyl Acetate	ND	0.500	0.031	ND	1.80	0.111		1
Chloroform	ND	0.020	0.009	ND	0.098	0.044		1
Tetrahydrofuran	ND	0.500	0.007	ND	1.47	0.020		1
1,2-Dichloroethane	ND	0.020	0.010	ND	0.081	0.039		1
n-Hexane	ND	0.200	0.005	ND	0.705	0.017		1
1,1,1-Trichloroethane	ND	0.020	0.008	ND	0.109	0.045		1
Benzene	ND	0.100	0.005	ND	0.319	0.016		1
Carbon tetrachloride	ND	0.020	0.010	ND	0.126	0.063		1
Cyclohexane	ND	0.200	0.006	ND	0.688	0.022		1
Dibromomethane	ND	0.200	0.018	ND	1.42	0.128		1
1,2-Dichloropropane	ND	0.020	0.005	ND	0.092	0.025		1
Bromodichloromethane	ND	0.020	0.007	ND	0.134	0.045		1
1,4-Dioxane	ND	0.100	0.032	ND	0.360	0.115		1
Trichloroethene	ND	0.020	0.006	ND	0.107	0.033		1
2,2,4-Trimethylpentane	ND	0.200	0.006	ND	0.934	0.029		1
Heptane	ND	0.200	0.004	ND	0.820	0.017		1
cis-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
4-Methyl-2-pentanone	ND	0.500	0.012	ND	2.05	0.049		1
trans-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
1,1,2-Trichloroethane	ND	0.020	0.006	ND	0.109	0.032		1
Toluene	ND	0.050	0.014	ND	0.188	0.053		1
2-Hexanone	ND	0.200	0.015	ND	0.820	0.062		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2137758
Report Date: 08/06/21

Air Canister Certification Results

Lab ID: L2137758-02
Client ID: CAN 1973
Sample Location:

Date Collected: 07/14/21 09:00
Date Received: 07/14/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Dibromochloromethane	ND	0.020	0.009	ND	0.170	0.073		1
1,2-Dibromoethane	ND	0.020	0.008	ND	0.154	0.062		1
Xylene (Total)	ND	0.020	0.007	ND	0.087	0.029		1
Tetrachloroethene	ND	0.020	0.008	ND	0.136	0.053		1
1,1,1,2-Tetrachloroethane	ND	0.020	0.005	ND	0.137	0.036		1
Chlorobenzene	ND	0.100	0.006	ND	0.461	0.030		1
Ethylbenzene	ND	0.020	0.005	ND	0.087	0.021		1
p/m-Xylene	ND	0.040	0.019	ND	0.174	0.083		1
Bromoform	ND	0.020	0.007	ND	0.207	0.067		1
Styrene	ND	0.020	0.005	ND	0.085	0.021		1
1,1,2,2-Tetrachloroethane	ND	0.020	0.006	ND	0.137	0.039		1
o-Xylene	ND	0.020	0.007	ND	0.087	0.029		1
1,2,3-Trichloropropane	ND	0.020	0.005	ND	0.121	0.033		1
Isopropylbenzene	ND	0.200	0.005	ND	0.983	0.026		1
Bromobenzene	ND	0.200	0.006	ND	0.793	0.025		1
4-Ethyltoluene	ND	0.020	0.004	ND	0.098	0.021		1
1,3,5-Trimethylbenzene	ND	0.020	0.006	ND	0.098	0.028		1
1,2,4-Trimethylbenzene	ND	0.020	0.004	ND	0.098	0.021		1
Benzyl chloride	ND	0.200	0.007	ND	1.04	0.037		1
1,3-Dichlorobenzene	ND	0.020	0.006	ND	0.120	0.034		1
1,4-Dichlorobenzene	ND	0.020	0.005	ND	0.120	0.032		1
sec-Butylbenzene	ND	0.200	0.003	ND	1.10	0.018		1
p-Isopropyltoluene	ND	0.200	0.005	ND	1.10	0.025		1
1,2-Dichlorobenzene	ND	0.020	0.010	ND	0.120	0.059		1
n-Butylbenzene	ND	0.200	0.005	ND	1.10	0.026		1
1,2-Dibromo-3-chloropropane	ND	0.020	0.006	ND	0.193	0.054		1
1,2,4-Trichlorobenzene	ND	0.050	0.030	ND	0.371	0.223		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2137758

Project Number: CANISTER QC BAT **Report Date:** 08/06/21

Air Canister Certification Results

Lab ID: L2137758-02
Client ID: CAN 1973
Sample Location:

Date Collected: 07/14/21 09:00
Date Received: 07/14/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Naphthalene	ND	0.050	0.035	ND	0.262	0.184		1
1,2,3-Trichlorobenzene	ND	0.050	0.013	ND	0.371	0.100		1
Hexachlorobutadiene	ND	0.050	0.017	ND	0.533	0.181		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	94		60-140
bromochloromethane	94		60-140
chlorobenzene-d5	99		60-140

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2137758

Project Number: CANISTER QC BAT **Report Date:** 08/06/21

Air Canister Certification Results

Lab ID: L2137758-03
Client ID: CAN 2649
Sample Location:

Date Collected: 07/14/21 09:00
Date Received: 07/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 07/15/21 01:22
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Propylene	ND	0.500	0.047	ND	0.861	0.080		1
Dichlorodifluoromethane	ND	0.200	0.018	ND	0.989	0.089		1
Chloromethane	ND	0.200	0.024	ND	0.413	0.050		1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.050	0.007	ND	0.349	0.050		1
Vinyl chloride	ND	0.020	0.007	ND	0.051	0.018		1
1,3-Butadiene	ND	0.020	0.010	ND	0.044	0.022		1
Bromomethane	ND	0.020	0.009	ND	0.078	0.033		1
Chloroethane	ND	0.100	0.014	ND	0.264	0.036		1
Ethyl Alcohol	ND	5.00	0.329	ND	9.42	0.620		1
Vinyl bromide	ND	0.200	0.010	ND	0.874	0.043		1
Acrolein	ND	0.050	0.039	ND	0.115	0.089		1
Acetone	ND	1.00	0.299	ND	2.38	0.710		1
Trichlorofluoromethane	ND	0.050	0.010	ND	0.281	0.053		1
iso-Propyl Alcohol	ND	0.500	0.179	ND	1.23	0.440		1
Acrylonitrile	ND	0.500	0.025	ND	1.09	0.053		1
1,2-Dichloroethene (total)	ND	0.020	0.008	ND	0.079	0.030		1
1,1-Dichloroethene	ND	0.020	0.008	ND	0.079	0.033		1
tert-Butyl Alcohol	ND	0.500	0.012	ND	1.52	0.036		1
1,3-Dichloropropene, Total	ND	0.020	0.007	ND	0.091	0.032		1
Methylene chloride	ND	0.500	0.013	ND	1.74	0.046		1
3-Chloropropene	ND	0.200	0.007	ND	0.626	0.021		1
Carbon disulfide	ND	0.200	0.014	ND	0.623	0.043		1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.050	0.009	ND	0.383	0.067		1
trans-1,2-Dichloroethene	ND	0.020	0.008	ND	0.079	0.030		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2137758
Report Date: 08/06/21

Air Canister Certification Results

Lab ID: L2137758-03
Client ID: CAN 2649
Sample Location:

Date Collected: 07/14/21 09:00
Date Received: 07/14/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,1-Dichloroethane	ND	0.020	0.007	ND	0.081	0.030		1
Methyl tert butyl ether	ND	0.200	0.008	ND	0.721	0.030		1
Vinyl acetate	ND	1.00	0.011	ND	3.52	0.039		1
2-Butanone	ND	0.500	0.027	ND	1.47	0.080		1
cis-1,2-Dichloroethene	ND	0.020	0.010	ND	0.079	0.038		1
Ethyl Acetate	ND	0.500	0.031	ND	1.80	0.111		1
Chloroform	ND	0.020	0.009	ND	0.098	0.044		1
Tetrahydrofuran	ND	0.500	0.007	ND	1.47	0.020		1
1,2-Dichloroethane	ND	0.020	0.010	ND	0.081	0.039		1
n-Hexane	ND	0.200	0.005	ND	0.705	0.017		1
1,1,1-Trichloroethane	ND	0.020	0.008	ND	0.109	0.045		1
Benzene	ND	0.100	0.005	ND	0.319	0.016		1
Carbon tetrachloride	ND	0.020	0.010	ND	0.126	0.063		1
Cyclohexane	ND	0.200	0.006	ND	0.688	0.022		1
Dibromomethane	ND	0.200	0.018	ND	1.42	0.128		1
1,2-Dichloropropane	ND	0.020	0.005	ND	0.092	0.025		1
Bromodichloromethane	ND	0.020	0.007	ND	0.134	0.045		1
1,4-Dioxane	ND	0.100	0.032	ND	0.360	0.115		1
Trichloroethene	ND	0.020	0.006	ND	0.107	0.033		1
2,2,4-Trimethylpentane	ND	0.200	0.006	ND	0.934	0.029		1
Heptane	ND	0.200	0.004	ND	0.820	0.017		1
cis-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
4-Methyl-2-pentanone	ND	0.500	0.012	ND	2.05	0.049		1
trans-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
1,1,2-Trichloroethane	ND	0.020	0.006	ND	0.109	0.032		1
Toluene	ND	0.050	0.014	ND	0.188	0.053		1
2-Hexanone	ND	0.200	0.015	ND	0.820	0.062		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT

Lab Number: L2137758
Report Date: 08/06/21

Air Canister Certification Results

Lab ID: L2137758-03
Client ID: CAN 2649
Sample Location:

Date Collected: 07/14/21 09:00
Date Received: 07/14/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Dibromochloromethane	ND	0.020	0.009	ND	0.170	0.073		1
1,2-Dibromoethane	ND	0.020	0.008	ND	0.154	0.062		1
Xylene (Total)	ND	0.020	0.007	ND	0.087	0.029		1
Tetrachloroethene	ND	0.020	0.008	ND	0.136	0.053		1
1,1,1,2-Tetrachloroethane	ND	0.020	0.005	ND	0.137	0.036		1
Chlorobenzene	ND	0.100	0.006	ND	0.461	0.030		1
Ethylbenzene	ND	0.020	0.005	ND	0.087	0.021		1
p/m-Xylene	ND	0.040	0.019	ND	0.174	0.083		1
Bromoform	ND	0.020	0.007	ND	0.207	0.067		1
Styrene	ND	0.020	0.005	ND	0.085	0.021		1
1,1,2,2-Tetrachloroethane	ND	0.020	0.006	ND	0.137	0.039		1
o-Xylene	ND	0.020	0.007	ND	0.087	0.029		1
1,2,3-Trichloropropane	ND	0.020	0.005	ND	0.121	0.033		1
Isopropylbenzene	ND	0.200	0.005	ND	0.983	0.026		1
Bromobenzene	ND	0.200	0.006	ND	0.793	0.025		1
4-Ethyltoluene	ND	0.020	0.004	ND	0.098	0.021		1
1,3,5-Trimethylbenzene	ND	0.020	0.006	ND	0.098	0.028		1
1,2,4-Trimethylbenzene	ND	0.020	0.004	ND	0.098	0.021		1
Benzyl chloride	ND	0.200	0.007	ND	1.04	0.037		1
1,3-Dichlorobenzene	ND	0.020	0.006	ND	0.120	0.034		1
1,4-Dichlorobenzene	ND	0.020	0.005	ND	0.120	0.032		1
sec-Butylbenzene	ND	0.200	0.003	ND	1.10	0.018		1
p-Isopropyltoluene	ND	0.200	0.005	ND	1.10	0.025		1
1,2-Dichlorobenzene	ND	0.020	0.010	ND	0.120	0.059		1
n-Butylbenzene	ND	0.200	0.005	ND	1.10	0.026		1
1,2-Dibromo-3-chloropropane	ND	0.020	0.006	ND	0.193	0.054		1
1,2,4-Trichlorobenzene	ND	0.050	0.030	ND	0.371	0.223		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2137758
Report Date: 08/06/21

Air Canister Certification Results

Lab ID: L2137758-03
Client ID: CAN 2649
Sample Location:

Date Collected: 07/14/21 09:00
Date Received: 07/14/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Naphthalene	ND	0.050	0.035	ND	0.262	0.184		1
1,2,3-Trichlorobenzene	ND	0.050	0.013	ND	0.371	0.100		1
Hexachlorobutadiene	ND	0.050	0.017	ND	0.533	0.181		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	93		60-140
bromochloromethane	93		60-140
chlorobenzene-d5	98		60-140

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2137758

Project Number: CANISTER QC BAT **Report Date:** 08/06/21

Air Canister Certification Results

Lab ID: L2137758-04
Client ID: CAN 3303
Sample Location:

Date Collected: 07/14/21 09:00
Date Received: 07/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 07/15/21 02:01
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Propylene	ND	0.500	0.047	ND	0.861	0.080		1
Dichlorodifluoromethane	ND	0.200	0.018	ND	0.989	0.089		1
Chloromethane	ND	0.200	0.024	ND	0.413	0.050		1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.050	0.007	ND	0.349	0.050		1
Vinyl chloride	ND	0.020	0.007	ND	0.051	0.018		1
1,3-Butadiene	ND	0.020	0.010	ND	0.044	0.022		1
Bromomethane	ND	0.020	0.009	ND	0.078	0.033		1
Chloroethane	ND	0.100	0.014	ND	0.264	0.036		1
Ethyl Alcohol	ND	5.00	0.329	ND	9.42	0.620		1
Vinyl bromide	ND	0.200	0.010	ND	0.874	0.043		1
Acrolein	ND	0.050	0.039	ND	0.115	0.089		1
Acetone	ND	1.00	0.299	ND	2.38	0.710		1
Trichlorofluoromethane	ND	0.050	0.010	ND	0.281	0.053		1
iso-Propyl Alcohol	ND	0.500	0.179	ND	1.23	0.440		1
1,2-Dichloroethene (total)	ND	0.020	0.008	ND	0.079	0.030		1
Acrylonitrile	ND	0.500	0.025	ND	1.09	0.053		1
1,1-Dichloroethene	ND	0.020	0.008	ND	0.079	0.033		1
1,3-Dichloropropene, Total	ND	0.020	0.007	ND	0.091	0.032		1
tert-Butyl Alcohol	ND	0.500	0.012	ND	1.52	0.036		1
Methylene chloride	ND	0.500	0.013	ND	1.74	0.046		1
3-Chloropropene	ND	0.200	0.007	ND	0.626	0.021		1
Carbon disulfide	ND	0.200	0.014	ND	0.623	0.043		1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.050	0.009	ND	0.383	0.067		1
trans-1,2-Dichloroethene	ND	0.020	0.008	ND	0.079	0.030		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2137758
Report Date: 08/06/21

Air Canister Certification Results

Lab ID: L2137758-04
Client ID: CAN 3303
Sample Location:

Date Collected: 07/14/21 09:00
Date Received: 07/14/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,1-Dichloroethane	ND	0.020	0.007	ND	0.081	0.030		1
Methyl tert butyl ether	ND	0.200	0.008	ND	0.721	0.030		1
Vinyl acetate	ND	1.00	0.011	ND	3.52	0.039		1
2-Butanone	ND	0.500	0.027	ND	1.47	0.080		1
cis-1,2-Dichloroethene	ND	0.020	0.010	ND	0.079	0.038		1
Ethyl Acetate	ND	0.500	0.031	ND	1.80	0.111		1
Chloroform	ND	0.020	0.009	ND	0.098	0.044		1
Tetrahydrofuran	ND	0.500	0.007	ND	1.47	0.020		1
1,2-Dichloroethane	ND	0.020	0.010	ND	0.081	0.039		1
n-Hexane	ND	0.200	0.005	ND	0.705	0.017		1
1,1,1-Trichloroethane	ND	0.020	0.008	ND	0.109	0.045		1
Benzene	ND	0.100	0.005	ND	0.319	0.016		1
Carbon tetrachloride	ND	0.020	0.010	ND	0.126	0.063		1
Cyclohexane	ND	0.200	0.006	ND	0.688	0.022		1
Dibromomethane	ND	0.200	0.018	ND	1.42	0.128		1
1,2-Dichloropropane	ND	0.020	0.005	ND	0.092	0.025		1
Bromodichloromethane	ND	0.020	0.007	ND	0.134	0.045		1
1,4-Dioxane	ND	0.100	0.032	ND	0.360	0.115		1
Trichloroethene	ND	0.020	0.006	ND	0.107	0.033		1
2,2,4-Trimethylpentane	ND	0.200	0.006	ND	0.934	0.029		1
Heptane	ND	0.200	0.004	ND	0.820	0.017		1
cis-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
4-Methyl-2-pentanone	ND	0.500	0.012	ND	2.05	0.049		1
trans-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
1,1,2-Trichloroethane	ND	0.020	0.006	ND	0.109	0.032		1
Toluene	ND	0.050	0.014	ND	0.188	0.053		1
2-Hexanone	ND	0.200	0.015	ND	0.820	0.062		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2137758
Report Date: 08/06/21

Air Canister Certification Results

Lab ID: L2137758-04
Client ID: CAN 3303
Sample Location:

Date Collected: 07/14/21 09:00
Date Received: 07/14/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Dibromochloromethane	ND	0.020	0.009	ND	0.170	0.073		1
1,2-Dibromoethane	ND	0.020	0.008	ND	0.154	0.062		1
Xylene (Total)	ND	0.020	0.007	ND	0.087	0.029		1
Tetrachloroethene	ND	0.020	0.008	ND	0.136	0.053		1
1,1,1,2-Tetrachloroethane	ND	0.020	0.005	ND	0.137	0.036		1
Chlorobenzene	ND	0.100	0.006	ND	0.461	0.030		1
Ethylbenzene	ND	0.020	0.005	ND	0.087	0.021		1
p/m-Xylene	ND	0.040	0.019	ND	0.174	0.083		1
Bromoform	ND	0.020	0.007	ND	0.207	0.067		1
Styrene	ND	0.020	0.005	ND	0.085	0.021		1
1,1,2,2-Tetrachloroethane	ND	0.020	0.006	ND	0.137	0.039		1
o-Xylene	ND	0.020	0.007	ND	0.087	0.029		1
1,2,3-Trichloropropane	ND	0.020	0.005	ND	0.121	0.033		1
Isopropylbenzene	ND	0.200	0.005	ND	0.983	0.026		1
Bromobenzene	ND	0.200	0.006	ND	0.793	0.025		1
4-Ethyltoluene	ND	0.020	0.004	ND	0.098	0.021		1
1,3,5-Trimethylbenzene	ND	0.020	0.006	ND	0.098	0.028		1
1,2,4-Trimethylbenzene	ND	0.020	0.004	ND	0.098	0.021		1
Benzyl chloride	ND	0.200	0.007	ND	1.04	0.037		1
1,3-Dichlorobenzene	ND	0.020	0.006	ND	0.120	0.034		1
1,4-Dichlorobenzene	ND	0.020	0.005	ND	0.120	0.032		1
sec-Butylbenzene	ND	0.200	0.003	ND	1.10	0.018		1
p-Isopropyltoluene	ND	0.200	0.005	ND	1.10	0.025		1
1,2-Dichlorobenzene	ND	0.020	0.010	ND	0.120	0.059		1
n-Butylbenzene	ND	0.200	0.005	ND	1.10	0.026		1
1,2-Dibromo-3-chloropropane	ND	0.020	0.006	ND	0.193	0.054		1
1,2,4-Trichlorobenzene	ND	0.050	0.030	ND	0.371	0.223		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2137758
Report Date: 08/06/21

Air Canister Certification Results

Lab ID: L2137758-04
Client ID: CAN 3303
Sample Location:

Date Collected: 07/14/21 09:00
Date Received: 07/14/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Naphthalene	ND	0.050	0.035	ND	0.262	0.184		1
1,2,3-Trichlorobenzene	ND	0.050	0.013	ND	0.371	0.100		1
Hexachlorobutadiene	ND	0.050	0.017	ND	0.533	0.181		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	92		60-140
bromochloromethane	92		60-140
chlorobenzene-d5	98		60-140

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2137758
Report Date: 08/06/21

Air Canister Certification Results

Lab ID: L2137758-05
Client ID: CAN 1691
Sample Location:

Date Collected: 07/14/21 09:00
Date Received: 07/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 07/15/21 02:40
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Propylene	ND	0.500	0.047	ND	0.861	0.080		1
Dichlorodifluoromethane	ND	0.200	0.018	ND	0.989	0.089		1
Chloromethane	ND	0.200	0.024	ND	0.413	0.050		1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.050	0.007	ND	0.349	0.050		1
Vinyl chloride	ND	0.020	0.007	ND	0.051	0.018		1
1,3-Butadiene	ND	0.020	0.010	ND	0.044	0.022		1
Bromomethane	ND	0.020	0.009	ND	0.078	0.033		1
Chloroethane	ND	0.100	0.014	ND	0.264	0.036		1
Ethyl Alcohol	ND	5.00	0.329	ND	9.42	0.620		1
Vinyl bromide	ND	0.200	0.010	ND	0.874	0.043		1
Acrolein	ND	0.050	0.039	ND	0.115	0.089		1
Acetone	ND	1.00	0.299	ND	2.38	0.710		1
Trichlorofluoromethane	ND	0.050	0.010	ND	0.281	0.053		1
iso-Propyl Alcohol	ND	0.500	0.179	ND	1.23	0.440		1
1,2-Dichloroethene (total)	ND	0.020	0.008	ND	0.079	0.030		1
Acrylonitrile	ND	0.500	0.025	ND	1.09	0.053		1
1,1-Dichloroethene	ND	0.020	0.008	ND	0.079	0.033		1
1,3-Dichloropropene, Total	ND	0.020	0.007	ND	0.091	0.032		1
tert-Butyl Alcohol	ND	0.500	0.012	ND	1.52	0.036		1
Methylene chloride	ND	0.500	0.013	ND	1.74	0.046		1
3-Chloropropene	ND	0.200	0.007	ND	0.626	0.021		1
Carbon disulfide	ND	0.200	0.014	ND	0.623	0.043		1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.050	0.009	ND	0.383	0.067		1
trans-1,2-Dichloroethene	ND	0.020	0.008	ND	0.079	0.030		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2137758
Report Date: 08/06/21

Air Canister Certification Results

Lab ID: L2137758-05
Client ID: CAN 1691
Sample Location:

Date Collected: 07/14/21 09:00
Date Received: 07/14/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,1-Dichloroethane	ND	0.020	0.007	ND	0.081	0.030		1
Methyl tert butyl ether	ND	0.200	0.008	ND	0.721	0.030		1
Vinyl acetate	ND	1.00	0.011	ND	3.52	0.039		1
2-Butanone	ND	0.500	0.027	ND	1.47	0.080		1
cis-1,2-Dichloroethene	ND	0.020	0.010	ND	0.079	0.038		1
Ethyl Acetate	ND	0.500	0.031	ND	1.80	0.111		1
Chloroform	ND	0.020	0.009	ND	0.098	0.044		1
Tetrahydrofuran	ND	0.500	0.007	ND	1.47	0.020		1
1,2-Dichloroethane	ND	0.020	0.010	ND	0.081	0.039		1
n-Hexane	ND	0.200	0.005	ND	0.705	0.017		1
1,1,1-Trichloroethane	ND	0.020	0.008	ND	0.109	0.045		1
Benzene	ND	0.100	0.005	ND	0.319	0.016		1
Carbon tetrachloride	ND	0.020	0.010	ND	0.126	0.063		1
Cyclohexane	ND	0.200	0.006	ND	0.688	0.022		1
Dibromomethane	ND	0.200	0.018	ND	1.42	0.128		1
1,2-Dichloropropane	ND	0.020	0.005	ND	0.092	0.025		1
Bromodichloromethane	ND	0.020	0.007	ND	0.134	0.045		1
1,4-Dioxane	ND	0.100	0.032	ND	0.360	0.115		1
Trichloroethene	ND	0.020	0.006	ND	0.107	0.033		1
2,2,4-Trimethylpentane	ND	0.200	0.006	ND	0.934	0.029		1
Heptane	ND	0.200	0.004	ND	0.820	0.017		1
cis-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
4-Methyl-2-pentanone	ND	0.500	0.012	ND	2.05	0.049		1
trans-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
1,1,2-Trichloroethane	ND	0.020	0.006	ND	0.109	0.032		1
Toluene	ND	0.050	0.014	ND	0.188	0.053		1
2-Hexanone	ND	0.200	0.015	ND	0.820	0.062		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2137758
Report Date: 08/06/21

Air Canister Certification Results

Lab ID: L2137758-05
Client ID: CAN 1691
Sample Location:

Date Collected: 07/14/21 09:00
Date Received: 07/14/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Dibromochloromethane	ND	0.020	0.009	ND	0.170	0.073		1
1,2-Dibromoethane	ND	0.020	0.008	ND	0.154	0.062		1
Xylene (Total)	ND	0.020	0.007	ND	0.087	0.029		1
Tetrachloroethene	ND	0.020	0.008	ND	0.136	0.053		1
1,1,1,2-Tetrachloroethane	ND	0.020	0.005	ND	0.137	0.036		1
Chlorobenzene	ND	0.100	0.006	ND	0.461	0.030		1
Ethylbenzene	ND	0.020	0.005	ND	0.087	0.021		1
p/m-Xylene	ND	0.040	0.019	ND	0.174	0.083		1
Bromoform	ND	0.020	0.007	ND	0.207	0.067		1
Styrene	ND	0.020	0.005	ND	0.085	0.021		1
1,1,2,2-Tetrachloroethane	ND	0.020	0.006	ND	0.137	0.039		1
o-Xylene	ND	0.020	0.007	ND	0.087	0.029		1
1,2,3-Trichloropropane	ND	0.020	0.005	ND	0.121	0.033		1
Isopropylbenzene	ND	0.200	0.005	ND	0.983	0.026		1
Bromobenzene	ND	0.200	0.006	ND	0.793	0.025		1
4-Ethyltoluene	ND	0.020	0.004	ND	0.098	0.021		1
1,3,5-Trimethylbenzene	ND	0.020	0.006	ND	0.098	0.028		1
1,2,4-Trimethylbenzene	ND	0.020	0.004	ND	0.098	0.021		1
Benzyl chloride	ND	0.200	0.007	ND	1.04	0.037		1
1,3-Dichlorobenzene	ND	0.020	0.006	ND	0.120	0.034		1
1,4-Dichlorobenzene	ND	0.020	0.005	ND	0.120	0.032		1
sec-Butylbenzene	ND	0.200	0.003	ND	1.10	0.018		1
p-Isopropyltoluene	ND	0.200	0.005	ND	1.10	0.025		1
1,2-Dichlorobenzene	ND	0.020	0.010	ND	0.120	0.059		1
n-Butylbenzene	ND	0.200	0.005	ND	1.10	0.026		1
1,2-Dibromo-3-chloropropane	ND	0.020	0.006	ND	0.193	0.054		1
1,2,4-Trichlorobenzene	ND	0.050	0.030	ND	0.371	0.223		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2137758
Report Date: 08/06/21

Air Canister Certification Results

Lab ID: L2137758-05
Client ID: CAN 1691
Sample Location:

Date Collected: 07/14/21 09:00
Date Received: 07/14/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Naphthalene	ND	0.050	0.035	ND	0.262	0.184		1
1,2,3-Trichlorobenzene	ND	0.050	0.013	ND	0.371	0.100		1
Hexachlorobutadiene	ND	0.050	0.017	ND	0.533	0.181		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	94		60-140
bromochloromethane	93		60-140
chlorobenzene-d5	98		60-140

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2137758

Project Number: CANISTER QC BAT **Report Date:** 08/06/21

Air Canister Certification Results

Lab ID: L2137758-06
Client ID: CAN 1818
Sample Location:

Date Collected: 07/14/21 09:00
Date Received: 07/14/21
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 07/15/21 03:19
Analyst: TS

	ppbV			ug/m3				
Parameter	**Results**	**RL**	**MDL**	**Results**	**RL**	**MDL**	**Qualifier**	**Dilution Factor**
Volatile Organics in Air by SIM - Mansfield Lab								
Propylene	ND	0.500	0.047	ND	0.861	0.080		1
Dichlorodifluoromethane	ND	0.200	0.018	ND	0.989	0.089		1
Chloromethane	ND	0.200	0.024	ND	0.413	0.050		1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.050	0.007	ND	0.349	0.050		1
Vinyl chloride	ND	0.020	0.007	ND	0.051	0.018		1
1,3-Butadiene	ND	0.020	0.010	ND	0.044	0.022		1
Bromomethane	ND	0.020	0.009	ND	0.078	0.033		1
Chloroethane	ND	0.100	0.014	ND	0.264	0.036		1
Ethyl Alcohol	ND	5.00	0.329	ND	9.42	0.620		1
Vinyl bromide	ND	0.200	0.010	ND	0.874	0.043		1
Acrolein	ND	0.050	0.039	ND	0.115	0.089		1
Acetone	ND	1.00	0.299	ND	2.38	0.710		1
Trichlorofluoromethane	ND	0.050	0.010	ND	0.281	0.053		1
iso-Propyl Alcohol	ND	0.500	0.179	ND	1.23	0.440		1
1,2-Dichloroethene (total)	ND	0.020	0.008	ND	0.079	0.030		1
Acrylonitrile	ND	0.500	0.025	ND	1.09	0.053		1
1,1-Dichloroethene	ND	0.020	0.008	ND	0.079	0.033		1
1,3-Dichloropropene, Total	ND	0.020	0.007	ND	0.091	0.032		1
tert-Butyl Alcohol	ND	0.500	0.012	ND	1.52	0.036		1
Methylene chloride	ND	0.500	0.013	ND	1.74	0.046		1
3-Chloropropene	ND	0.200	0.007	ND	0.626	0.021		1
Carbon disulfide	ND	0.200	0.014	ND	0.623	0.043		1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.050	0.009	ND	0.383	0.067		1
trans-1,2-Dichloroethene	ND	0.020	0.008	ND	0.079	0.030		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2137758
Report Date: 08/06/21

Air Canister Certification Results

Lab ID: L2137758-06
Client ID: CAN 1818
Sample Location:

Date Collected: 07/14/21 09:00
Date Received: 07/14/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
1,1-Dichloroethane	ND	0.020	0.007	ND	0.081	0.030		1
Methyl tert butyl ether	ND	0.200	0.008	ND	0.721	0.030		1
Vinyl acetate	ND	1.00	0.011	ND	3.52	0.039		1
2-Butanone	ND	0.500	0.027	ND	1.47	0.080		1
cis-1,2-Dichloroethene	ND	0.020	0.010	ND	0.079	0.038		1
Ethyl Acetate	ND	0.500	0.031	ND	1.80	0.111		1
Chloroform	ND	0.020	0.009	ND	0.098	0.044		1
Tetrahydrofuran	ND	0.500	0.007	ND	1.47	0.020		1
1,2-Dichloroethane	ND	0.020	0.010	ND	0.081	0.039		1
n-Hexane	ND	0.200	0.005	ND	0.705	0.017		1
1,1,1-Trichloroethane	ND	0.020	0.008	ND	0.109	0.045		1
Benzene	ND	0.100	0.005	ND	0.319	0.016		1
Carbon tetrachloride	ND	0.020	0.010	ND	0.126	0.063		1
Cyclohexane	ND	0.200	0.006	ND	0.688	0.022		1
Dibromomethane	ND	0.200	0.018	ND	1.42	0.128		1
1,2-Dichloropropane	ND	0.020	0.005	ND	0.092	0.025		1
Bromodichloromethane	ND	0.020	0.007	ND	0.134	0.045		1
1,4-Dioxane	ND	0.100	0.032	ND	0.360	0.115		1
Trichloroethene	ND	0.020	0.006	ND	0.107	0.033		1
2,2,4-Trimethylpentane	ND	0.200	0.006	ND	0.934	0.029		1
Heptane	ND	0.200	0.004	ND	0.820	0.017		1
cis-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
4-Methyl-2-pentanone	ND	0.500	0.012	ND	2.05	0.049		1
trans-1,3-Dichloropropene	ND	0.020	0.007	ND	0.091	0.032		1
1,1,2-Trichloroethane	ND	0.020	0.006	ND	0.109	0.032		1
Toluene	ND	0.050	0.014	ND	0.188	0.053		1
2-Hexanone	ND	0.200	0.015	ND	0.820	0.062		1

Project Name: BATCH CANISTER CERTIFICATION
Project Number: CANISTER QC BAT
Lab Number: L2137758
Report Date: 08/06/21

Air Canister Certification Results

Lab ID: L2137758-06
Client ID: CAN 1818
Sample Location:

Date Collected: 07/14/21 09:00
Date Received: 07/14/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Dibromochloromethane	ND	0.020	0.009	ND	0.170	0.073		1
1,2-Dibromoethane	ND	0.020	0.008	ND	0.154	0.062		1
Xylene (Total)	ND	0.020	0.007	ND	0.087	0.029		1
Tetrachloroethene	ND	0.020	0.008	ND	0.136	0.053		1
1,1,1,2-Tetrachloroethane	ND	0.020	0.005	ND	0.137	0.036		1
Chlorobenzene	ND	0.100	0.006	ND	0.461	0.030		1
Ethylbenzene	ND	0.020	0.005	ND	0.087	0.021		1
p/m-Xylene	ND	0.040	0.019	ND	0.174	0.083		1
Bromoform	ND	0.020	0.007	ND	0.207	0.067		1
Styrene	ND	0.020	0.005	ND	0.085	0.021		1
1,1,2,2-Tetrachloroethane	ND	0.020	0.006	ND	0.137	0.039		1
o-Xylene	ND	0.020	0.007	ND	0.087	0.029		1
1,2,3-Trichloropropane	ND	0.020	0.005	ND	0.121	0.033		1
Isopropylbenzene	ND	0.200	0.005	ND	0.983	0.026		1
Bromobenzene	ND	0.200	0.006	ND	0.793	0.025		1
4-Ethyltoluene	ND	0.020	0.004	ND	0.098	0.021		1
1,3,5-Trimethylbenzene	ND	0.020	0.006	ND	0.098	0.028		1
1,2,4-Trimethylbenzene	ND	0.020	0.004	ND	0.098	0.021		1
Benzyl chloride	ND	0.200	0.007	ND	1.04	0.037		1
1,3-Dichlorobenzene	ND	0.020	0.006	ND	0.120	0.034		1
1,4-Dichlorobenzene	ND	0.020	0.005	ND	0.120	0.032		1
sec-Butylbenzene	ND	0.200	0.003	ND	1.10	0.018		1
p-Isopropyltoluene	ND	0.200	0.005	ND	1.10	0.025		1
1,2-Dichlorobenzene	ND	0.020	0.010	ND	0.120	0.059		1
n-Butylbenzene	ND	0.200	0.005	ND	1.10	0.026		1
1,2-Dibromo-3-chloropropane	ND	0.020	0.006	ND	0.193	0.054		1
1,2,4-Trichlorobenzene	ND	0.050	0.030	ND	0.371	0.223		1

Project Name: BATCH CANISTER CERTIFICATION **Lab Number:** L2137758

Project Number: CANISTER QC BAT **Report Date:** 08/06/21

Air Canister Certification Results

Lab ID: L2137758-06
Client ID: CAN 1818
Sample Location:

Date Collected: 07/14/21 09:00
Date Received: 07/14/21
Field Prep: Not Specified

Sample Depth:

Parameter	ppbV Results	ppbV RL	ppbV MDL	ug/m3 Results	ug/m3 RL	ug/m3 MDL	Qualifier	Dilution Factor
Volatile Organics in Air by SIM - Mansfield Lab								
Naphthalene	ND	0.050	0.035	ND	0.262	0.184		1
1,2,3-Trichlorobenzene	ND	0.050	0.013	ND	0.371	0.100		1
Hexachlorobutadiene	ND	0.050	0.017	ND	0.533	0.181		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	94		60-140
bromochloromethane	94		60-140
chlorobenzene-d5	100		60-140

Project Name: NIKE 58 - SI IN LAUNCH AREA
Project Number: D01ME0077-02

Lab Number: L2140444
Report Date: 08/06/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
NA	Present/Intact

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2140444-01A	Canister - 6 Liter	NA	NA			Y	Absent		DOD-TO15-SIM(30)
L2140444-02A	Canister - 6 Liter	NA	NA			Y	Absent		DOD-TO15-SIM(30)
L2140444-03A	Canister - 6 Liter	NA	NA			Y	Absent		DOD-TO15-SIM(30)
L2140444-04A	Canister - 6 Liter	NA	NA			Y	Absent		DOD-TO15-SIM(30)
L2140444-05A	Canister - 6 Liter	NA	NA			Y	Absent		DOD-TO15-SIM(30)
L2140444-06A	Canister - 6 Liter	NA	NA			Y	Absent		DOD-TO15-SIM(30)
L2140444-07A	Canister - 6 Liter	NA	NA			Y	Absent		DOD-TO15-SIM(30)
L2140444-08A	Canister - 6 Liter	NA	NA			Y	Absent		DOD-TO15-SIM(30)
L2140444-09A	Canister - 6 Liter	NA	NA			Y	Absent		DOD-TO15-SIM(30)
L2140444-10A	Canister - 6 Liter	NA	NA			Y	Absent		CLEAN-FEE()
L2140444-11A	Canister - 6 Liter	NA	NA			Y	Absent		CLEAN-FEE()

*Values in parentheses indicate holding time in days

Project Name:	NIKE 58 - SI IN LAUNCH AREA	**Lab Number:**	L2140444
Project Number:	D01ME0077-02	**Report Date:**	08/06/21

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	NIKE 58 - SI IN LAUNCH AREA	**Lab Number:**	L2140444
Project Number:	D01ME0077-02	**Report Date:**	08/06/21

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	NIKE 58 - SI IN LAUNCH AREA	**Lab Number:**	L2140444
Project Number:	D01ME0077-02	**Report Date:**	08/06/21

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Project Name:	NIKE 58 - SI IN LAUNCH AREA	**Lab Number:**	L2140444
Project Number:	D01ME0077-02	**Report Date:**	08/06/21

REFERENCES

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

7/28/21

CHAIN-OF-CUSTODY RECORD

Verina Consulting Group, LLC, Bridgewater, NJ
Robert Gan
1011 US-22, Bridgewater Township, NJ 08807
(908) 864-4400, RGan@vcg-llc.com

COC # 072021VI

L2140444

Project Name: D01ME0077-02, Nike 58 - SI in Launch Area	Laboratory: Alpha Analytical, Inc., Mansfield, MA	Event: Nike 58 Summer VI 2021
Project Number: D01ME0077-02	POC: Chris Anderson, (802) 585-5351, canderson@alphalab.com	
WBS Code:	Ship to: 320 Forbes Boulevard, Mansfield, MA 02048	

Comments:
TO15SIM (A) – VOCs SIM AIR/GAS
matrix AA+AI samples collected over 24 hrs between 7/03+7/04
matrix GS samples collected over 8hrs on 7/04

Equipment:

Code	Matrix
AA	Ambient Air
AI	Indoor Air
GS	Soil Gas

Code	Container/Preservative
2	1x Leak-free stainless steel pressure vessels, with valve and specially prepared interior surfaces, None
3	1x Leak-free stainless steel pressure vessels, with valve and specially prepared interior surfaces, None

Event: Nike 58 Summer VI 2021

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: TO15SIM (A) 2	TO15SIM (A) 3	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
1	AA-01-SUMMER2021	AA	07/25/2021	0925	SM	X		AA-01	N1	0.00	0.00	1	collected 7/03-7/04
2	IA-01-SUMMER2021	AI	07/25/2021	0915		X		IA-01	N1	0.00	0.00	1	
3	IA-02-SUMMER2021	AI	07/25/2021	0930		X		IA-02	N1	0.00	0.00	1	
4	IA-FD-SUMMER2021	AI	07/25/2021	1000		X			FD1	0.00	0.00	1	
5	SV-01-SUMMER2021	GS	07/25/2021	1030			X	SV-01	N1	0.00	0.00	1	collected 7/04
6	SV-02-SUMMER2021	GS	07/25/2021	1025			X	SV-02	N1	0.00	0.00	1	
7	SV-03-SUMMER2021	GS	07/25/2021	1034			X	SV-03	N1	0.00	0.00	1	
8	SV-04-SUMMER2021	GS	07/25/2021	1050			X	SV-04	N1	0.00	0.00	1	
9	SV-FD-SUMMER2021	GS	07/25/2021	1035			X		FD1	0.00	0.00	1	
10													
11													

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
Schuyler UPS	7/26/21	0915	UPS		
				7/28/21	11:23

Shipping Date / Carrier / Airbill Number
Shipping Date: 7/26/21 - UPS

Received by Laboratory: *(Signature, Date, Time)* **& condition**

ENV.COC_Field
July 09, 202

CHRIS PYRA
(908) 864-4400
STE 302
1011 US HWY 22
BRIDGEWATER NJ 08807
51 LBS 1 OF 1
SHP WT 51 LBS
DWT 28,21,16
DATE 26 JUL 202
SHIP (508) 822-9300
TO: ALPHA ANALYTICAL
320 FORBES BLVD
MANSFIELD MA 02048-1806
MA 024 9-02
UPS GROUND
TRACKING #: 1Z 019 X66 03 9079 9799
BILLING: P/P

CHRIS PYRA
(908) 864-4400
STE 302
1011 US HWY 22
BRIDGEWATER NJ 08807
47 LBS 1 OF 1
SHP WT 47 LBS
DWT 28,21,16
DATE 26 JUL 202
SHIP (508) 822-9300
TO: ALPHA ANALYTICAL
320 FORBES BLVD
MANSFIELD MA 02048-1806
MA 024 9-02
UPS GROUND
TRACKING #: 1Z 019 X66 03 5746 7414
BILLING: P/P

CHRIS PYRA
(908) 854-4400
STE 302
1011 US HWY 22
BRIDGEWATER NJ 08807
24 LBS 1 OF 1
SHP WT 24 LBS
DWT 22.15.17
DATE 26 JUL 202
SHIP (508) 822-9300
TO: ALPHA ANALYTICAL
320 FORBES BLVD
MANSFIELD MA 02048-1806
MA 024 9-02
UPS GROUND
TRACKING #: 1Z 019 X66 03 5746 5514
BILLING: P/P
ISH 1Z 38F E2644 48 9V 07/202

CHRIS PYRA
(908) 854-4400
STE 302
1011 US HWY 22
BRIDGEWATER NJ 08807
13 LBS 1 OF 1
SHP WT 13 LBS
DATE 26 JUL 202
SHIP (508) 822-9300
TO: ALPHA ANALYTICAL
320 FORBES BLVD
MANSFIELD MA 02048-1806
MA 024 9-02
UPS GROUND
TRACKING #: 1Z 019 X66 03 5746 8360
BILLING: P/P
ISH 1Z 38F E2644 48 9V 07/202

Appendix E. Historical Groundwater and Drinking Water Data

Caribou LO-58 Site - Historical Groundwater Data

Location ID:	MW-01	MW-01	MW-01	MW-01	MW-02	MW-02	MW-02	MW-02	MW-02	MW-02	MW-03	MW-03
Field Sample ID:	MW-01-SPRING2020	MW-01-SPRING2020-R	MW-01-WINTER2020	MW-01-SUMMER2021	MW-02-SPRING2020	MW-FD-SPRING2020	MW-02-WINTER2020	MW-FD-WINTER2020	MW-02-SUMMER2021	MW-FD-SUMMER2021	MW-03-SPRING2020	MW-03-WINTER2020
Lab Sample ID:	SN4725-12	SN4725-7	TN0377-7	SO4723-1	SN4725-13	SN4725-17	TN0377-8	TN0377-12	SO4723-2	SO4723-6	SN4725-14	TN0377-9
Sample Date:	6/10/2020	6/11/2020	12/14/2020	7/21/2021	6/10/2020	6/10/2020	12/15/2020	12/15/2020	7/20/2021	7/20/2021	6/10/2020	12/15/2020
Sample Type:	N	N	N	N	N	FD	N	FD	N	FD	N	N
PAHs (µg/L)												
1-Methylnaphthalene		0.100 UJ	0.100 UJ	0.110 U	0.0990 U	0.0940 U	0.0930 U	0.0980 U	0.100 U	0.100 U	0.0960 U	0.0940 U
2-Methylnaphthalene		0.100 U	0.100 UJ	0.110 U	0.0990 U	0.0940 U	0.0930 U	0.0980 U	0.100 U	0.100 U	0.0960 U	0.0940 U
Acenaphthene		0.100 U	0.100 UJ	0.110 U	0.0990 U	0.0940 U	0.0930 U	0.0980 U	0.100 U	0.100 U	0.0960 U	0.0940 U
Acenaphthylene		0.100 U	0.100 UJ	0.110 U	0.0990 U	0.0940 U	0.0930 U	0.0980 U	0.100 U	0.100 U	0.0960 U	0.0940 U
Anthracene		0.100 U	0.100 UJ	0.110 U	0.0990 U	0.0940 U	0.0930 U	0.0980 U	0.100 U	0.100 U	0.0960 U	0.0940 U
Benzo(a)anthracene		0.100 UJ	0.100 UJ	0.110 U	0.0990 U	0.0940 U	0.0930 U	0.0980 U	0.100 U	0.100 U	0.0960 U	0.0940 U
Benzo(a)pyrene		0.100 UJ	0.100 UJ	0.110 UJ	0.0990 U	0.0940 U	0.0930 U	0.0980 U	0.100 U	0.100 U	0.0960 U	0.0940 U
Benzo(b)fluoranthene		0.100 UJ	0.100 UJ	0.110 U	0.0990 U	0.0940 U	0.0930 U	0.0980 U	0.100 U	0.100 U	0.0960 U	0.0940 U
Benzo(g,h,i)perylene		0.100 U	0.100 UJ	0.110 UJ	0.0990 U	0.0940 U	0.0930 U	0.0980 U	0.100 U	0.100 U	0.0960 U	0.0940 U
Benzo(k)fluoranthene		0.100 U	0.100 UJ	0.110 UJ	0.0990 U	0.0940 U	0.0930 U	0.0980 U	0.100 U	0.100 U	0.0960 U	0.0940 U
Chrysene		0.100 U	0.0440 J	0.110 U	0.0990 U	0.0940 U	0.0930 U	0.0980 U	0.100 U	0.100 U	0.0960 U	0.0940 U
Dibenz(a,h)anthracene		0.100 UJ	0.100 UJ	0.110 UJ	0.0990 U	0.0940 U	0.0930 U	0.0980 U	0.100 U	0.100 U	0.0960 U	0.0940 U
Fluoranthene		0.100 U	0.100 UJ	0.110 U	0.0990 U	0.0940 U	0.0930 U	0.0980 U	0.100 U	0.100 U	0.0960 U	0.0940 U
Fluorene		0.100 U	0.100 UJ	0.110 U	0.0990 U	0.0940 U	0.0930 U	0.0980 U	0.100 U	0.100 U	0.0960 U	0.0940 U
Indeno(1,2,3-c,d)pyrene		0.100 UJ	0.100 UJ	0.110 UJ	0.0990 U	0.0940 U	0.0930 U	0.0980 U	0.100 U	0.100 U	0.0960 U	0.0940 U
Naphthalene		0.100 U	0.100 UJ	0.110 U	0.0990 U	0.0940 U	0.0930 U	0.0980 U	0.100 U	0.100 U	0.0960 U	0.0940 U
Phenanthrene		0.100 U	0.100 UJ	0.110 U	0.0990 U	0.0940 U	0.0930 U	0.0980 U	0.100 U	0.100 U	0.0960 U	0.0940 U
Pyrene		0.100 U	0.0700 J	0.110 U	0.0990 U	0.0940 U	0.0930 U	0.0980 U	0.100 U	0.100 U	0.0960 U	0.0940 U
Mercury (µg/L)												
Mercury	0.200 U		0.100 U	0.100 U	0.100 U	0.200 U	0.100 U	0.100 U	0.100 U	0.0170 J	0.100 U	0.100 U
VPH (µg/L)												
Benzene	2.00 U		2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
C5-C8 Volatile Petroleum Hydrocarbons Aliphatic, Adjusted for Targe Analytes, Surrogates and Internal Standards	75.0 U		75.0 U	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U
C9-C10 Volatile Petroleum Hydrocarbons, Aromati	75.0 U		75.0 U	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U
C9-C12 Volatile Petroleum Hydrocarbons Aliphatic, Adjusted for Targe Analytes, Surrogates and Internal Standards	75.0 U		75.0 U	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U
Ethylbenzene	3.80 U		3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
m,p-Xylene	7.50 U		7.50 U	7.50 U	7.50 U	7.50 U	7.50 U	7.50 U	7.50 U	7.50 U	7.50 U	7.50 U
Methyl tert-butyl ether (MTBE)	3.80 U		3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
Naphthalene	3.80 U		3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
o-Xylene	3.80 U		3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
Toluene	3.80 U		3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
Metals (µg/L)												
Antimony	1.01	0.150 J	1.00 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.00 U	1.00 U	0.500 U	0.500 U
Arsenic	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U
Beryllium	0.200 U	0.200 U	1.00 U	0.200 U	0.200 U	0.200 U	1.00 U	1.00 U	1.00 U	1.00 U	0.200 U	0.200 U
Cadmium	0.0830 J	0.200 U	0.0630 J	0.200 U	0.200 U	1.00 U	0.200 U	0.0690 J	0.0390 J	0.200 U	0.200 U	1.00 U
Calcium	66500	69100	67500	84100	83600	89500	92700	95000	88400	75700	66800	
Chromium	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
Copper	3.00 U	3.00 U	3.29 J	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U	3.49 J	3.84 J	3.00 U	3.00 U
Lead	0.570 J	1.00 U	1.00 U	0.0920 J	0.200 J	1.00 U	1.00 U	1.00 U	0.500 U	0.500 U	1.00 U	
Manganese	11.9	1.60 J	2.30 J	4.92	5.20	1.80 J	1.10 J	2.00 U	2.00 U	2.30	0.740 J	
Nickel	2.00 U	0.250 J	2.00 U	2.00 U	2.00 U	2.00 U	0.280 J	0.230 J	2.00 U	2.00 U	1.20 U	0.170 J
Selenium	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U	0.260 J	3.00 U	3.00 U	3.00 U	
Silver	0.400 U	0.400 U	0.400 U	0.400 U	0.400 U	0.400 U	0.400 U	0.400 U	0.400 U	0.400 U	0.400 U	
Thallium	0.400 U	0.400 U	0.0990 J	0.400 U	0.400 U	0.400 U	0.400 U	0.0920 J	0.400 U	0.400 U	0.400 U	
Zinc	18.0	8.00 U	4.80 J	8.00 U	8.00 U	8.00 U	8.00 U	8.00 U	8.00 U	8.00 U	8.00 U	
VOCs (µg/L)												
1,1,1-Trichloroethane	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	
1,1,2,2-Tetrachloroethane	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	
1,1,2-Trichloroethane	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	
1,1-Dichloroethane	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	
1,1-Dichloroethene	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	
1,2-Dichloroethane	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	
1,2-Dichloropropane	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	
2-Butanone (MEK)	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 UJ	2.50 U	2.50 U	
2-Hexanone	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 UJ	2.50 U	2.50 U	
4-Methyl-2-pentanone (MIBK	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 UJ	2.50 U	2.50 U	
Acetone	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 UJ	2.50 U	2.50 U	
Benzene	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U	

	Location ID:	MW-01	MW-01	MW-01	MW-01	MW-02	MW-02	MW-02	MW-02	MW-02	MW-02	MW-03	MW-03
	Field Sample ID:	MW-01-SPRING2020	MW-01-SPRING2020-R	MW-01-WINTER2020	MW-01-SUMMER2021	MW-02-SPRING2020	MW-FD-SPRING2020	MW-02-WINTER2020	MW-FD-WINTER2020	MW-02-SUMMER2021	MW-FD-SUMMER2021	MW-03-SPRING2020	MW-03-WINTER2020
	Lab Sample ID:	SN4725-12	SN4725-7	TN0377-7	SO4723-1	SN4725-13	SN4725-17	TN0377-8	TN0377-12	SO4723-2	SO4723-6	SN4725-14	TN0377-9
	Sample Date:	6/10/2020	6/11/2020	12/14/2020	7/21/2021	6/10/2020	6/10/2020	12/15/2020	12/15/2020	7/20/2021	7/20/2021	6/10/2020	12/15/2020
	Sample Type:	N	N	N	N	N	FD	N	FD	N	FD	N	N
Bromodichloromethane		0.500 U		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
Bromoform		0.500 U		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
Bromomethane		1.00 U		1.00 UJ	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
Carbon disulfide		0.500 U		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
Carbon Tetrachloride		0.500 U		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
Chlorobenzene		0.500 U		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
Chloroethane		1.00 U		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
Chloroform		0.500 U		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
Chloromethane		1.00 U		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
cis-1,2-Dichloroethene		0.500 U		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
cis-1,3-Dichloropropene		0.500 U		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
Dibromochloromethane		0.500 U		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
Ethylbenzene		0.500 U		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
m,p-Xylene		1.00 U		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
Methylene chloride		2.50 U		5.00 U	2.50 U	2.50 U	2.50 U	9.30 U	9.40 U	2.50 U	2.50 UJ	2.50 U	5.00 U
o-Xylene		0.500 U		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
Styrene		0.500 U		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
Tetrachloroethene (PCE		0.500 U		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
Toluene		0.500 U		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
trans-1,2-Dichloroethene		0.500 U		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
trans-1,3-Dichloropropene		0.500 U		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
Trichloroethene (TCE		0.500 U		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
Vinyl chloride		1.00 U		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 UJ	1.00 U	1.00 U
Xylenes, Total		1.50 U		1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.50 UJ	1.50 U	1.50 U

Notes:

µg/L Micrograms per liter
FD Field duplicate
J Estimated value
N Normal field sample
U Undetected: The analyte was analyzed for, but not detected
UJ The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.

Location ID:	MW-03	MW-04	MW-04	MW-04	MW-05	MW-05	MW-05
Field Sample ID:	MW-03-SUMMER2021	MW-04-SPRING2020	MW-04-WINTER2020	MW-04-SUMMER2021	MW-05-SPRING2020	MW-05-WINTER2020	MW-05-SUMMER2021
Lab Sample ID:	SO4723-3	SN4725-15	TN0377-10	SO4723-4	SN4725-16	TN0377-11	SO4723-5
Sample Date:	7/20/2021	6/10/2020	12/15/2020	7/21/2021	6/10/2020	12/15/2020	7/20/2021
Sample Type:	N	N	N	N	N	N	N
PAHs (µg/L)							
1-Methylnaphthalene	0.110 U	0.0960 U	0.100 U	0.0930 U	0.140 J	0.0720 J	0.160 J
2-Methylnaphthalene	0.110 U	0.0960 U	0.100 U	0.0930 U	0.0940 U	0.100 U	0.0930 U
Acenaphthene	0.110 U	0.0960 U	0.100 U	0.0930 U	0.170 J	0.100 U	0.180 J
Acenaphthylene	0.110 U	0.0960 U	0.100 U	0.0930 U	0.0940 U	0.100 U	0.0930 U
Anthracene	0.110 U	0.0960 U	0.100 U	0.0930 U	0.0940 U	0.100 U	0.0470 J
Benzo(a)anthracene	0.110 U	0.0960 U	0.100 U	0.0930 U	0.0940 U	0.100 U	0.0930 U
Benzo(a)pyrene	0.110 U	0.0960 U	0.100 U	0.0930 U	0.0940 U	0.100 U	0.0930 U
Benzo(b)fluoranthene	0.110 U	0.0960 U	0.100 U	0.0930 U	0.0940 U	0.100 U	0.0930 U
Benzo(g,h,i)perylene	0.110 U	0.0960 U	0.100 U	0.0930 U	0.0940 U	0.100 U	0.0930 U
Benzo(k)fluoranthene	0.110 U	0.0960 U	0.100 U	0.0930 U	0.0940 U	0.100 U	0.0930 U
Chrysene	0.110 U	0.0960 U	0.100 U	0.0930 U	0.0940 U	0.100 U	0.0930 U
Dibenz(a,h)anthracene	0.110 U	0.0960 U	0.100 U	0.0930 U	0.0940 U	0.100 U	0.0930 U
Fluoranthene	0.110 U	0.0960 U	0.100 U	0.0930 U	0.0940 U	0.100 U	0.0930 U
Fluorene	0.110 U	0.0960 U	0.100 U	0.0930 U	0.360	0.0770 J	0.440
Indeno(1,2,3-c,d)pyrene	0.110 U	0.0960 U	0.100 U	0.0930 U	0.0940 U	0.100 U	0.0930 U
Naphthalene	0.110 U	0.0960 U	0.100 U	0.0930 U	0.220	0.100 U	0.0930 U
Phenanthrene	0.110 U	0.0960 U	0.100 U	0.0930 U	0.170 J	0.100 U	0.240
Pyrene	0.110 U	0.0960 U	0.100 U	0.0930 U	0.0940 U	0.100 U	0.0930 U
Mercury (µg/L)							
Mercury	0.100 U	0.200 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U
VPH (µg/L)							
Benzene	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
C5-C8 Volatile Petroleum Hydrocarbons Aliphatic, Adjusted for Targe Analytes, Surrogates and Internal Standards	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U
C9-C10 Volatile Petroleum Hydrocarbons, Aromati	75.0 U	75.0 U	75.0 U	75.0 U	95.0 J	58.0 J	76.0 J
C9-C12 Volatile Petroleum Hydrocarbons Aliphatic, Adjusted for Targe Analytes, Surrogates and Internal Standards	75.0 U	75.0 U	75.0 U	75.0 U	84.0 J	75.0 U	82.0 J
Ethylbenzene	3.80 U	3.80 U	3.80 U	3.80 U	0.790 J	3.80 U	3.80 U
m,p-Xylene	7.50 U	7.50 U	7.50 U	7.50 U	7.50 U	7.50 U	7.50 U
Methyl tert-butyl ether (MTBE)	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
Naphthalene	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
o-Xylene	3.80 U	3.80 U	3.80 U	3.80 U	0.850 J	3.80 U	3.80 U
Toluene	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
Metals (µg/L)							
Antimony	1.00 U	0.500 U	0.500 U	1.00 U	0.500 U	0.230 J	0.500 U
Arsenic	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U
Beryllium	1.00 U	0.200 U	0.200 U	1.00 U	1.00 U	1.00 U	1.00 U
Cadmium	0.0740 J	0.200 U	0.200 U	0.0530 J	2.75	3.95	0.739 J
Calcium	75300	92200	97800	93500	103000	93700	103000
Chromium	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U
Copper	3.82 J	3.13	3.00 U	3.57 J	3.00 U	7.92	6.26 J
Lead	1.00 U	0.500 U	1.00 U	1.00 U	0.370 J	1.00 U	1.00 U
Manganese	2.00 U	2.20	2.30	2.00 U	706	697	621 J
Nickel	2.00 U	1.20 U	0.310 J	2.00 U	2.00 U	1.30 J	2.00 U
Selenium	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U
Silver	0.400 U	0.400 U	0.400 U	0.400 U	0.400 U	0.400 U	0.400 U
Thallium	0.400 U	0.400 U	0.400 U	0.400 U	0.400 U	0.400 U	0.400 U
Zinc	8.00 U	8.00 U	8.00 U	8.00 U	14.0	26.0	6.50 J
VOCs (µg/L)							
1,1,1-Trichloroethane	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
1,1,2,2-Tetrachloroethane	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
1,1,2-Trichloroethane	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
1,1-Dichloroethane	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
1,1-Dichloroethene	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
1,2-Dichloroethane	0.500 U	0.500 U	0.500 U	0.270 J	0.500 U	0.500 U	0.500 U
1,2-Dichloropropane	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
2-Butanone (MEK)	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U
2-Hexanone	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U
4-Methyl-2-pentanone (MIBK	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U
Acetone	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U
Benzene	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U

	Location ID:	MW-03	MW-04	MW-04	MW-04	MW-05	MW-05	MW-05
	Field Sample ID:	MW-03-SUMMER2021	MW-04-SPRING2020	MW-04-WINTER2020	MW-04-SUMMER2021	MW-05-SPRING2020	MW-05-WINTER2020	MW-05-SUMMER2021
	Lab Sample ID:	SO4723-3	SN4725-15	TN0377-10	SO4723-4	SN4725-16	TN0377-11	SO4723-5
	Sample Date:	7/20/2021	6/10/2020	12/15/2020	7/21/2021	6/10/2020	12/15/2020	7/20/2021
	Sample Type:	N	N	N	N	N	N	N
Bromodichloromethane		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Bromoform		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Bromomethane		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Carbon disulfide		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Carbon Tetrachloride		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Chlorobenzene		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Chloroethane		1.00 U	1.00 U	1.00 U	0.710 J	1.00 U	1.00 U	1.00 U
Chloroform		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Chloromethane		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
cis-1,2-Dichloroethene		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
cis-1,3-Dichloropropene		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Dibromochloromethane		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Ethylbenzene		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
m,p-Xylene		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Methylene chloride		2.50 U	2.50 U	17.0 U	2.50 U	2.50 U	5.80 U	5.00 U
o-Xylene		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Styrene		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Tetrachloroethene (PCE		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Toluene		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
trans-1,2-Dichloroethene		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
trans-1,3-Dichloropropene		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Trichloroethene (TCE		0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.310 J
Vinyl chloride		1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
Xylenes, Total		1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.50 U	1.50 U

Notes:

µg/L Micrograms per liter
FD Field duplicate
J Estimated value
N Normal field sample
U Undetected: The analyte was analyzed for, but not detected
UJ The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.

Caribou LO-58 Site - Historical Drinking Water Data

Location ID:	DW-01-EFF	DW-01-EFF	DW-01-EFF	DW-01-EFF	DW-01-INF	DW-01-INF	DW-01-INF	DW-01-INF	DW-01-INF
Field Sample ID:	DW-01-EFF-SPRING2020	DW-01-EFF-WINTER2020	DW-01-EFF-FEBRUARY2021	DW-01-EFF-SUMMER2021	DW-01-INF-SPRING2020	DW-01-INF-WINTER2020	DW-01-INF-FEBRUARY2021	DW-FD-FEBRUARY2021	DW-01-INF-SUMMER2021
Lab Sample ID:	SN4725-1	TN0377-1	SO1108-1	SO4724-1	SN4725-2	TN0377-2	SO1108-2	SO1108-4	SO4724-2
Sample Date:	6/11/2020	12/18/2020	2/27/2021	7/20/2021	6/11/2020	12/18/2020	2/27/2021	2/27/2021	7/20/2021
Sample Type:	N	N	N	N	N	N	N	FD	N
PAHs (µg/L)									
1-Methylnaphthalene	0.0970 U	0.0930 U		0.0930 U	0.0940 U	0.0950 U			0.0930 U
2-Methylnaphthalene	0.0970 U	0.0930 U		0.0930 U	0.0940 U	0.0950 U			0.0930 U
Acenaphthene	0.0970 U	0.0930 U		0.0930 U	0.0940 U	0.0950 U			0.0930 U
Acenaphthylene	0.0970 U	0.0930 U		0.0930 U	0.0940 U	0.0950 U			0.0930 U
Anthracene	0.0970 U	0.0930 U		0.0930 U	0.0940 UJ	0.0950 U			0.0930 U
Benzo(a)anthracene	0.0970 U	0.0930 U		0.0930 U	0.0940 UJ	0.0950 U			0.0930 U
Benzo(a)pyrene	0.0970 U	0.0930 U		0.0930 U	0.0940 UJ	0.0950 U			0.0930 U
Benzo(b)fluoranthene	0.0970 U	0.0930 U		0.0930 U	0.0940 UJ	0.0950 U			0.0930 U
Benzo(g,h,i)perylene	0.0970 U	0.0930 U		0.0930 U	0.0940 UJ	0.0950 U			0.0930 U
Benzo(k)fluoranthene	0.0970 U	0.0930 U		0.0930 U	0.0940 U	0.0950 U			0.0930 U
Chrysene	0.0970 U	0.0930 U		0.0930 U	0.0940 U	0.0950 U			0.0930 U
Dibenz(a,h)anthracene	0.0970 U	0.0930 U		0.0930 U	0.0940 U	0.0950 U			0.0930 U
Fluoranthene	0.0970 U	0.0930 U		0.0930 U	0.0940 U	0.0950 U			0.0930 U
Fluorene	0.0970 U	0.0930 U		0.0930 U	0.0940 U	0.0950 U			0.0930 U
Indeno(1,2,3-c,d)pyrene	0.0970 U	0.0930 U		0.0930 U	0.0940 U	0.0950 U			0.0930 U
Naphthalene	0.0970 U	0.0930 U		0.0930 U	0.0940 U	0.0950 U			0.0930 U
Phenanthrene	0.0970 U	0.0930 U		0.0930 U	0.0940 U	0.0950 U			0.0930 U
Pyrene	0.0970 U	0.0930 U		0.0930 U	0.0940 U	0.0950 U			0.0930 U
Mercury (µg/L)									
Mercury	0.100 U	0.100 U		0.100 U	0.100 U	0.100 U			0.100 U
VPH (µg/L)									
Benzene	2.00 UJ	2.00 U		2.00 U	2.00 U	2.00 U			2.00 U
C5-C8 Volatile Petroleum Hydrocarbons Aliphatic, Adjusted for Target Analytes, Surrogates and Internal Standards	75.0 UJ	75.0 U		75.0 U	75.0 U	75.0 U			75.0 U
C9-C10 Volatile Petroleum Hydrocarbons, Aromatic	75.0 UJ	75.0 U		75.0 U	75.0 U	75.0 U			75.0 U
C9-C12 Volatile Petroleum Hydrocarbons Aliphatic, Adjusted for Target Analytes, Surrogates and Internal Standards	75.0 UJ	75.0 U		75.0 U	75.0 U	75.0 U			75.0 U
Ethylbenzene	3.80 UJ	3.80 U		3.80 U	3.80 U	3.80 U			3.80 U
m,p-Xylene	7.50 UJ	7.50 U		7.50 U	7.50 U	7.50 U			7.50 U
Methyl tert-butyl ether (MTBE)	3.80 UJ	3.80 U		3.80 U	3.80 U	3.80 U			3.80 U
Naphthalene	3.80 UJ	3.80 U		3.80 U	3.80 U	3.80 U			3.80 U
o-Xylene	3.80 UJ	3.80 U		3.80 U	3.80 U	3.80 U			3.80 U
Toluene	3.80 UJ	3.80 U		3.80 U	3.80 U	3.80 U			3.80 U
Metals (µg/L)									
Antimony	0.0560 J	10.9	1.00 U	0.500 U	0.500 U	0.0780 J	1.00 U	1.00 U	1.00 U
Arsenic	4.00 U	214	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U
Beryllium	0.0510 J	0.200 U		1.00 U	0.0640 J	0.200 U			0.200 U
Cadmium	1.00 U	1.00 U		0.0390 J	0.200 U	0.200 U			0.200 U
Calcium	518	5560		83800	358	1110			88500
Chromium	0.630 J	5.00 U		5.00 U	0.680 J	5.00 U			5.00 U
Copper	3.52	13.1		13.7	15.8	36.4			7.84
Lead	0.730 J	1.00 U		1.00 U	1.07 J	2.18			1.00 U
Manganese	2.00 U	0.920 J		2.00 U	2.00 U	0.350 J			2.00 U
Nickel	2.00 U	0.310 J		4.64	2.00 U	3.06			2.00 U
Selenium	0.270 J	0.380 J		3.00 U	3.00 U	3.00 U			3.00 U
Silver	0.400 U	0.400 U		0.400 U	0.400 U	0.400 U			0.400 U
Thallium	0.400 U	0.400 U		0.400 U	0.400 U	0.400 U			0.400 U
Zinc	16.0 J	13.0		35.0	63.0 J	38.0			6.00 J

Location ID:	DW-01-EFF	DW-01-EFF	DW-01-EFF	DW-01-EFF	DW-01-INF	DW-01-INF	DW-01-INF	DW-01-INF	DW-01-INF
Field Sample ID:	DW-01-EFF-SPRING2020	DW-01-EFF-WINTER2020	DW-01-EFF-FEBRUARY2021	DW-01-EFF-SUMMER2021	DW-01-INF-SPRING2020	DW-01-INF-WINTER2020	DW-01-INF-FEBRUARY2021	DW-FD-FEBRUARY2021	DW-01-INF-SUMMER2021
Lab Sample ID:	SN4725-1	TN0377-1	SO1108-1	SO4724-1	SN4725-2	TN0377-2	SO1108-2	SO1108-4	SO4724-2
Sample Date:	6/11/2020	12/18/2020	2/27/2021	7/20/2021	6/11/2020	12/18/2020	2/27/2021	2/27/2021	7/20/2021
Sample Type:	N	N	N	N	N	N	N	FD	N
VOCs (µg/L)									
1,1,1,2-Tetrachloroethane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
1,1,1-Trichloroethane	0.250 U	0.250 U		0.250 UJ	0.0630 J	0.250 U			0.250 UJ
1,1,2,2-Tetrachloroethane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
1,1,2-Trichloroethane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
1,1-Dichloroethane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
1,1-Dichloroethene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
1,1-Dichloropropene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
1,2,3-Trichlorobenzene	0.500 U	0.500 U		0.500 UJ	0.500 U	0.500 U			0.500 UJ
1,2,3-Trichloropropane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
1,2,4-Trichlorobenzene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
1,2,4-Trimethylbenzene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
1,2-Dibromo-3-chloropropane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
1,2-Dibromoethane (EDB)	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
1,2-Dichlorobenzene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
1,2-Dichloroethane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
1,2-Dichloropropane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
1,3,5-Trimethylbenzene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
1,3-Dichlorobenzene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
1,3-Dichloropropane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
1,4-Dichlorobenzene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
2,2-Dichloropropane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
2-Butanone (MEK)	2.50 U	2.50 U		2.50 UJ	2.50 U	2.50 U			2.50 UJ
2-Chlorotoluene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
2-Hexanone	2.50 U	2.50 U		2.50 UJ	2.50 UJ	2.50 U			2.50 UJ
4-Chlorotoluene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
4-Methyl-2-pentanone (MIBK)	2.50 U	2.50 U		2.50 UJ	2.50 U	2.50 U			2.50 UJ
Acetone	2.50 U	2.50 U		2.40 J	2.50 U	2.50 U			2.50 UJ
Benzene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
Bromobenzene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
Bromochloromethane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
Bromodichloromethane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
Bromoform	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
Bromomethane	0.500 U	0.500 U		0.500 UJ	0.500 U	0.500 U			0.500 UJ
Carbon disulfide	0.500 U	0.500 U		0.500 UJ	0.500 U	0.500 U			0.500 UJ
Carbon Tetrachloride	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
Chlorobenzene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
Chloroethane	0.500 U	0.500 U		0.500 UJ	0.500 U	0.500 U			0.500 UJ
Chloroform	0.250 U	0.250 U		0.250 UJ	0.250 U	0.0490 J			0.500 UJ
Chloromethane	0.500 U	0.500 U		1.00 UJ	0.500 U	0.500 U			1.00 UJ
cis-1,2-Dichloroethene	0.250 U	0.250 U		0.250 UJ	0.760	0.480 J			0.740 J
cis-1,3-Dichloropropene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
Cumene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
Dibromochloromethane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
Dibromomethane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
Dichlorodifluoromethane	0.500 U	0.500 U		0.500 UJ	0.500 U	0.500 U			0.500 UJ
Ethylbenzene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
Hexachlorobutadiene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
m,p-Xylene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ

Location ID:	DW-01-EFF	DW-01-EFF	DW-01-EFF	DW-01-EFF	DW-01-INF	DW-01-INF	DW-01-INF	DW-01-INF	DW-01-INF
Field Sample ID:	DW-01-EFF-SPRING2020	DW-01-EFF-WINTER2020	DW-01-EFF-FEBRUARY2021	DW-01-EFF-SUMMER2021	DW-01-INF-SPRING2020	DW-01-INF-WINTER2020	DW-01-INF-FEBRUARY2021	DW-FD-FEBRUARY2021	DW-01-INF-SUMMER2021
Lab Sample ID:	SN4725-1	TN0377-1	SO1108-1	SO4724-1	SN4725-2	TN0377-2	SO1108-2	SO1108-4	SO4724-2
Sample Date:	6/11/2020	12/18/2020	2/27/2021	7/20/2021	6/11/2020	12/18/2020	2/27/2021	2/27/2021	7/20/2021
Sample Type:	N	N	N	N	N	N	N	FD	N
Methyl tert-butyl ether (MTBE)	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
Methylene chloride	1.20 U	2.50 U		2.50 UJ	1.20 U	3.40 U			1.20 UJ
Naphthalene	0.500 UJ	0.500 U		0.500 UJ	0.500 UJ	0.500 U			0.500 UJ
n-Butylbenzene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
n-Propylbenzene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
o-Xylene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
p-Cymene (p-Isopropyltoluene)	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
sec-Butylbenzene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
Styrene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
Tetrachloroethene (PCE)	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
Toluene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
trans-1,2-Dichloroethene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
trans-1,3-Dichloropropene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
Trichloroethene (TCE)	0.250 U	0.250 U		0.250 UJ	3.00	2.40			2.90 J
Trichlorofluoromethane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U			0.250 UJ
Vinyl chloride	0.500 U	0.500 U		0.500 UJ	0.500 U	0.500 U			0.500 UJ

Notes:

µg/L Micrograms per liter
FD Field duplicate
J Estimated value
N Normal field sample
U Undetected: The analyte was analyzed for, but not detected.
UJ The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.

Location ID:	DW-01-MID	DW-01-MID	DW-01-MID	DW-01-MID	DW-02R-EFF	DW-02R-EFF	DW-02R-EFF	DW-02R-INF	DW-02R-INF
Field Sample ID:	DW-01-MID-SPRING2020	DW-01-MID-WINTER2020	DW-01-MID-FEBRUARY2021	DW-01-MID-SUMMER2021	DW-02R-EFF-SPRING2020	DW-02R-EFF-WINTER2020	DW-02R-EFF-SUMMER2021	DW-02R-INF-SPRING2020	DW-FD-SPRING2020
Lab Sample ID:	SN4725-3	TN0377-3	SO1108-3	SO4724-3	SN4725-4	TN0377-4	SO4724-4	SN4725-5	SN4725-11
Sample Date:	6/11/2020	12/18/2020	2/27/2021	7/20/2021	6/11/2020	12/16/2020	7/21/2021	6/11/2020	6/11/2020
Sample Type:	N	N	N	N	N	N	N	N	FD
PAHs (µg/L)									
1-Methylnaphthalene	0.0940 U	0.100 U		0.0930 U	0.0930 U	0.0940 U	0.0960 U	0.0960 U	0.0960 U
2-Methylnaphthalene	0.0940 U	0.100 U		0.0930 U	0.0930 U	0.0940 U	0.0960 U	0.0960 U	0.0960 U
Acenaphthene	0.0940 U	0.100 U		0.0930 U	0.0930 U	0.0940 U	0.0960 U	0.0960 U	0.0960 U
Acenaphthylene	0.0940 U	0.100 U		0.0930 U	0.0930 U	0.0940 U	0.0960 U	0.0960 U	0.0960 U
Anthracene	0.0940 U	0.100 U		0.0930 U	0.0930 U	0.0940 U	0.0960 U	0.0960 U	0.0960 U
Benzo(a)anthracene	0.0940 U	0.100 U		0.0930 U	0.0930 U	0.0940 U	0.0960 U	0.0960 U	0.0960 U
Benzo(a)pyrene	0.0940 U	0.100 U		0.0930 U	0.0930 U	0.0940 U	0.0960 U	0.0960 U	0.0960 U
Benzo(b)fluoranthene	0.0940 U	0.100 U		0.0930 U	0.0930 U	0.0940 U	0.0960 U	0.0960 U	0.0960 U
Benzo(g,h,i)perylene	0.0940 U	0.100 U		0.0930 U	0.0930 U	0.0940 U	0.0960 U	0.0960 U	0.0960 U
Benzo(k)fluoranthene	0.0940 U	0.100 U		0.0930 U	0.0930 U	0.0940 U	0.0960 U	0.0960 U	0.0960 U
Chrysene	0.0940 U	0.100 U		0.0930 U	0.0930 U	0.0940 U	0.0960 U	0.0960 U	0.0960 U
Dibenz(a,h)anthracene	0.0940 U	0.100 U		0.0930 U	0.0930 U	0.0940 U	0.0960 U	0.0960 U	0.0960 U
Fluoranthene	0.0940 U	0.100 U		0.0930 U	0.0930 U	0.0940 U	0.0960 U	0.0960 U	0.0960 U
Fluorene	0.0940 U	0.100 U		0.0930 U	0.0930 U	0.0940 U	0.0960 U	0.0960 U	0.0960 U
Indeno(1,2,3-c,d)pyrene	0.0940 U	0.100 U		0.0930 U	0.0930 U	0.0940 U	0.0960 U	0.0960 U	0.0960 U
Naphthalene	0.0940 U	0.100 U		0.0930 U	0.0930 U	0.0940 U	0.0960 U	0.0960 U	0.0960 U
Phenanthrene	0.0940 U	0.100 U		0.0930 U	0.0930 U	0.0940 U	0.0960 U	0.0960 U	0.0960 U
Pyrene	0.0940 U	0.100 U		0.0930 U	0.0930 U	0.0940 U	0.0960 U	0.0960 U	0.0960 U
Mercury (µg/L)									
Mercury	0.0150 J	0.100 U		0.100 U	0.0180 J	0.100 U	0.100 U	0.0150 J	0.0180 J
VPH (µg/L)									
Benzene	2.00 U	2.00 U		2.00 U	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
C5-C8 Volatile Petroleum Hydrocarbons Aliphatic, Adjusted for Target Analytes, Surrogates and Internal Standards	75.0 U	75.0 U		75.0 U	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U
C9-C10 Volatile Petroleum Hydrocarbons, Aromatic	75.0 U	75.0 U		75.0 U	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U
C9-C12 Volatile Petroleum Hydrocarbons Aliphatic, Adjusted for Target Analytes, Surrogates and Internal Standards	75.0 U	75.0 U		75.0 U	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U
Ethylbenzene	3.80 U	3.80 U		3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
m,p-Xylene	7.50 U	7.50 U		7.50 U	7.50 U	7.50 U	7.50 U	7.50 U	7.50 U
Methyl tert-butyl ether (MTBE)	3.80 U	3.80 U		3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
Naphthalene	3.80 U	3.80 U		3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
o-Xylene	3.80 U	3.80 U		3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
Toluene	3.80 U	3.80 U		3.80 U	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
Metals (µg/L)									
Antimony	0.500 U	3.44	1.00 U	1.00 U	0.0680 J	0.0580 J	1.00 U	0.500 U	0.500 U
Arsenic	4.00 U	90.3	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U
Beryllium	0.0680 J	0.0710 J		1.00 U	0.200 U	0.200 U	0.200 U	0.0460 J	0.0520 J
Cadmium	1.00 U	1.00 U		0.0830 J	0.200 U	0.200 U	0.200 U	1.00 U	0.200 U
Calcium	472	2980		89300	66100	67600	59600	63800	63900
Chromium	0.540 J	5.00 U		5.00 U	0.440 J	5.00 U	5.00 U	0.460 J	0.400 J
Copper	4.29	4.68		11.8	24.3	12.8	21.4	64.0	74.2
Lead	2.97 J	1.00 U		1.00 U	9.06 J	1.97	1.00 U	11.0 J	12.6 J
Manganese	2.00 U	3.58		2.00 U	2.00 U	1.00 U	2.00 U	2.00 U	2.70
Nickel	2.00 U	0.300 J		2.18	3.21	2.33	2.00 U	4.29	3.82
Selenium	0.300 J	0.370 J		0.300 J	3.00 U	3.00 U	3.00 U	3.00 U	3.00 U
Silver	0.400 U	0.400 U		0.400 U	0.400 U	0.400 U	0.400 U	0.400 U	0.0590 J
Thallium	0.0860 J	0.180 J		0.140 J	0.400 U	0.400 U	0.400 U	0.400 U	0.400 U
Zinc	84.2 J	13.0		35.0	81.0 J	22.0	21.0	62.5 J	90.1 J

Location ID:	DW-01-MID	DW-01-MID	DW-01-MID	DW-01-MID	DW-02R-EFF	DW-02R-EFF	DW-02R-EFF	DW-02R-INF	DW-02R-INF
Field Sample ID:	DW-01-MID-SPRING2020	DW-01-MID-WINTER2020	DW-01-MID-FEBRUARY2021	DW-01-MID-SUMMER2021	DW-02R-EFF-SPRING2020	DW-02R-EFF-WINTER2020	DW-02R-EFF-SUMMER2021	DW-02R-INF-SPRING2020	DW-FD-SPRING2020
Lab Sample ID:	SN4725-3	TN0377-3	SO1108-3	SO4724-3	SN4725-4	TN0377-4	SO4724-4	SN4725-5	SN4725-11
Sample Date:	6/11/2020	12/18/2020	2/27/2021	7/20/2021	6/11/2020	12/16/2020	7/21/2021	6/11/2020	6/11/2020
Sample Type:	N	N	N	N	N	N	N	N	FD
VOCs (µg/L)									
1,1,1,2-Tetrachloroethane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
1,1,1-Trichloroethane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
1,1,2,2-Tetrachloroethane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
1,1,2-Trichloroethane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
1,1-Dichloroethane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
1,1-Dichloroethene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
1,1-Dichloropropene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
1,2,3-Trichlorobenzene	0.500 U	0.500 U		0.500 UJ	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
1,2,3-Trichloropropane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
1,2,4-Trichlorobenzene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
1,2,4-Trimethylbenzene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
1,2-Dibromo-3-chloropropane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
1,2-Dibromoethane (EDB)	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
1,2-Dichlorobenzene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
1,2-Dichloroethane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
1,2-Dichloropropane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
1,3,5-Trimethylbenzene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
1,3-Dichlorobenzene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
1,3-Dichloropropane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
1,4-Dichlorobenzene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
2,2-Dichloropropane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
2-Butanone (MEK)	2.50 U	2.50 U		2.50 UJ	2.50 U	2.50 U	2.50 UJ	2.50 U	2.50 U
2-Chlorotoluene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
2-Hexanone	2.50 U	2.50 U		2.50 UJ	2.50 U	2.50 U	2.50 UJ	2.50 U	2.50 U
4-Chlorotoluene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
4-Methyl-2-pentanone (MIBK)	2.50 U	2.50 U		2.50 UJ	2.50 U	2.50 U	2.50 UJ	2.50 U	2.50 U
Acetone	2.50 U	2.50 U		2.50 UJ	2.50 U	2.50 U	2.50 UJ	2.50 U	2.50 U
Benzene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
Bromobenzene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
Bromochloromethane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
Bromodichloromethane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
Bromoform	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
Bromomethane	0.500 U	0.500 U		0.500 UJ	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
Carbon disulfide	0.500 U	0.500 U		0.500 UJ	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
Carbon Tetrachloride	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
Chlorobenzene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
Chloroethane	0.500 U	0.500 U		0.500 UJ	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
Chloroform	0.250 U	0.250 U		0.250 UJ	0.350 J	0.250 U	0.250 UJ	0.250 U	0.250 U
Chloromethane	0.500 U	0.500 U		1.00 UJ	0.500 U	0.500 U	1.00 UJ	0.500 U	0.500 U
cis-1,2-Dichloroethene	0.160 J	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
cis-1,3-Dichloropropene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
Cumene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
Dibromochloromethane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
Dibromomethane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
Dichlorodifluoromethane	0.500 U	0.500 U		0.500 UJ	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U
Ethylbenzene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
Hexachlorobutadiene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
m,p-Xylene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U

Location ID:	DW-01-MID	DW-01-MID	DW-01-MID	DW-01-MID	DW-02R-EFF	DW-02R-EFF	DW-02R-EFF	DW-02R-INF	DW-02R-INF
Field Sample ID:	DW-01-MID-SPRING2020	DW-01-MID-WINTER2020	DW-01-MID-FEBRUARY2021	DW-01-MID-SUMMER2021	DW-02R-EFF-SPRING2020	DW-02R-EFF-WINTER2020	DW-02R-EFF-SUMMER2021	DW-02R-INF-SPRING2020	DW-FD-SPRING2020
Lab Sample ID:	SN4725-3	TN0377-3	SO1108-3	SO4724-3	SN4725-4	TN0377-4	SO4724-4	SN4725-5	SN4725-11
Sample Date:	6/11/2020	12/18/2020	2/27/2021	7/20/2021	6/11/2020	12/16/2020	7/21/2021	6/11/2020	6/11/2020
Sample Type:	N	N	N	N	N	N	N	N	FD
Methyl tert-butyl ether (MTBE)	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
Methylene chloride	1.20 U	2.50 U		1.20 UJ	1.20 U	4.20 U	2.50 UJ	1.20 U	1.20 U
Naphthalene	0.500 UJ	0.500 U		0.500 UJ	0.500 UJ	0.500 U	0.500 UJ	0.500 UJ	0.500 UJ
n-Butylbenzene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
n-Propylbenzene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
o-Xylene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
p-Cymene (p-Isopropyltoluene)	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
sec-Butylbenzene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
Styrene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
Tetrachloroethene (PCE)	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
Toluene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
trans-1,2-Dichloroethene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
trans-1,3-Dichloropropene	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
Trichloroethene (TCE)	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
Trichlorofluoromethane	0.250 U	0.250 U		0.250 UJ	0.250 U	0.250 U	0.250 UJ	0.250 U	0.250 U
Vinyl chloride	0.500 U	0.500 U		0.500 UJ	0.500 U	0.500 U	0.500 UJ	0.500 U	0.500 U

Notes:

µg/L Micrograms per liter
FD Field duplicate
J Estimated value
N Normal field sample
U Undetected: The analyte was analyzed for, but not detected.
UJ The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.

Location ID:	DW-02R-INF	DW-02R-INF	DW-02R-INF	DW-02R-INF	DW-04-TAP
Field Sample ID:	DW-02R-INF-WINTER2020	DW-FD-WINTER2020	DW-02R-INF-SUMMER2021	DW-FD-SUMMER2021	DW-04-TAP-SPRING2020
Lab Sample ID:	TN0377-5	TN0377-6	SO4724-5	SO4724-6	SN4725-6
Sample Date:	12/16/2020	12/16/2020	7/21/2021	7/21/2021	6/11/2020
Sample Type:	N	FD	N	FD	N
PAHs (µg/L)					
1-Methylnaphthalene	0.0960 U	0.0970 U	0.0950 U	0.0950 U	0.0970 U
2-Methylnaphthalene	0.0960 U	0.0970 U	0.0950 U	0.0950 U	0.0970 U
Acenaphthene	0.0960 U	0.0970 U	0.0950 U	0.0950 U	0.0970 U
Acenaphthylene	0.0960 U	0.0970 U	0.0950 U	0.0950 U	0.0970 U
Anthracene	0.0960 U	0.0970 U	0.0950 U	0.0950 U	0.0970 U
Benzo(a)anthracene	0.0960 U	0.0970 U	0.0950 U	0.0950 U	0.0970 U
Benzo(a)pyrene	0.0960 U	0.0970 U	0.0950 U	0.0950 U	0.0970 U
Benzo(b)fluoranthene	0.0960 U	0.0970 U	0.0950 U	0.0950 U	0.0970 U
Benzo(g,h,i)perylene	0.0960 U	0.0970 U	0.0950 U	0.0950 U	0.0970 U
Benzo(k)fluoranthene	0.0960 U	0.0970 U	0.0950 U	0.0950 U	0.0970 U
Chrysene	0.0460 J	0.0970 U	0.0950 U	0.0950 U	0.0970 U
Dibenz(a,h)anthracene	0.0960 U	0.0970 U	0.0950 U	0.0950 U	0.0970 U
Fluoranthene	0.0960 U	0.0970 U	0.0950 U	0.0950 U	0.0970 U
Fluorene	0.0960 U	0.0970 U	0.0950 U	0.0950 U	0.0970 U
Indeno(1,2,3-c,d)pyrene	0.0960 U	0.0970 U	0.0950 U	0.0950 U	0.0970 U
Naphthalene	0.0960 U	0.0970 U	0.0950 U	0.0950 U	0.0970 U
Phenanthrene	0.0960 U	0.0970 U	0.0950 U	0.0950 U	0.0970 U
Pyrene	0.0640 J	0.0970 U	0.0950 U	0.0950 U	0.0970 U
Mercury (µg/L)					
Mercury	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U
VPH (µg/L)					
Benzene	2.00 U	2.00 U	2.00 U	2.00 U	2.00 U
C5-C8 Volatile Petroleum Hydrocarbons Aliphatic, Adjusted for Target Analytes, Surrogates and Internal Standards	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U
C9-C10 Volatile Petroleum Hydrocarbons, Aromatic	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U
C9-C12 Volatile Petroleum Hydrocarbons Aliphatic, Adjusted for Target Analytes, Surrogates and Internal Standards	75.0 U	75.0 U	75.0 U	75.0 U	75.0 U
Ethylbenzene	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
m,p-Xylene	7.50 U	7.50 U	7.50 U	7.50 U	7.50 U
Methyl tert-butyl ether (MTBE)	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
Naphthalene	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
o-Xylene	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
Toluene	3.80 U	3.80 U	3.80 U	3.80 U	3.80 U
Metals (µg/L)					
Antimony	0.0600 J	0.0610 J	1.00 U	1.00 U	0.500 U
Arsenic	4.00 U	4.00 U	4.00 U	4.00 U	4.00 U
Beryllium	0.200 U	0.200 U	1.00 U	1.00 U	0.200 U
Cadmium	1.00 U	1.00 U	0.0370 J	0.0460 J	0.200 U
Calcium	72500	72900	59600	58400	70800
Chromium	5.00 U	5.00 U	5.00 U	5.00 U	0.480 J
Copper	18.6	19.1	12.2 J	18.5 J	24.3
Lead	2.30 J	3.42 J	1.00 UJ	2.48 J	1.40 J
Manganese	7.04	7.89	2.00 U	2.00 U	2.00 U
Nickel	1.40 J	7.33 J	2.00 U	2.98	1240
Selenium	3.00 U	3.00 U	3.00 U	0.220 J	3.00 U
Silver	0.400 U	0.400 U	0.400 U	0.400 U	0.400 U
Thallium	0.400 U	0.400 U	0.400 U	0.400 U	0.400 U
Zinc	22.0 J	55.9 J	7.60 J	19.0 J	27.0 J

Location ID:	DW-02R-INF	DW-02R-INF	DW-02R-INF	DW-02R-INF	DW-04-TAP
Field Sample ID:	DW-02R-INF-WINTER2020	DW-FD-WINTER2020	DW-02R-INF-SUMMER2021	DW-FD-SUMMER2021	DW-04-TAP-SPRING2020
Lab Sample ID:	TN0377-5	TN0377-6	SO4724-5	SO4724-6	SN4725-6
Sample Date:	12/16/2020	12/16/2020	7/21/2021	7/21/2021	6/11/2020
Sample Type:	N	FD	N	FD	N
VOCs (µg/L)					
1,1,1,2-Tetrachloroethane	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
1,1,1-Trichloroethane	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
1,1,2,2-Tetrachloroethane	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
1,1,2-Trichloroethane	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
1,1-Dichloroethane	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
1,1-Dichloroethene	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
1,1-Dichloropropene	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
1,2,3-Trichlorobenzene	0.500 U	0.500 U	0.500 UJ	0.500 UJ	0.500 U
1,2,3-Trichloropropane	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
1,2,4-Trichlorobenzene	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
1,2,4-Trimethylbenzene	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
1,2-Dibromo-3-chloropropane	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
1,2-Dibromoethane (EDB)	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
1,2-Dichlorobenzene	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
1,2-Dichloroethane	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
1,2-Dichloropropane	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
1,3,5-Trimethylbenzene	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
1,3-Dichlorobenzene	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
1,3-Dichloropropane	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
1,4-Dichlorobenzene	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
2,2-Dichloropropane	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
2-Butanone (MEK)	2.50 U	2.50 U	2.50 UJ	2.50 UJ	2.50 U
2-Chlorotoluene	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
2-Hexanone	2.50 U	2.50 U	2.50 UJ	2.50 UJ	2.50 U
4-Chlorotoluene	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
4-Methyl-2-pentanone (MIBK)	2.50 U	2.50 U	2.50 UJ	2.50 UJ	2.50 U
Acetone	2.50 U	2.50 U	2.50 UJ	2.50 UJ	2.50 U
Benzene	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
Bromobenzene	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
Bromochloromethane	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
Bromodichloromethane	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
Bromoform	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
Bromomethane	0.500 U	0.500 U	0.500 UJ	0.500 UJ	0.500 U
Carbon disulfide	0.500 U	0.500 U	0.500 UJ	0.500 UJ	0.500 U
Carbon Tetrachloride	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
Chlorobenzene	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
Chloroethane	0.500 U	0.500 U	0.500 UJ	0.500 UJ	0.500 U
Chloroform	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
Chloromethane	0.500 U	0.500 U	1.00 UJ	1.00 UJ	0.500 U
cis-1,2-Dichloroethene	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
cis-1,3-Dichloropropene	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
Cumene	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
Dibromochloromethane	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
Dibromomethane	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
Dichlorodifluoromethane	0.500 U	0.500 U	0.500 UJ	0.500 UJ	0.500 U
Ethylbenzene	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
Hexachlorobutadiene	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
m,p-Xylene	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U

Location ID:	DW-02R-INF	DW-02R-INF	DW-02R-INF	DW-02R-INF	DW-04-TAP
Field Sample ID:	DW-02R-INF-WINTER2020	DW-FD-WINTER2020	DW-02R-INF-SUMMER2021	DW-FD-SUMMER2021	DW-04-TAP-SPRING2020
Lab Sample ID:	TN0377-5	TN0377-6	SO4724-5	SO4724-6	SN4725-6
Sample Date:	12/16/2020	12/16/2020	7/21/2021	7/21/2021	6/11/2020
Sample Type:	N	FD	N	FD	N
Methyl tert-butyl ether (MTBE)	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
Methylene chloride	2.50 UJ	7.80 J	2.50 UJ	2.50 UJ	1.20 U
Naphthalene	0.500 U	0.500 U	0.500 UJ	0.500 UJ	0.500 UJ
n-Butylbenzene	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
n-Propylbenzene	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
o-Xylene	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
p-Cymene (p-Isopropyltoluene)	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
sec-Butylbenzene	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
Styrene	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
Tetrachloroethene (PCE)	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
Toluene	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
trans-1,2-Dichloroethene	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
trans-1,3-Dichloropropene	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
Trichloroethene (TCE)	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
Trichlorofluoromethane	0.250 U	0.250 U	0.250 UJ	0.250 UJ	0.250 U
Vinyl chloride	0.500 U	0.500 U	0.500 UJ	0.500 UJ	0.500 U

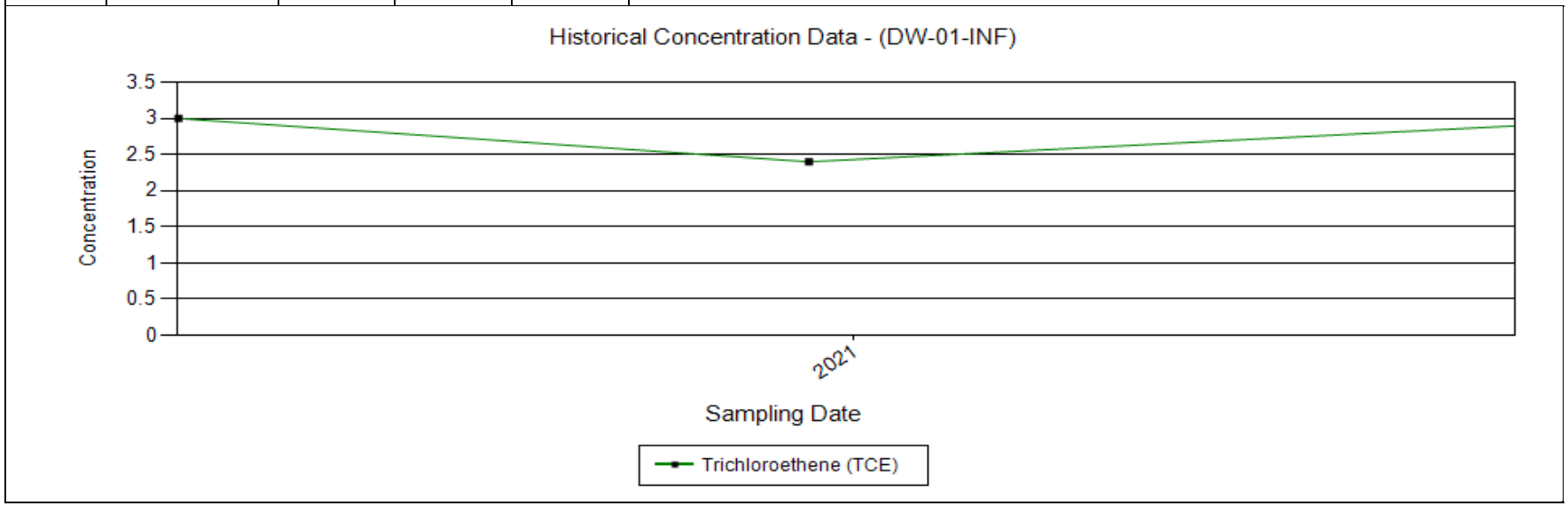
Notes:

µg/L Micrograms per liter
FD Field duplicate
J Estimated value
N Normal field sample
U Undetected: The analyte was analyzed for, but not detected.
UJ The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.

Appendix F. Time Series Plots for TCE in DW-01

Historical TCE Concentration Data for DW-01 at LO-58 Site through 20-Jul-2021

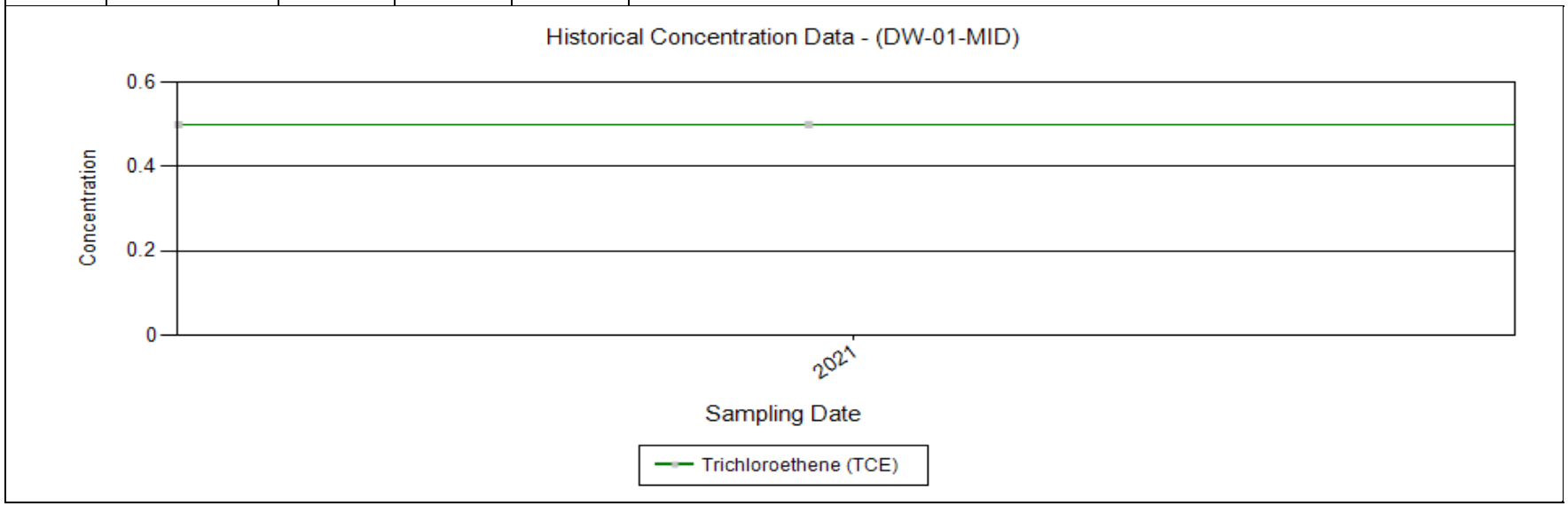
D01ME0077 - Nike 58				
DW-01-INF	Trichloroethene (TCE)(ug/L)	11-Jun-20	18-Dec-20	20-Jul-21
		3.0	2.4	2.9 J



Notes:
**Nondetect results shown in silver and detected results shown in black.
Rejected results are excluded. Any data considered over range, as indicated by the Electronic Data Deliverable, are also excluded.
All data in above table is reported to two significant figures.
Data in tables may continue onto subsequent pages . Number of data points in table for this location: 3
-- Not sampled for analyte.

Historical TCE Concentration Data for DW-01 at LO-58 Site through 20-Jul-2021

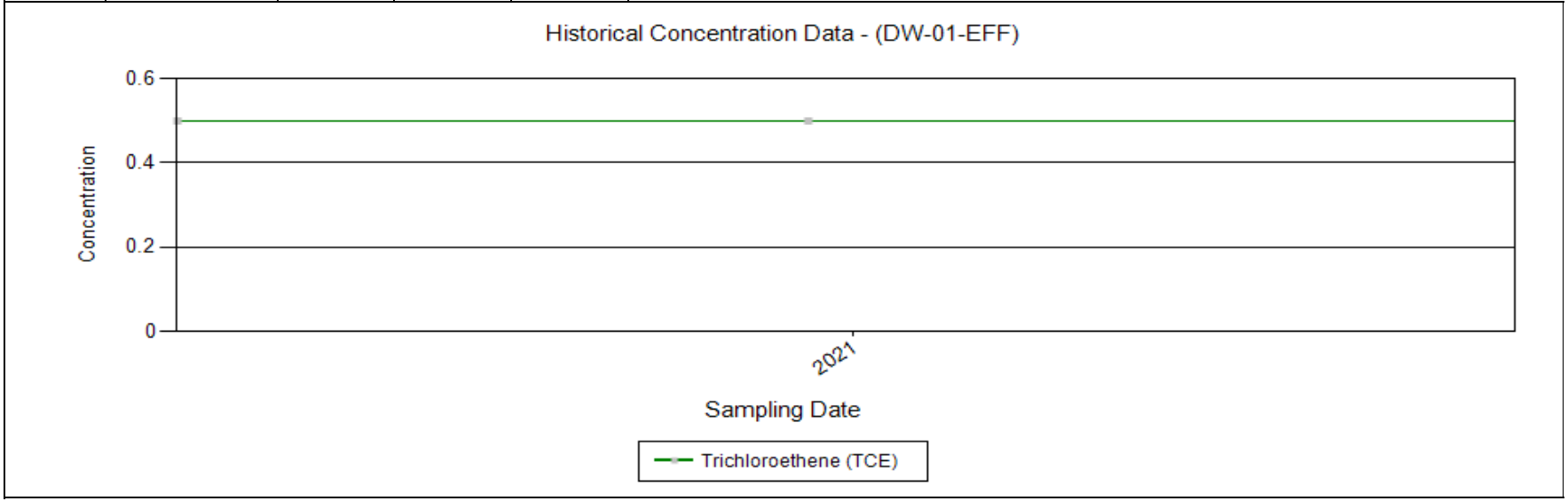
D01ME0077 - Nike 58				
DW-01-MID	Trichloroethene (TCE)(ug/L)	11-Jun-20	18-Dec-20	20-Jul-21
		0.50 U	0.50 U	0.50 UJ



Notes:
**Nondetect results shown in silver and detected results shown in black.
Rejected results are excluded. Any data considered over range, as indicated by the Electronic Data Deliverable, are also excluded.
All data in above table is reported to two significant figures.
Data in tables may continue onto subsequent pages . Number of data points in table for this location: 3
-- Not sampled for analyte.

Historical TCE Concentration Data for DW-01 at LO-58 Site through 20-Jul-2021

D01ME0077 - Nike 58				
DW-01-EFF	Trichloroethene (TCE)(ug/L)	11-Jun-20	18-Dec-20	20-Jul-21
		0.50 U	0.50 U	0.50 UJ



Notes:
**Nondetect results shown in silver and detected results shown in black.
Rejected results are excluded. Any data considered over range, as indicated by the Electronic Data Deliverable, are also excluded.
All data in above table is reported to two significant figures.
Data in tables may continue onto subsequent pages . Number of data points in table for this location: 3
-- Not sampled for analyte.

Appendix G. Data Validation Reports

Facility:	D01ME0077-02, Nike 58 - SI in Launch Area
Event:	Nike 58 Summer Groundwater 2021 Sampling
SDG:	SO4723
Guidance Document:	Quality Assurance Project Plan Former LO-58 Nike Missile Launch Site, Caribou, Maine
Prime Contractor:	Verina Consulting Group, LLC, Bridgewater, NJ
Project Manager:	Robert Gan
Contract Laboratory(ies):	Katahdin Analytical Services, Scarborough, ME
Data Review Contractor:	NOBIS
Data Review Level:	S2AVEM
Primary Data Reviewer:	Kristi Rutherford, Environmental Chemist
Second Reviewer:	Gary Glennon, Lead Chemist
Date Submitted:	October 14, 2021

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	BNASIM	MADEPVP	SW6020A	SW7470A	SW8260C
GW-EB-SUMMER2021	SO4723-8	Water	Equipment Blank/EB	X	X	X	X	X
GW-TB-SUMMER2021	SO4723-7	Water	Trip Blank/TB		X			X
MW-01-SUMMER2021	SO4723-1	Water	Field Sample/N	X	X	X	X	X
MW-02-SUMMER2021	SO4723-2	Water	Field Sample/N	X	X	X	X	X
MW-03-SUMMER2021	SO4723-3	Water	Field Sample/N	X	X	X	X	X
MW-04-SUMMER2021	SO4723-4	Water	Field Sample/N	X	X	X	X	X
MW-05-SUMMER2021	SO4723-5	Water	Field Sample/N	X	X	X	X	X
MW-FD-SUMMER2021	SO4723-6	Water	Field Duplicate/FD	X	X	X	X	X

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at S2AVEM data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan Former LO-58 Nike Missile Launch Site, Caribou, Maine and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Verina Consulting Group, LLC, Bridgewater, NJ; analyses were performed by Katahdin Analytical Services, Scarborough, ME and were reported under sample delivery group (SDG) SO4723. Data have been evaluated electronically based on electronic data deliverables (EDDs) provided by the laboratory, and hard copy data summary forms have also been reviewed during this effort and compared to the automated review output by the reviewers whose signatures appear on the following page. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative and throughout this report.

All quality control (QC) elements associated with this SDG have been reviewed by a project chemist in accordance with the requirements defined for the project. This review is documented in the attached Data Review Checklists. The QC elements listed below were supported by the electronic deliverable and were evaluated using ADR processes.

- Blank - Negative
- Equipment Blank
- Field Duplicate RPD
- Lab Blank
- LCS Recovery
- LCS RPD
- MS Recovery
- MS RPD
- Prep Hold Time
- Surrogate
- Test Hold Time
- Trip Blank

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 89 results (14.86%) out of the 599 results (sample and field QC samples) reported are qualified based on review and 36 results (6.01%) have been rejected or deemed a serious deficiency (X qualifier). Trace values, defined as results that are qualified as estimated because they fall between the detection limit and the reporting limit/limit of quantitation, are not counted as qualified results in the above count. The qualified results are detailed throughout this report and discussed in the narrative below, where appropriate.

Narrative Comments

Drinking waters (DW) listed on COC are reported in SDG SO4724.

Analytical Method	Data Reviewer Comment
BNASIM	No additional comments; see Checklist for detail.
MADEPVP	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW7470A	No additional comments; see Checklist for detail.
SW8260C	No additional comments; see Checklist for detail.

Kristi Rutherford

October 11, 2021

Reviewed by Kristi Rutherford, Environmental Chemist, NOBIS

As the First Reviewer, I certify that I have performed a data review process in accordance with the requirements of the project guidance document, and have compared the electronic data to the laboratory's hard copy report and have verified the consistency of the reported sample results and method quality control data between the two deliverables.

Gary J. Glennon

Reviewed by Gary Glennon, Lead Chemist, NOBIS

October 14, 2021

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method BNASIM, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
MW-01-SUMMER2021-MS (MS)/ WG303222-3	Benzo(a)pyrene	48.00	53 - 120	10 - 120	percent	J/UJ	M	
MW-01-SUMMER2021-MS (MS)/ WG303222-3	Benzo (g,h,i)perylene	38.00	44 - 128	10 - 128	percent	J/UJ	M	
MW-01-SUMMER2021-MS (MS)/ WG303222-3	Benzo (k)fluoranthene	53.00	54 - 125	10 - 125	percent	J/UJ	M	
MW-01-SUMMER2021-MS (MS)/ WG303222-3	Dibenz (a,h)anthracene	34.00	44 - 131	10 - 131	percent	J/UJ	M	
MW-01-SUMMER2021-MS (MS)/ WG303222-3	Indeno(1,2,3-c,d)pyrene	37.00	48 - 130	10 - 130	percent	J/UJ	M	
MW-01-SUMMER2021-MSD (SD)/ WG303222-4	Benzo(a)pyrene	40.00	53 - 120	10 - 120	percent	J/UJ	M	
MW-01-SUMMER2021-MSD (SD)/ WG303222-4	Benzo (g,h,i)perylene	35.00	44 - 128	10 - 128	percent	J/UJ	M	
MW-01-SUMMER2021-MSD (SD)/ WG303222-4	Benzo (k)fluoranthene	41.00	54 - 125	10 - 125	percent	J/UJ	M	
MW-01-SUMMER2021-MSD (SD)/ WG303222-4	Dibenz (a,h)anthracene	32.00	44 - 131	10 - 131	percent	J/UJ	M	
MW-01-SUMMER2021-MSD (SD)/ WG303222-4	Indeno(1,2,3-c,d)pyrene	33.00	48 - 130	10 - 130	percent	J/UJ	M	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the MS Recovery for BNASIM

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
MW-01-SUMMER2021 SO4723-1	N	Benzo(a)pyrene	0.220	0.110 UMM	0.110 UJ		ug/l	M
MW-01-SUMMER2021 SO4723-1	N	Benzo(g,h,i)perylene	0.220	0.110 UMM	0.110 UJ		ug/l	M
MW-01-SUMMER2021 SO4723-1	N	Benzo(k)fluoranthene	0.220	0.110 UMM	0.110 UJ		ug/l	M
MW-01-SUMMER2021 SO4723-1	N	Dibenz(a,h)anthracene	0.220	0.110 UMM	0.110 UJ		ug/l	M

Qualified Results associated with the MS Recovery for BNASIM

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
MW-01-SUMMER2021 SO4723-1	N	Indeno(1,2,3-c,d)pyrene	0.220	0.110 UMM	0.110 UJ		ug/l	M

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW6020A, Total, Equipment Blank

The purpose of equipment blanks is to determine the existence and magnitude of cross-contamination problems resulting from the process during sampling. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in equipment blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
GW-EB-SUMMER2021 (EB)/ SO4723-8	Calcium	130.0	< 21	< 100	ug/l	U/None*	V	
GW-EB-SUMMER2021 (EB)/ SO4723-8	Chromium	0.8800	< 0.22	< 5	ug/l	U/None*	V	
GW-EB-SUMMER2021 (EB)/ SO4723-8	Copper	5.010	< 0.19	< 3	ug/l	U/None*	V	
GW-EB-SUMMER2021 (EB)/ SO4723-8	Manganese	0.3600	< 0.35	< 2	ug/l	U/None*	V	
GW-EB-SUMMER2021 (EB)/ SO4723-8	Nickel	0.7800	< 0.15	< 2	ug/l	U/None*	V	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOQ will be qualified based on the validation type such as J+ at the sample result.

Qualified Results associated with the Equipment Blank for SW6020A, Total

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
MW-01-SUMMER2021 SO4723-1	N	Chromium	5.00	1.20 JN	5.00 U		ug/l	V/L
MW-01-SUMMER2021 SO4723-1	N	Copper	3.00	3.29 B	3.29 J	+	ug/l	V
MW-01-SUMMER2021 SO4723-1	N	Nickel	2.00	0.700 JN	2.00 U		ug/l	V/L
MW-02-SUMMER2021 SO4723-2	N	Chromium	5.00	2.24 J	5.00 U		ug/l	V/L
MW-02-SUMMER2021 SO4723-2	N	Copper	3.00	3.49 B	3.49 J	+	ug/l	V
MW-02-SUMMER2021 SO4723-2	N	Manganese	2.00	0.780 J	2.00 U		ug/l	V/L
MW-02-SUMMER2021 SO4723-2	N	Nickel	2.00	0.750 J	2.00 U		ug/l	V/L
MW-03-SUMMER2021 SO4723-3	N	Chromium	5.00	1.20 J	5.00 U		ug/l	V/L
MW-03-SUMMER2021 SO4723-3	N	Copper	3.00	3.82 B	3.82 J	+	ug/l	V
MW-03-SUMMER2021 SO4723-3	N	Manganese	2.00	0.880 J	2.00 U		ug/l	V/L
MW-03-SUMMER2021 SO4723-3	N	Nickel	2.00	0.660 J	2.00 U		ug/l	V/L
MW-04-SUMMER2021 SO4723-4	N	Chromium	5.00	1.40 J	5.00 U		ug/l	V/L
MW-04-SUMMER2021 SO4723-4	N	Copper	3.00	3.57 B	3.57 J	+	ug/l	V
MW-04-SUMMER2021 SO4723-4	N	Manganese	2.00	1.80 J	2.00 U		ug/l	V/L
MW-04-SUMMER2021 SO4723-4	N	Nickel	2.00	1.00 J	2.00 U		ug/l	V/L
MW-05-SUMMER2021 SO4723-5	N	Chromium	5.00	0.790 J	5.00 U		ug/l	V/L

Qualified Results associated with the Equipment Blank for SW6020A, Total

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
MW-05-SUMMER2021 SO4723-5	N	Copper	3.00	6.26 B	6.26 J	+	ug/l	V
MW-05-SUMMER2021 SO4723-5	N	Nickel	2.00	1.00 J	2.00 U		ug/l	V/L
MW-FD-SUMMER2021 SO4723-6	FD	Chromium	5.00	1.80 J	5.00 U		ug/l	V/L
MW-FD-SUMMER2021 SO4723-6	FD	Copper	3.00	3.84 B	3.84 J	+	ug/l	V
MW-FD-SUMMER2021 SO4723-6	FD	Manganese	2.00	0.580 J	2.00 U		ug/l	V/L
MW-FD-SUMMER2021 SO4723-6	FD	Nickel	2.00	0.500 J	2.00 U		ug/l	V/L

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW6020A, Total, Lab Blank

The purpose of laboratory blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in laboratory blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
PBWOG29IMW2 (LB)/ PBWOG29IMW2	Antimony	0.09000	< 0.054	< 1	ug/l	U/None*	L	
PBWOG29IMW2 (LB)/ PBWOG29IMW2	Beryllium	0.07000	< 0.034	< 1	ug/l	U/None*	L	
PBWOG29IMW2 (LB)/ PBWOG29IMW2	Calcium	39.00	< 20	< 100	ug/l	U/None*	L	
PBWOG29IMW2 (LB)/ PBWOG29IMW2	Chromium	1.700	< 0.22	< 5	ug/l	U/None*	L	
PBWOG29IMW2 (LB)/ PBWOG29IMW2	Lead	0.1000	< 0.074	< 1	ug/l	U/None*	L	
PBWOG29IMW2 (LB)/ PBWOG29IMW2	Manganese	0.6900	< 0.35	< 2	ug/l	U/None*	L	
PBWOG29IMW2 (LB)/ PBWOG29IMW2	Nickel	0.6000	< 0.15	< 2	ug/l	U/None*	L	
PBWOI23IMW2 (LB)/ PBWOI23IMW2	Copper	2.890	< 0.18	< 3	ug/l	U/None*	L	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOQ will be qualified based on the validation type such as J+ at the sample result.

Qualified Results associated with the Lab Blank for SW6020A, Total

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
GW-EB-SUMMER2021 SO4723-8	EB	Chromium	5.00	0.880 J	5.00 U		ug/l	L
GW-EB-SUMMER2021 SO4723-8	EB	Manganese	2.00	0.360 J	2.00 U		ug/l	L
GW-EB-SUMMER2021 SO4723-8	EB	Nickel	2.00	0.780 J	2.00 U		ug/l	L
MW-01-SUMMER2021 SO4723-1	N	Antimony	1.00	0.260 JN	1.00 U		ug/l	L
MW-01-SUMMER2021 SO4723-1	N	Beryllium	1.00	0.0720 J	1.00 U		ug/l	L
MW-01-SUMMER2021 SO4723-1	N	Chromium	5.00	1.20 JN	5.00 U		ug/l	V/L
MW-01-SUMMER2021 SO4723-1	N	Lead	1.00	0.210 JN	1.00 U		ug/l	L
MW-01-SUMMER2021 SO4723-1	N	Nickel	2.00	0.700 JN	2.00 U		ug/l	V/L
MW-02-SUMMER2021 SO4723-2	N	Antimony	1.00	0.170 J	1.00 U		ug/l	L
MW-02-SUMMER2021 SO4723-2	N	Beryllium	1.00	0.100 J	1.00 U		ug/l	L
MW-02-SUMMER2021 SO4723-2	N	Chromium	5.00	2.24 J	5.00 U		ug/l	V/L
MW-02-SUMMER2021 SO4723-2	N	Lead	1.00	0.170 J	1.00 U		ug/l	L

Qualified Results associated with the Lab Blank for SW6020A, Total

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
MW-02-SUMMER2021 SO4723-2	N	Manganese	2.00	0.780 J	2.00 U		ug/l	V/L
MW-02-SUMMER2021 SO4723-2	N	Nickel	2.00	0.750 J	2.00 U		ug/l	V/L
MW-03-SUMMER2021 SO4723-3	N	Antimony	1.00	0.0870 J	1.00 U		ug/l	L
MW-03-SUMMER2021 SO4723-3	N	Beryllium	1.00	0.0790 J	1.00 U		ug/l	L
MW-03-SUMMER2021 SO4723-3	N	Chromium	5.00	1.20 J	5.00 U		ug/l	V/L
MW-03-SUMMER2021 SO4723-3	N	Lead	1.00	0.130 J	1.00 U		ug/l	L
MW-03-SUMMER2021 SO4723-3	N	Manganese	2.00	0.880 J	2.00 U		ug/l	V/L
MW-03-SUMMER2021 SO4723-3	N	Nickel	2.00	0.660 J	2.00 U		ug/l	V/L
MW-04-SUMMER2021 SO4723-4	N	Antimony	1.00	0.0570 J	1.00 U		ug/l	L
MW-04-SUMMER2021 SO4723-4	N	Beryllium	1.00	0.0520 J	1.00 U		ug/l	L
MW-04-SUMMER2021 SO4723-4	N	Chromium	5.00	1.40 J	5.00 U		ug/l	V/L
MW-04-SUMMER2021 SO4723-4	N	Lead	1.00	0.150 J	1.00 U		ug/l	L
MW-04-SUMMER2021 SO4723-4	N	Manganese	2.00	1.80 J	2.00 U		ug/l	V/L
MW-04-SUMMER2021 SO4723-4	N	Nickel	2.00	1.00 J	2.00 U		ug/l	V/L
MW-05-SUMMER2021 SO4723-5	N	Beryllium	1.00	0.0530 J	1.00 U		ug/l	L
MW-05-SUMMER2021 SO4723-5	N	Chromium	5.00	0.790 J	5.00 U		ug/l	V/L
MW-05-SUMMER2021 SO4723-5	N	Lead	1.00	0.110 J	1.00 U		ug/l	L
MW-05-SUMMER2021 SO4723-5	N	Nickel	2.00	1.00 J	2.00 U		ug/l	V/L
MW-FD-SUMMER2021 SO4723-6	FD	Antimony	1.00	0.0780 J	1.00 U		ug/l	L
MW-FD-SUMMER2021 SO4723-6	FD	Beryllium	1.00	0.0710 J	1.00 U		ug/l	L
MW-FD-SUMMER2021 SO4723-6	FD	Chromium	5.00	1.80 J	5.00 U		ug/l	V/L
MW-FD-SUMMER2021 SO4723-6	FD	Manganese	2.00	0.580 J	2.00 U		ug/l	V/L
MW-FD-SUMMER2021 SO4723-6	FD	Nickel	2.00	0.500 J	2.00 U		ug/l	V/L

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW6020A, Total, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
MW-01-SUMMER2021-MS (MS)/ SO4723-001S	Calcium	48.00	87 - 118	30 - 118	percent	J/UJ	M	Spike amount Insignificant
MW-01-SUMMER2021-MSD (SD)/ SO4723-001P	Antimony	118.0	85 - 117	30 - 117	percent	J/None	M	
MW-01-SUMMER2021-MSD (SD)/ SO4723-001P	Calcium	476.0	87 - 118	30 - 118	percent	J/None	M	Spike amount Insignificant
MW-01-SUMMER2021-MSD (SD)/ SO4723-001P	Chromium	118.0	85 - 116	30 - 116	percent	J/None	M	
MW-01-SUMMER2021-MSD (SD)/ SO4723-001P	Lead	116.0	88 - 115	30 - 115	percent	J/None	M	
MW-01-SUMMER2021-MSD (SD)/ SO4723-001P	Manganese	117.0	87 - 115	30 - 115	percent	J/None	M	
MW-01-SUMMER2021-MSD (SD)/ SO4723-001P	Nickel	118.0	85 - 117	30 - 117	percent	J/None	M	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the MS Recovery for SW6020A, Total

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
MW-01-SUMMER2021 SO4723-1	N	Manganese	2.00	2.30 N	2.30 J	+	ug/l	M
MW-05-SUMMER2021 SO4723-5	N	Manganese	2.00	621	621 J	+	ug/l	M

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260C, Equipment Blank

The purpose of equipment blanks is to determine the existence and magnitude of cross-contamination problems resulting from the process during sampling. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in equipment blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
GW-EB-SUMMER2021 (EB)/ SO4723-8	Methylene chloride	1.200	< 1.1	< 5	ug/l	U/None*	V	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOQ will be qualified based on the validation type such as J+ at the sample result.

Qualified Results associated with the Equipment Blank for SW8260C

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
MW-05-SUMMER2021 SO4723-5	N	Methylene chloride	5.00	1.60 J	5.00 U		ug/l	V/L/T

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260C, Lab Blank

The purpose of laboratory blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in laboratory blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
WG303527-2 (LB)/ WG303527-2	Methylene chloride	1.300	< 1.1	< 5	ug/l	U/None*	L	
WG303781-2 (LB)/ WG303781-2	Methylene chloride	2.200	< 1.1	< 5	ug/l	U/None*	L	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOQ will be qualified based on the validation type such as J+ at the sample result.

Qualified Results associated with the Lab Blank for SW8260C

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
GW-EB-SUMMER2021 SO4723-8	EB	Methylene chloride	5.00	1.20 J	5.00 U		ug/l	L
MW-05-SUMMER2021 SO4723-5	N	Methylene chloride	5.00	1.60 J	5.00 U		ug/l	V/L/T

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260C, LCS Recovery

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
WG303527-1 (BS)/ WG303527-1	Chloroethane	157.0	60 - 138	20 - 138	percent	J/None	C	
WG303684-9 (BS)/ WG303684-9	2-Butanone (MEK)	148.0	56 - 143	20 - 143	percent	J/None	C	
WG303684-9 (BS)/ WG303684-9	Acetone	162.0	39 - 160	20 - 160	percent	J/None	C	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the LCS Recovery for SW8260C

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
MW-04-SUMMER2021 SO4723-4	N	Chloroethane	2.00	0.710 JL	0.710 J	+	ug/l	C/I/TR

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260C, LCS RPD

The objective of laboratory control sample/laboratory control sample duplicate (LCS/LCSD) RPD analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. LCS/LCSD analyses are also performed to generate data that determines the long-term precision of the analytical method on various matrices. Non-homogenous samples can impact the apparent method precision. Summary forms were evaluated and compared to electronic data deliverables. Laboratory control sample/laboratory control sample duplicate RPD results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
WG303781-6 (BD)/ WG303781-6	Acetone	21.70	< 20	< 20	rpd	J/None	Z	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Quality Control Outliers for test method SW8260C, Surrogate

Method performance for individual samples is demonstrated through spiking activities. All samples are spiked with surrogate compounds prior to sample preparation. The sample itself may produce effects due to such factors as interferences and high concentrations of analytes. Summary forms were evaluated and compared to electronic data deliverables. Surrogate results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
MW-03-SUMMER2021 (N)/ SO4723-3	1,2-Dichloroethane-d4	120.0	81 - 118	10 - 118	percent	J/None	I	
MW-04-SUMMER2021 (N)/ SO4723-4	1,2-Dichloroethane-d4	123.0	81 - 118	10 - 118	percent	J/None	I	
MW-05-SUMMER2021 (N)/ SO4723-5	1,2-Dichloroethane-d4	125.0	81 - 118	10 - 118	percent	J/None	I	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Surrogate for SW8260C

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
MW-04-SUMMER2021 SO4723-4	N	1,2-Dichloroethane	1.00	0.270 J	0.270 J	+	ug/l	I/TR
MW-04-SUMMER2021 SO4723-4	N	Chloroethane	2.00	0.710 JL	0.710 J	+	ug/l	C/I/TR
MW-05-SUMMER2021 SO4723-5	N	Trichloroethene (TCE)	1.00	0.310 J	0.310 J	+	ug/l	I/TR

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260C, Test Hold Time

Hold times are ascertained based on project requirements. Holding times were determined by comparing the chain of custody records with the dates of analysis found in the electronic data deliverable and laboratory summary forms. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
GW-EB-SUMMER2021 (EB)/ SO4723-8		14.06	< 14	< 14	days	J/X	H1	Test Exceeds UCL
GW-TB-SUMMER2021 (TB)/ SO4723-7		14.31	< 14	< 14	days	J/X	H1	Test Exceeds UCL
MW-01-SUMMER2021 (N)/ SO4723-1		14.14	< 14	< 14	days	J/X	H1	Test Exceeds UCL
MW-FD-SUMMER2021 (FD)/ SO4723-6		15.15	< 14	< 14	days	J/X	H1	Test Exceeds UCL

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Test Hold Time for SW8260C

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
MW-FD-SUMMER2021 SO4723-6	FD	1,1,1-Trichloroethane	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	1,1,2,2-Tetrachloroethane	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	1,1,2-Trichloroethane	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	1,1-Dichloroethane	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	1,1-Dichloroethene	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	1,2-Dichloroethane	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	1,2-Dichloropropane	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	2-Butanone (MEK)	5.00	2.50 UL	2.50 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	2-Hexanone	5.00	2.50 U	2.50 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	4-Methyl-2-pentanone (MIBK)	5.00	2.50 U	2.50 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Acetone	5.00	2.50 UL	2.50 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Benzene	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Bromodichloromethane	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Bromoform	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Bromomethane	2.00	1.00 U	1.00 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Carbon disulfide	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Carbon tetrachloride	1.00	0.500 U	0.500 X		ug/l	H1

Qualified Results associated with the Test Hold Time for SW8260C

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
MW-FD-SUMMER2021 SO4723-6	FD	Chlorobenzene	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Chloroethane	2.00	1.00 U	1.00 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Chloroform	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Chloromethane	2.00	1.00 U	1.00 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	cis-1,2-Dichloroethene	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	cis-1,3-Dichloropropene	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Dibromochloromethane	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Ethylbenzene	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	m,p-Xylene	2.00	1.00 U	1.00 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Methylene chloride	5.00	2.50 U	2.50 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	o-Xylene	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Styrene	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Tetrachloroethene (PCE)	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Toluene	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	trans-1,2-Dichloroethene	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	trans-1,3-Dichloropropene	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Trichloroethene (TCE)	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Vinyl chloride	2.00	1.00 U	1.00 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Xylenes, Total	3.00	1.50 U	1.50 X		ug/l	H1

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW8260C, Trip Blank

The purpose of trip blanks is to determine the existence and magnitude of cross-contamination problems resulting from the shipping of samples. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in trip blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
GW-TB-SUMMER2021 (TB)/ SO4723-7	Chloromethane	1.700	< 0.36	< 2	ug/l	U/None*	T	
GW-TB-SUMMER2021 (TB)/ SO4723-7	Methylene chloride	6.100	< 1.1	< 5	ug/l	U/None*	T	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOQ will be qualified based on the validation type such as J+ at the sample result.

Qualified Results associated with the Trip Blank for SW8260C

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
MW-05-SUMMER2021 SO4723-5	N	Methylene chloride	5.00	1.60 J	5.00 U		ug/l	V/L/T

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Table of All Qualified Results

Test Method: BNASIM		Extraction Method: SW3510C						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
MW-01-SUMMER2021 SO4723-1	N	Benzo(a)pyrene	0.220	0.110 UMM	0.110 UJ		ug/l	M
MW-01-SUMMER2021 SO4723-1	N	Benzo(g,h,i)perylene	0.220	0.110 UMM	0.110 UJ		ug/l	M
MW-01-SUMMER2021 SO4723-1	N	Benzo(k)fluoranthene	0.220	0.110 UMM	0.110 UJ		ug/l	M
MW-01-SUMMER2021 SO4723-1	N	Dibenz(a,h)anthracene	0.220	0.110 UMM	0.110 UJ		ug/l	M
MW-01-SUMMER2021 SO4723-1	N	Indeno(1,2,3-c,d)pyrene	0.220	0.110 UMM	0.110 UJ		ug/l	M

Test Method: SW6020A		Extraction Method: TOTAL						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
GW-EB-SUMMER2021 SO4723-8	EB	Chromium	5.00	0.880 J	5.00 U		ug/l	L
GW-EB-SUMMER2021 SO4723-8	EB	Manganese	2.00	0.360 J	2.00 U		ug/l	L
GW-EB-SUMMER2021 SO4723-8	EB	Nickel	2.00	0.780 J	2.00 U		ug/l	L
MW-01-SUMMER2021 SO4723-1	N	Antimony	1.00	0.260 JN	1.00 U		ug/l	L
MW-01-SUMMER2021 SO4723-1	N	Beryllium	1.00	0.0720 J	1.00 U		ug/l	L
MW-01-SUMMER2021 SO4723-1	N	Chromium	5.00	1.20 JN	5.00 U		ug/l	V/L
MW-01-SUMMER2021 SO4723-1	N	Copper	3.00	3.29 B	3.29 J	+	ug/l	V
MW-01-SUMMER2021 SO4723-1	N	Lead	1.00	0.210 JN	1.00 U		ug/l	L
MW-01-SUMMER2021 SO4723-1	N	Manganese	2.00	2.30 N	2.30 J	+	ug/l	M
MW-01-SUMMER2021 SO4723-1	N	Nickel	2.00	0.700 JN	2.00 U		ug/l	V/L
MW-02-SUMMER2021 SO4723-2	N	Antimony	1.00	0.170 J	1.00 U		ug/l	L
MW-02-SUMMER2021 SO4723-2	N	Beryllium	1.00	0.100 J	1.00 U		ug/l	L
MW-02-SUMMER2021 SO4723-2	N	Chromium	5.00	2.24 J	5.00 U		ug/l	V/L
MW-02-SUMMER2021 SO4723-2	N	Copper	3.00	3.49 B	3.49 J	+	ug/l	V
MW-02-SUMMER2021 SO4723-2	N	Lead	1.00	0.170 J	1.00 U		ug/l	L
MW-02-SUMMER2021 SO4723-2	N	Manganese	2.00	0.780 J	2.00 U		ug/l	V/L
MW-02-SUMMER2021 SO4723-2	N	Nickel	2.00	0.750 J	2.00 U		ug/l	V/L
MW-03-SUMMER2021 SO4723-3	N	Antimony	1.00	0.0870 J	1.00 U		ug/l	L
MW-03-SUMMER2021 SO4723-3	N	Beryllium	1.00	0.0790 J	1.00 U		ug/l	L

Table of All Qualified Results

Test Method: SW6020A		Extraction Method: TOTAL						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
MW-03-SUMMER2021 SO4723-3	N	Chromium	5.00	1.20 J	5.00 U		ug/l	V/L
MW-03-SUMMER2021 SO4723-3	N	Copper	3.00	3.82 B	3.82 J	+	ug/l	V
MW-03-SUMMER2021 SO4723-3	N	Lead	1.00	0.130 J	1.00 U		ug/l	L
MW-03-SUMMER2021 SO4723-3	N	Manganese	2.00	0.880 J	2.00 U		ug/l	V/L
MW-03-SUMMER2021 SO4723-3	N	Nickel	2.00	0.660 J	2.00 U		ug/l	V/L
MW-04-SUMMER2021 SO4723-4	N	Antimony	1.00	0.0570 J	1.00 U		ug/l	L
MW-04-SUMMER2021 SO4723-4	N	Beryllium	1.00	0.0520 J	1.00 U		ug/l	L
MW-04-SUMMER2021 SO4723-4	N	Chromium	5.00	1.40 J	5.00 U		ug/l	V/L
MW-04-SUMMER2021 SO4723-4	N	Copper	3.00	3.57 B	3.57 J	+	ug/l	V
MW-04-SUMMER2021 SO4723-4	N	Lead	1.00	0.150 J	1.00 U		ug/l	L
MW-04-SUMMER2021 SO4723-4	N	Manganese	2.00	1.80 J	2.00 U		ug/l	V/L
MW-04-SUMMER2021 SO4723-4	N	Nickel	2.00	1.00 J	2.00 U		ug/l	V/L
MW-05-SUMMER2021 SO4723-5	N	Beryllium	1.00	0.0530 J	1.00 U		ug/l	L
MW-05-SUMMER2021 SO4723-5	N	Chromium	5.00	0.790 J	5.00 U		ug/l	V/L
MW-05-SUMMER2021 SO4723-5	N	Copper	3.00	6.26 B	6.26 J	+	ug/l	V
MW-05-SUMMER2021 SO4723-5	N	Lead	1.00	0.110 J	1.00 U		ug/l	L
MW-05-SUMMER2021 SO4723-5	N	Manganese	2.00	621	621 J	+	ug/l	M
MW-05-SUMMER2021 SO4723-5	N	Nickel	2.00	1.00 J	2.00 U		ug/l	V/L
MW-FD-SUMMER2021 SO4723-6	FD	Antimony	1.00	0.0780 J	1.00 U		ug/l	L
MW-FD-SUMMER2021 SO4723-6	FD	Beryllium	1.00	0.0710 J	1.00 U		ug/l	L
MW-FD-SUMMER2021 SO4723-6	FD	Chromium	5.00	1.80 J	5.00 U		ug/l	V/L
MW-FD-SUMMER2021 SO4723-6	FD	Copper	3.00	3.84 B	3.84 J	+	ug/l	V
MW-FD-SUMMER2021 SO4723-6	FD	Manganese	2.00	0.580 J	2.00 U		ug/l	V/L
MW-FD-SUMMER2021 SO4723-6	FD	Nickel	2.00	0.500 J	2.00 U		ug/l	V/L

Test Method: SW8260C		Extraction Method: SW5030						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
GW-EB-SUMMER2021 SO4723-8	EB	Methylene chloride	5.00	1.20 J	5.00 U		ug/l	L

Table of All Qualified Results

Test Method: SW8260C		Extraction Method: SW5030						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
MW-04-SUMMER2021 SO4723-4	N	1,2-Dichloroethane	1.00	0.270 J	0.270 J	+	ug/l	I/TR
MW-04-SUMMER2021 SO4723-4	N	Chloroethane	2.00	0.710 JL	0.710 J	+	ug/l	C/I/TR
MW-05-SUMMER2021 SO4723-5	N	Methylene chloride	5.00	1.60 J	5.00 U		ug/l	V/L/T
MW-05-SUMMER2021 SO4723-5	N	Trichloroethene (TCE)	1.00	0.310 J	0.310 J	+	ug/l	I/TR
MW-FD-SUMMER2021 SO4723-6	FD	1,1,1-Trichloroethane	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	1,1,2,2-Tetrachloroethane	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	1,1,2-Trichloroethane	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	1,1-Dichloroethane	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	1,1-Dichloroethene	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	1,2-Dichloroethane	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	1,2-Dichloropropane	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	2-Butanone (MEK)	5.00	2.50 UL	2.50 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	2-Hexanone	5.00	2.50 U	2.50 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	4-Methyl-2-pentanone (MIBK)	5.00	2.50 U	2.50 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Acetone	5.00	2.50 UL	2.50 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Benzene	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Bromodichloromethane	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Bromoform	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Bromomethane	2.00	1.00 U	1.00 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Carbon disulfide	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Carbon tetrachloride	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Chlorobenzene	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Chloroethane	2.00	1.00 U	1.00 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Chloroform	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Chloromethane	2.00	1.00 U	1.00 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	cis-1,2-Dichloroethene	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	cis-1,3-Dichloropropene	1.00	0.500 U	0.500 X		ug/l	H1

Table of All Qualified Results

Test Method: SW8260C		Extraction Method: SW5030						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
MW-FD-SUMMER2021 SO4723-6	FD	Dibromochloromethane	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Ethylbenzene	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	m,p-Xylene	2.00	1.00 U	1.00 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Methylene chloride	5.00	2.50 U	2.50 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	o-Xylene	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Styrene	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Tetrachloroethene (PCE)	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Toluene	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	trans-1,2-Dichloroethene	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	trans-1,3-Dichloropropene	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Trichloroethene (TCE)	1.00	0.500 U	0.500 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Vinyl chloride	2.00	1.00 U	1.00 X		ug/l	H1
MW-FD-SUMMER2021 SO4723-6	FD	Xylenes, Total	3.00	1.50 U	1.50 X		ug/l	H1

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Table of All Trace Results

Test Method: BNASIM	Extraction Method: SW3510C							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
MW-05-SUMMER2021	N	1-Methylnaphthalene	0.190	0.160 J	0.160 J		ug/L	TR
MW-05-SUMMER2021	N	Acenaphthene	0.190	0.180 J	0.180 J		ug/L	TR
MW-05-SUMMER2021	N	Anthracene	0.190	0.0470 J	0.0470 J		ug/L	TR

Test Method: MADEPVP	Extraction Method: METHOD							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
MW-01-SUMMER2021-MS	MS	C9-C10 Volatile Petroleum Hydrocarbons, Aromatic	100	86.7	86.7 J		ug/L	TR
MW-01-SUMMER2021-MSD	SD	C9-C10 Volatile Petroleum Hydrocarbons, Aromatic	100	87.6	87.6 J		ug/L	TR
MW-05-SUMMER2021	N	C9-C10 Volatile Petroleum Hydrocarbons, Aromatic	100	76.0 J	76.0 J		ug/L	TR
MW-05-SUMMER2021	N	C9-C12 Volatile Petroleum Hydrocarbons Aliphatic, Adjusted for Target Analytes, Surrogates and Internal Standards	100	82.0 J	82.0 J		ug/L	TR

Test Method: SW6020A	Extraction Method: Total							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
MW-01-SUMMER2021	N	Cadmium	1.00	0.0630 J	0.0630 J		ug/L	TR
MW-01-SUMMER2021	N	Thallium	1.00	0.0990 J	0.0990 J		ug/L	TR
MW-01-SUMMER2021	N	Zinc	10.0	4.80 J	4.80 J		ug/L	TR
MW-02-SUMMER2021	N	Cadmium	1.00	0.0690 J	0.0690 J		ug/L	TR
MW-02-SUMMER2021	N	Selenium	5.00	0.260 J	0.260 J		ug/L	TR
MW-02-SUMMER2021	N	Thallium	1.00	0.0920 J	0.0920 J		ug/L	TR
MW-03-SUMMER2021	N	Cadmium	1.00	0.0740 J	0.0740 J		ug/L	TR
MW-04-SUMMER2021	N	Cadmium	1.00	0.0530 J	0.0530 J		ug/L	TR
MW-05-SUMMER2021	N	Cadmium	1.00	0.739 J	0.739 J		ug/L	TR
MW-05-SUMMER2021	N	Zinc	10.0	6.50 J	6.50 J		ug/L	TR
MW-FD-SUMMER2021	FD	Cadmium	1.00	0.0390 J	0.0390 J		ug/L	TR

Test Method: SW7470A	Extraction Method: METHOD							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
MW-FD-SUMMER2021	FD	Mercury	0.200	0.0170 J	0.0170 J		ug/L	TR

Test Method: SW8260C	Extraction Method: SW5030							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
GW-TB-SUMMER2021	TB	Chloromethane	2.00	1.70 J	1.70 J		ug/L	TR
MW-04-SUMMER2021	N	1,2-Dichloroethane	1.00	0.270 J	0.270 J	+	ug/L	I/TR
MW-04-SUMMER2021	N	Chloroethane	2.00	0.710 JL	0.710 J	+	ug/L	C/I/TR
MW-05-SUMMER2021	N	Trichloroethene (TCE)	1.00	0.310 J	0.310 J	+	ug/L	I/TR

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW6020A, Total							
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
MW-05-SUMMER2021 SO4723-5	N	Copper	3.00	6.26 B	6.26	6.26 J	V

Modified Qualifiers for test method SW8260C							
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
GW-EB-SUMMER2021 SO4723-8	EB	1,1,1-Trichloroethane	1.00	0.500 U	0.500 X	0.500 U	
GW-EB-SUMMER2021 SO4723-8	EB	1,1,2,2-Tetrachloroethane	1.00	0.500 U	0.500 X	0.500 U	
GW-EB-SUMMER2021 SO4723-8	EB	1,1,2-Trichloroethane	1.00	0.500 U	0.500 X	0.500 U	
GW-EB-SUMMER2021 SO4723-8	EB	1,1-Dichloroethane	1.00	0.500 U	0.500 X	0.500 U	
GW-EB-SUMMER2021 SO4723-8	EB	1,1-Dichloroethene	1.00	0.500 U	0.500 X	0.500 U	
GW-EB-SUMMER2021 SO4723-8	EB	1,2-Dichloroethane	1.00	0.500 U	0.500 X	0.500 U	
GW-EB-SUMMER2021 SO4723-8	EB	1,2-Dichloropropane	1.00	0.500 U	0.500 X	0.500 U	
GW-EB-SUMMER2021 SO4723-8	EB	2-Butanone (MEK)	5.00	2.50 U	2.50 X	2.50 U	
GW-EB-SUMMER2021 SO4723-8	EB	2-Hexanone	5.00	2.50 U	2.50 X	2.50 U	
GW-EB-SUMMER2021 SO4723-8	EB	4-Methyl-2-pentanone (MIBK)	5.00	2.50 U	2.50 X	2.50 U	
GW-EB-SUMMER2021 SO4723-8	EB	Acetone	5.00	2.50 U	2.50 X	2.50 U	
GW-EB-SUMMER2021 SO4723-8	EB	Benzene	1.00	0.500 U	0.500 X	0.500 U	
GW-EB-SUMMER2021 SO4723-8	EB	Bromodichloromethane	1.00	0.500 U	0.500 X	0.500 U	
GW-EB-SUMMER2021 SO4723-8	EB	Bromoform	1.00	0.500 U	0.500 X	0.500 U	
GW-EB-SUMMER2021 SO4723-8	EB	Bromomethane	2.00	1.00 U	1.00 X	1.00 U	
GW-EB-SUMMER2021 SO4723-8	EB	Carbon disulfide	1.00	0.500 U	0.500 X	0.500 U	
GW-EB-SUMMER2021 SO4723-8	EB	Carbon tetrachloride	1.00	0.500 U	0.500 X	0.500 U	
GW-EB-SUMMER2021 SO4723-8	EB	Chlorobenzene	1.00	0.500 U	0.500 X	0.500 U	
GW-EB-SUMMER2021 SO4723-8	EB	Chloroethane	2.00	1.00 U	1.00 X	1.00 U	
GW-EB-SUMMER2021 SO4723-8	EB	Chloroform	1.00	0.500 U	0.500 X	0.500 U	
GW-EB-SUMMER2021 SO4723-8	EB	Chloromethane	2.00	1.00 U	1.00 X	1.00 U	
GW-EB-SUMMER2021 SO4723-8	EB	cis-1,2-Dichloroethene	1.00	0.500 U	0.500 X	0.500 U	
GW-EB-SUMMER2021 SO4723-8	EB	cis-1,3-Dichloropropene	1.00	0.500 U	0.500 X	0.500 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260C							
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
GW-EB-SUMMER2021 SO4723-8	EB	Dibromochloromethane	1.00	0.500 U	0.500 X	0.500 U	
GW-EB-SUMMER2021 SO4723-8	EB	Ethylbenzene	1.00	0.500 U	0.500 X	0.500 U	
GW-EB-SUMMER2021 SO4723-8	EB	m,p-Xylene	2.00	1.00 U	1.00 X	1.00 U	
GW-EB-SUMMER2021 SO4723-8	EB	Methylene chloride	5.00	1.20 J	5.00 X	5.00 U	L
GW-EB-SUMMER2021 SO4723-8	EB	o-Xylene	1.00	0.500 U	0.500 X	0.500 U	
GW-EB-SUMMER2021 SO4723-8	EB	Styrene	1.00	0.500 U	0.500 X	0.500 U	
GW-EB-SUMMER2021 SO4723-8	EB	Tetrachloroethene (PCE)	1.00	0.500 U	0.500 X	0.500 U	
GW-EB-SUMMER2021 SO4723-8	EB	Toluene	1.00	0.500 U	0.500 X	0.500 U	
GW-EB-SUMMER2021 SO4723-8	EB	trans-1,2-Dichloroethene	1.00	0.500 U	0.500 X	0.500 U	
GW-EB-SUMMER2021 SO4723-8	EB	trans-1,3-Dichloropropene	1.00	0.500 U	0.500 X	0.500 U	
GW-EB-SUMMER2021 SO4723-8	EB	Trichloroethene (TCE)	1.00	0.500 U	0.500 X	0.500 U	
GW-EB-SUMMER2021 SO4723-8	EB	Vinyl chloride	2.00	1.00 U	1.00 X	1.00 U	
GW-EB-SUMMER2021 SO4723-8	EB	Xylenes, Total	3.00	1.50 U	1.50 X	1.50 U	
GW-TB-SUMMER2021 SO4723-7	TB	1,1,1-Trichloroethane	1.00	0.500 U	0.500 X	0.500 U	
GW-TB-SUMMER2021 SO4723-7	TB	1,1,2,2-Tetrachloroethane	1.00	0.500 U	0.500 X	0.500 U	
GW-TB-SUMMER2021 SO4723-7	TB	1,1,2-Trichloroethane	1.00	0.500 U	0.500 X	0.500 U	
GW-TB-SUMMER2021 SO4723-7	TB	1,1-Dichloroethane	1.00	0.500 U	0.500 X	0.500 U	
GW-TB-SUMMER2021 SO4723-7	TB	1,1-Dichloroethene	1.00	0.500 U	0.500 X	0.500 U	
GW-TB-SUMMER2021 SO4723-7	TB	1,2-Dichloroethane	1.00	0.500 U	0.500 X	0.500 U	
GW-TB-SUMMER2021 SO4723-7	TB	1,2-Dichloropropane	1.00	0.500 U	0.500 X	0.500 U	
GW-TB-SUMMER2021 SO4723-7	TB	2-Butanone (MEK)	5.00	2.50 UL	2.50 X	2.50 U	
GW-TB-SUMMER2021 SO4723-7	TB	2-Hexanone	5.00	2.50 U	2.50 X	2.50 U	
GW-TB-SUMMER2021 SO4723-7	TB	4-Methyl-2-pentanone (MIBK)	5.00	2.50 U	2.50 X	2.50 U	
GW-TB-SUMMER2021 SO4723-7	TB	Acetone	5.00	2.50 UL	2.50 X	2.50 U	
GW-TB-SUMMER2021 SO4723-7	TB	Benzene	1.00	0.500 U	0.500 X	0.500 U	
GW-TB-SUMMER2021 SO4723-7	TB	Bromodichloromethane	1.00	0.500 U	0.500 X	0.500 U	
GW-TB-SUMMER2021 SO4723-7	TB	Bromoform	1.00	0.500 U	0.500 X	0.500 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260C							
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
GW-TB-SUMMER2021 SO4723-7	TB	Bromomethane	2.00	1.00 U	1.00 X	1.00 U	
GW-TB-SUMMER2021 SO4723-7	TB	Carbon disulfide	1.00	0.500 U	0.500 X	0.500 U	
GW-TB-SUMMER2021 SO4723-7	TB	Carbon tetrachloride	1.00	0.500 U	0.500 X	0.500 U	
GW-TB-SUMMER2021 SO4723-7	TB	Chlorobenzene	1.00	0.500 U	0.500 X	0.500 U	
GW-TB-SUMMER2021 SO4723-7	TB	Chloroethane	2.00	1.00 U	1.00 X	1.00 U	
GW-TB-SUMMER2021 SO4723-7	TB	Chloroform	1.00	0.500 U	0.500 X	0.500 U	
GW-TB-SUMMER2021 SO4723-7	TB	Chloromethane	2.00	1.70 J	1.70 J	1.70 J	TR
GW-TB-SUMMER2021 SO4723-7	TB	cis-1,2-Dichloroethene	1.00	0.500 U	0.500 X	0.500 U	
GW-TB-SUMMER2021 SO4723-7	TB	cis-1,3-Dichloropropene	1.00	0.500 U	0.500 X	0.500 U	
GW-TB-SUMMER2021 SO4723-7	TB	Dibromochloromethane	1.00	0.500 U	0.500 X	0.500 U	
GW-TB-SUMMER2021 SO4723-7	TB	Ethylbenzene	1.00	0.500 U	0.500 X	0.500 U	
GW-TB-SUMMER2021 SO4723-7	TB	m,p-Xylene	2.00	1.00 U	1.00 X	1.00 U	
GW-TB-SUMMER2021 SO4723-7	TB	Methylene chloride	5.00	6.10	6.10 J	6.10	
GW-TB-SUMMER2021 SO4723-7	TB	o-Xylene	1.00	0.500 U	0.500 X	0.500 U	
GW-TB-SUMMER2021 SO4723-7	TB	Styrene	1.00	0.500 U	0.500 X	0.500 U	
GW-TB-SUMMER2021 SO4723-7	TB	Tetrachloroethene (PCE)	1.00	0.500 U	0.500 X	0.500 U	
GW-TB-SUMMER2021 SO4723-7	TB	Toluene	1.00	0.500 U	0.500 X	0.500 U	
GW-TB-SUMMER2021 SO4723-7	TB	trans-1,2-Dichloroethene	1.00	0.500 U	0.500 X	0.500 U	
GW-TB-SUMMER2021 SO4723-7	TB	trans-1,3-Dichloropropene	1.00	0.500 U	0.500 X	0.500 U	
GW-TB-SUMMER2021 SO4723-7	TB	Trichloroethene (TCE)	1.00	0.500 U	0.500 X	0.500 U	
GW-TB-SUMMER2021 SO4723-7	TB	Vinyl chloride	2.00	1.00 U	1.00 X	1.00 U	
GW-TB-SUMMER2021 SO4723-7	TB	Xylenes, Total	3.00	1.50 U	1.50 X	1.50 U	
MW-01-SUMMER2021 SO4723-1	N	1,1,1-Trichloroethane	1.00	0.500 U	0.500 X	0.500 U	
MW-01-SUMMER2021 SO4723-1	N	1,1,2,2-Tetrachloroethane	1.00	0.500 U	0.500 X	0.500 U	
MW-01-SUMMER2021 SO4723-1	N	1,1,2-Trichloroethane	1.00	0.500 U	0.500 X	0.500 U	
MW-01-SUMMER2021 SO4723-1	N	1,1-Dichloroethane	1.00	0.500 U	0.500 X	0.500 U	
MW-01-SUMMER2021 SO4723-1	N	1,1-Dichloroethene	1.00	0.500 U	0.500 X	0.500 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260C							
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
MW-01-SUMMER2021 SO4723-1	N	1,2-Dichloroethane	1.00	0.500 U	0.500 X	0.500 U	
MW-01-SUMMER2021 SO4723-1	N	1,2-Dichloropropane	1.00	0.500 U	0.500 X	0.500 U	
MW-01-SUMMER2021 SO4723-1	N	2-Butanone (MEK)	5.00	2.50 UL	2.50 X	2.50 U	
MW-01-SUMMER2021 SO4723-1	N	2-Hexanone	5.00	2.50 U	2.50 X	2.50 U	
MW-01-SUMMER2021 SO4723-1	N	4-Methyl-2-pentanone (MIBK)	5.00	2.50 U	2.50 X	2.50 U	
MW-01-SUMMER2021 SO4723-1	N	Acetone	5.00	2.50 UL	2.50 X	2.50 U	
MW-01-SUMMER2021 SO4723-1	N	Benzene	1.00	0.500 U	0.500 X	0.500 U	
MW-01-SUMMER2021 SO4723-1	N	Bromodichloromethane	1.00	0.500 U	0.500 X	0.500 U	
MW-01-SUMMER2021 SO4723-1	N	Bromoform	1.00	0.500 U	0.500 X	0.500 U	
MW-01-SUMMER2021 SO4723-1	N	Bromomethane	2.00	1.00 U	1.00 X	1.00 U	
MW-01-SUMMER2021 SO4723-1	N	Carbon disulfide	1.00	0.500 U	0.500 X	0.500 U	
MW-01-SUMMER2021 SO4723-1	N	Carbon tetrachloride	1.00	0.500 U	0.500 X	0.500 U	
MW-01-SUMMER2021 SO4723-1	N	Chlorobenzene	1.00	0.500 U	0.500 X	0.500 U	
MW-01-SUMMER2021 SO4723-1	N	Chloroethane	2.00	1.00 U	1.00 X	1.00 U	
MW-01-SUMMER2021 SO4723-1	N	Chloroform	1.00	0.500 U	0.500 X	0.500 U	
MW-01-SUMMER2021 SO4723-1	N	Chloromethane	2.00	1.00 U	1.00 X	1.00 U	
MW-01-SUMMER2021 SO4723-1	N	cis-1,2-Dichloroethene	1.00	0.500 U	0.500 X	0.500 U	
MW-01-SUMMER2021 SO4723-1	N	cis-1,3-Dichloropropene	1.00	0.500 U	0.500 X	0.500 U	
MW-01-SUMMER2021 SO4723-1	N	Dibromochloromethane	1.00	0.500 U	0.500 X	0.500 U	
MW-01-SUMMER2021 SO4723-1	N	Ethylbenzene	1.00	0.500 U	0.500 X	0.500 U	
MW-01-SUMMER2021 SO4723-1	N	m,p-Xylene	2.00	1.00 U	1.00 X	1.00 U	
MW-01-SUMMER2021 SO4723-1	N	Methylene chloride	5.00	2.50 U	2.50 X	2.50 U	
MW-01-SUMMER2021 SO4723-1	N	o-Xylene	1.00	0.500 U	0.500 X	0.500 U	
MW-01-SUMMER2021 SO4723-1	N	Styrene	1.00	0.500 U	0.500 X	0.500 U	
MW-01-SUMMER2021 SO4723-1	N	Tetrachloroethene (PCE)	1.00	0.500 U	0.500 X	0.500 U	
MW-01-SUMMER2021 SO4723-1	N	Toluene	1.00	0.500 U	0.500 X	0.500 U	
MW-01-SUMMER2021 SO4723-1	N	trans-1,2-Dichloroethene	1.00	0.500 U	0.500 X	0.500 U	

Table of Results with Modified Qualifiers

Modified Qualifiers for test method SW8260C							
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
MW-01-SUMMER2021 SO4723-1	N	trans-1,3-Dichloropropene	1.00	0.500 U	0.500 X	0.500 U	
MW-01-SUMMER2021 SO4723-1	N	Trichloroethene (TCE)	1.00	0.500 U	0.500 X	0.500 U	
MW-01-SUMMER2021 SO4723-1	N	Vinyl chloride	2.00	1.00 U	1.00 X	1.00 U	
MW-01-SUMMER2021 SO4723-1	N	Xylenes, Total	3.00	1.50 U	1.50 X	1.50 U	

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Reason Code Definitions

Code	Definition
C	LCS Recovery
H1	Test Hold Time
I	Surrogate recovery outside project limits.
L	Lab Blank
M	MS Recovery
T	Trip Blank
TR	Trace Level Detect
V	Equipment Blank
Z	LCS RPD

Flag Code and Definitions

Flag	Definition
J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team (which should include a project chemist), but exclusion of the data is recommended.

Bias

-	The result may be biased low
+	The result may be biased high

Note - The bias field is a separate field; however, it is an integral part of the final flag (qualifier) on the sample result

Review Questions

Method: BNASIM (GC/MS-SIM Analysis by SW8270)

Review Questions	Yes	No	NA	Comment
Were all samples documented correctly on the chain-of-custody (COC)?	•			
Did samples listed on COCs match the sample labels?	•			
Were samples relinquished properly on the COC?	•			
Were all samples properly preserved?	•			
Were sampling dates/times, date and time of laboratory receipt of samples, and sample conditions upon receipt at the laboratory (including preservattion, pH, and temperature) are documented?	•			
Were sample results reported with percent moisture correction if required?			•	
Were analytical methods performed and analysis dates present?	•			
Were all requested target analytes reported?	•			
Were QAPP specified laboratory PQLs achieved?		•		Lab LOQs agree with those listed on WS#15. Lab LOQs for several PAHs exceed PQL goals and PALs as noted on WS#15.
Were holding times met?	•			
Were trip blanks analyzed at the proper frequency and in control?			•	
Were field blanks analyzed at the proper frequency and in control?			•	
Were equipment blanks analyzed at the proper frequency and in control?	•			GW-EB-SUMMER2021
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than DL?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			LCS only
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?			•	
Was a MS/MSD pair prepared with each batch?	•			
Were MS/MSD recoveries within project acceptance limits?		•		MW-01-SUMMER2021 some %Rs below criteria. See outlier report.
Was the MS/MSD RPD within project acceptance limits?		•		RPDs outside criteria for 3 compounds. No qualifications since parent sample results ND.
If ISM was used for sample collection, were laboratory triplicates analyzed and within project acceptance limits?			•	
Were surrogate recoveries within project acceptance limits?	•			
Were field replicates (duplicates, triplicates, etc.) analyzed at the proper frequency and in control?	•			MW-02-SUMMER2021 / MW-FD-SUMMER2021
Were reported sample concentrations within calibration range?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?		•		ICV outside criteria for benzo(a)pyrene. Calibration review outside scope of S2AVEM validation.
Were DoD QSM corrective actions followed if deviations were noted?		•		Case narrative notes ICV outside criteria; passing ICV required before sample analysis.
Were any data recommended for exclusion in the data validation process?		•		

Review Questions

Method: MADEPVP (Method for the Determination of Volatile Petroleum Hydrocarbons (VPH))				
Review Questions	Yes	No	NA	Comment
Were all samples documented correctly on the chain-of-custody (COC)?	•			
Did samples listed on COCs match the sample labels?	•			
Were samples relinquished properly on the COC?	•			
Were all samples properly preserved?	•			
Were sampling dates/times, date and time of laboratory receipt of samples, and sample conditions upon receipt at the laboratory (including preservattion, pH, and temperature) are documented?	•			
Were sample results reported with percent moisture correction if required?			•	
Were analytical methods performed and analysis dates present?	•			
Were all requested target analytes reported?	•			
Were QAPP specified laboratory PQLs achieved?	•			
Were holding times met?	•			
Were trip blanks analyzed at the proper frequency and in control?	•			GW-TB-SUMMER2021 ND
Were field blanks analyzed at the proper frequency and in control?			•	
Were equipment blanks analyzed at the proper frequency and in control?	•			
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than DL?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			MW-01-SUMMER2021
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If ISM was used for sample collection, were laboratory triplicates analyzed and within project acceptance limits?			•	
Were surrogate recoveries within project acceptance limits?	•			
Were field replicates (duplicates, triplicates, etc.) analyzed at the proper frequency and in control?	•			MW-02-SUMMER2021 / MW-FD-SUMMER2021
Were reported sample concentrations within calibration range?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			Manual integration noted.
Were DoD QSM corrective actions followed if deviations were noted?			•	No issues noted
Were any data recommended for exclusion in the data validation process?		•		

Review Questions

Method: SW6020A (Trace Metals by Inductively Coupled Plasma/Mass Spectrometry)				
Review Questions	Yes	No	NA	Comment
Were all samples documented correctly on the chain-of-custody (COC)?	•			
Did samples listed on COCs match the sample labels?	•			
Were samples relinquished properly on the COC?	•			
Were all samples properly preserved?	•			
Were sampling dates/times, date and time of laboratory receipt of samples, and sample conditions upon receipt at the laboratory (including preservattion, pH, and temperature) are documented?	•			
Were sample results reported with percent moisture correction if required?			•	
Were analytical methods performed and analysis dates present?	•			
Were all requested target analytes reported?	•			
Were QAPP specified laboratory PQLs achieved?		•		Lab LOQs agree with those listed on WS#15 except for Cr (5.0 ug/L). All lab LOQs meet PQL goals except for As, as noted on WS#15. All lab LOQs meet Project Action Limits (PALs).
Were holding times met?	•			
Were trip blanks analyzed at the proper frequency and in control?			•	
Were field blanks analyzed at the proper frequency and in control?			•	
Were equipment blanks analyzed at the proper frequency and in control?		•		GW-EB-SUMMER2021 contamination (Ca, Cr, Cu, Mn, Ni). See outlier report.
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than DL?		•		PBWOG29IMW2 Sb, Be, Ca, Cr, Pb, Mn, Ni contamination. PBWOI23IMW2 Cu contamination. See outlier report. Results for Cu in all samples biased high J+ due MB and EB contamination.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			LCS only
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?			•	
Was a MS/MSD pair prepared with each batch?	•			MW-01-SUMMER2021
Were MS/MSD recoveries within project acceptance limits?		•		Several %Rs above criteria in the MSD, Ca below criteria in the MS - see outlier report. No actions for Ca since sample conc >4X spiked amount.
Was the MS/MSD RPD within project acceptance limits?	•			
Were Post Spike (PS) recoveries within project acceptance limits?	•			PDS within limits where required for analytes with MS%R outside criteria. Since Ca >4X spike amount in MS and Hg MS within criteria, PDS not required.
Was a Dilution Test/Serial Dilution performed and within project acceptance critiera?	•			%D within limits if sample concentration >50X LOQ
If ISM was used for sample collection, were laboratory triplicates analyzed and within project acceptance limits?			•	
Were field replicates (duplicates, triplicates, etc.) analyzed at the proper frequency and in control?	•			MW-02-SUMMER2021 / MW-FD-SUMMER2021

Review Questions

Method: SW6020A (Trace Metals by Inductively Coupled Plasma/Mass Spectrometry)				
Review Questions	Yes	No	NA	Comment
Were reported sample concentrations within calibration range?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?		•		ICSA outside criteria for Cu, not assessed as part of S2AVEM validation.
Were DoD QSM corrective actions followed if deviations were noted?		•		Samples should have been reanalyzed due ICSA exceedance noted in case narrative. Not assessed for S2AVEM.
Were any data recommended for exclusion in the data validation process?		•		

Review Questions

Method: SW7470A (Mercury in Water (Manual Cold-Vapor Technique))				
Review Questions	Yes	No	NA	Comment
Were all samples documented correctly on the chain-of-custody (COC)?	•			
Did samples listed on COCs match the sample labels?	•			
Were samples relinquished properly on the COC?	•			
Were all samples properly preserved?	•			
Were sampling dates/times, date and time of laboratory receipt of samples, and sample conditions upon receipt at the laboratory (including preservattion, pH, and temperature) are documented?	•			
Were sample results reported with percent moisture correction if required?			•	
Were analytical methods performed and analysis dates present?	•			
Were all requested target analytes reported?	•			
Were QAPP specified laboratory PQLs achieved?	•			
Were holding times met?	•			
Were trip blanks analyzed at the proper frequency and in control?			•	
Were field blanks analyzed at the proper frequency and in control?			•	
Were equipment blanks analyzed at the proper frequency and in control?	•			GW-EB-SUMMER2021
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than DL?	•			PBWOG27HGW2 ND
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			LCS only
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?			•	
Was a MS/MSD pair prepared with each batch?	•			MW-01-SUMMER2021
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If ISM was used for sample collection, were laboratory triplicates analyzed and within project acceptance limits?			•	
Were field replicates (duplicates, triplicates, etc.) analyzed at the proper frequency and in control?	•			MW-02-SUMMER2021 / MW-FD-SUMMER2021
Were reported sample concentrations within calibration range?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were DoD QSM corrective actions followed if deviations were noted?			•	
Were any data recommended for exclusion in the data validation process?		•		

Review Questions

Method: SW8260C (Volatile Organic Compounds by GC/MS)				
Review Questions	Yes	No	NA	Comment
Were all samples documented correctly on the chain-of-custody (COC)?	•			
Did samples listed on COCs match the sample labels?	•			
Were samples relinquished properly on the COC?	•			
Were all samples properly preserved?	•			
Were sampling dates/times, date and time of laboratory receipt of samples, and sample conditions upon receipt at the laboratory (including preservattion, pH, and temperature) are documented?	•			
Were sample results reported with percent moisture correction if required?			•	
Were analytical methods performed and analysis dates present?	•			
Were all requested target analytes reported?	•			
Were QAPP specified laboratory PQLs achieved?	•			Lab LOQs agree with WS#15 and meet PQL goals and PAL.
Were holding times met?		•		Sample MW-01-SUMMER2021 analyzed on 14th day from collection. Based on prof judgment, qualifications were manually removed by the validator. Sample MW-FD-SUMMER2021 was analyzed on 15th day; qualified J/X. Case narrative notes samples were reanalyzed past hold time; initial analysis has been reported. Only sample MW-FD-SUMMER2021 was qualified.
Were trip blanks analyzed at the proper frequency and in control?		•		GW-TB-SUMMER2021 Methylene Chloride, chloromethane contamination. See outlier report.
Were field blanks analyzed at the proper frequency and in control?			•	
Were equipment blanks analyzed at the proper frequency and in control?		•		GW-EB-SUMMER2021 Methylene Chloride contamination. See outlier report.
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than DL?		•		WG303781-2, WG303527-2 Methylene Chloride contamination. See outlier report.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			LCS only for WG303684-9. LCS/LCSD for WG303781-1/6.
Were LCS/LCSD recoveries within project acceptance limits?		•		WG303684-9 two compounds above criteria. See outlier report.
Was the LCS/LCSD RPD within project acceptance limits?		•		WG303781-1/6 acetone RPD outside criteria. See outlier report.
Was a MS/MSD pair prepared with each batch?	•			MW-01-SUMMER2021
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If ISM was used for sample collection, were laboratory triplicates analyzed and within project acceptance limits?			•	
Were surrogate recoveries within project acceptance limits?		•		Some %Rs for 1,2-DICHLOROETHANE-D4 above criteria for some samples. See outlier report.
Were field replicates (duplicates, triplicates, etc.) analyzed at the proper frequency and in control?	•			MW-02-SUMMER2021 / MW-FD-SUMMER2021: Note the results for the FD were qualified due to holding time and the ND results may not be usable. Precision criteria before qualification was met.

Review Questions

Method: SW8260C (Volatile Organic Compounds by GC/MS)

Review Questions	Yes	No	NA	Comment
Were reported sample concentrations within calibration range?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?		•		CCV outside criteria for tetrachloroethene, ICV outside criteria for acetone and 2-butanone; not assessed as part of a S2AVEM validation.
Were DoD QSM corrective actions followed if deviations were noted?			•	ICV/CCV nonfconformances and corrective actions not assessed for S2AVEM.
Were any data recommended for exclusion in the data validation process?	•			ND results in sample MW-FD-SUMMER2021 recommended for rejection (X) due to holding time exceedance.

Facility:	D01ME0077-02, Nike 58 - SI in Launch Area
Event:	Nike 58 Summer Groundwater 2021 Sampling
SDG:	SO4724
Guidance Document:	Quality Assurance Project Plan Former LO-58 Nike Missile Launch Site, Caribou, Maine
Prime Contractor:	Verina Consulting Group, LLC, Bridgewater, NJ
Project Manager:	Robert Gan
Contract Laboratory(ies):	Katahdin Analytical Services, Scarborough, ME
Data Review Contractor:	NOBIS
Data Review Level:	S2AVEM
Primary Data Reviewer:	Kristi Rutherford, Environmental Chemist
Second Reviewer:	Gary Glennon, Lead Chemist
Date Submitted:	October 14, 2021

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	BNASIM	E524.2	MADEPVP	SW6020A	SW7470A
DW-01-EFF-SUMMER2021	SO4724-1	Water	Field Sample/N	X	X	X	X	X
DW-01-INF-SUMMER2021	SO4724-2	Water	Field Sample/N	X	X	X	X	X
DW-01-MID-SUMMER2021	SO4724-3	Water	Field Sample/N	X	X	X	X	X
DW-02R-EFF-SUMMER2021	SO4724-4	Water	Field Sample/N	X	X	X	X	X
DW-02R-INF-SUMMER2021	SO4724-5	Water	Field Sample/N	X	X	X	X	X
DW-FD-SUMMER2021	SO4724-6	Water	Field Duplicate/FD	X	X	X	X	X
DW-TB-SUMMER2021	SO4724-7	Water	Trip Blank/TB		X	X		

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at S2AVEM data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan Former LO-58 Nike Missile Launch Site, Caribou, Maine and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Verina Consulting Group, LLC, Bridgewater, NJ; analyses were performed by Katahdin Analytical Services, Scarborough, ME and were reported under sample delivery group (SDG) SO4724. Data have been evaluated electronically based on electronic data deliverables (EDDs) provided by the laboratory, and hard copy data summary forms have also been reviewed during this effort and compared to the automated review output by the reviewers whose signatures appear on the following page. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative and throughout this report.

All quality control (QC) elements associated with this SDG have been reviewed by a project chemist in accordance with the requirements defined for the project. This review is documented in the attached Data Review Checklists. The QC elements listed below were supported by the electronic deliverable and were evaluated using ADR processes.

- Blank - Negative
- Field Duplicate RPD
- Lab Blank
- LCS Recovery
- LCS RPD
- MS Recovery
- MS RPD
- Prep Hold Time
- Surrogate
- Test Hold Time
- Trip Blank

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 422 results (58.94%) out of the 716 results (sample and field QC samples) reported are qualified based on review and 21 results (2.93%) have been rejected or deemed a serious deficiency (X qualifier). Trace values, defined as results that are qualified as estimated because they fall between the detection limit and the reporting limit/limit of quantitation, are not counted as qualified results in the above count. The qualified results are detailed throughout this report and discussed in the narrative below, where appropriate.

Narrative Comments

Only the DWs listed on the COC were reported in this SDG SO4724. The GWs were reported in SDG SO4723.

Analytical Method	Data Reviewer Comment
BNASIM	No additional comments; see Checklist for detail.
E524.2	No additional comments; see Checklist for detail.
MADEPVP	No additional comments; see Checklist for detail.
SW6020A	No additional comments; see Checklist for detail.
SW7470A	No additional comments; see Checklist for detail.

Kristi Rutherford

October 14, 2021

Reviewed by Kristi Rutherford, Environmental Chemist, NOBIS

As the First Reviewer, I certify that I have performed a data review process in accordance with the requirements of the project guidance document, and have compared the electronic data to the laboratory's hard copy report and have verified the consistency of the reported sample results and method quality control data between the two deliverables.

Gary J. Glennon

Reviewed by Gary Glennon, Lead Chemist, NOBIS

October 14, 2021

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method E524.2, Lab Blank

The purpose of laboratory blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in laboratory blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
WG303440-2 (LB)/ WG303440-2	Chloroform	0.1600	< 0.047	< 0.5	ug/l	U/None*	L	
WG303440-2 (LB)/ WG303440-2	Chloromethane	0.1000	< 0.077	< 1	ug/l	U/None*	L	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOQ will be qualified based on the validation type such as J+ at the sample result.

Qualified Results associated with the Lab Blank for E524.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-EFF-SUMMER2021 SO4724-1	N	Chloromethane	1.00	0.180 J	1.00 UJ		ug/l	L/T/I
DW-01-INF-SUMMER2021 SO4724-2	N	Chloroform	0.500	0.0530 J	0.500 UJ		ug/l	L/I
DW-01-INF-SUMMER2021 SO4724-2	N	Chloromethane	1.00	0.0960 J	1.00 UJ		ug/l	L/T/I
DW-01-MID-SUMMER2021 SO4724-3	N	Chloromethane	1.00	0.120 J	1.00 UJ		ug/l	L/T/I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Chloromethane	1.00	0.120 J	1.00 UJ		ug/l	L/T/I
DW-02R-INF-SUMMER2021 SO4724-5	N	Chloromethane	1.00	0.120 J	1.00 UJ		ug/l	L/T/I
DW-FD-SUMMER2021 SO4724-6	FD	Chloromethane	1.00	0.290 J	1.00 UJ		ug/l	L/T/I
DW-TB-SUMMER2021 SO4724-7	TB	Chloromethane	1.00	0.130 J	1.00 U		ug/l	L

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method E524.2, LCS Recovery

The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
WG303440-1 (BS)/ WG303440-1	2-Hexanone	68.00	70 - 130	70 - 130	percent	J/X	C	
WG303440-1 (BS)/ WG303440-1	4-Methyl-2-pentanone (MIBK)	68.00	70 - 130	70 - 130	percent	J/X	C	
WG303440-1 (BS)/ WG303440-1	Acetone	134.0	70 - 130	70 - 130	percent	J/None	C	
WG303440-1 (BS)/ WG303440-1	Chloroethane	138.0	70 - 130	70 - 130	percent	J/None	C	
WG303440-1 (BS)/ WG303440-1	Naphthalene	52.00	70 - 130	70 - 130	percent	J/X	C	
WG303440-5 (BD)/ WG303440-5	2-Hexanone	68.00	70 - 130	70 - 130	percent	J/X	C	
WG303440-5 (BD)/ WG303440-5	Naphthalene	48.00	70 - 130	70 - 130	percent	J/X	C	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the LCS Recovery for E524.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-EFF-SUMMER2021 SO4724-1	N	2-Hexanone	5.00	2.50 ULL	2.50 X		ug/l	C/I
DW-01-EFF-SUMMER2021 SO4724-1	N	4-Methyl-2-pentanone (MIBK)	5.00	2.50 UL	2.50 X		ug/l	C/I
DW-01-EFF-SUMMER2021 SO4724-1	N	Acetone	5.00	2.40 JL	2.40 J		ug/l	C/I/TR
DW-01-EFF-SUMMER2021 SO4724-1	N	Naphthalene	1.00	0.500 ULL	0.500 X		ug/l	C/I
DW-01-INF-SUMMER2021 SO4724-2	N	2-Hexanone	5.00	2.50 ULL	2.50 X		ug/l	C/I
DW-01-INF-SUMMER2021 SO4724-2	N	4-Methyl-2-pentanone (MIBK)	5.00	2.50 ULM	2.50 X		ug/l	C/M/I
DW-01-INF-SUMMER2021 SO4724-2	N	Naphthalene	1.00	0.500 ULLMM	0.500 X		ug/l	C/M/I
DW-01-MID-SUMMER2021 SO4724-3	N	2-Hexanone	5.00	2.50 ULL	2.50 X		ug/l	C/I
DW-01-MID-SUMMER2021 SO4724-3	N	4-Methyl-2-pentanone (MIBK)	5.00	2.50 UL	2.50 X		ug/l	C/I
DW-01-MID-SUMMER2021 SO4724-3	N	Naphthalene	1.00	0.500 ULL	0.500 X		ug/l	C/I

Qualified Results associated with the LCS Recovery for E524.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-02R-EFF-SUMMER2021 SO4724-4	N	2-Hexanone	5.00	2.50 ULL	2.50 X		ug/l	C/I
DW-02R-EFF-SUMMER2021 SO4724-4	N	4-Methyl-2-pentanone (MIBK)	5.00	2.50 UL	2.50 X		ug/l	C/I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Naphthalene	1.00	0.500 ULL	0.500 X		ug/l	C/I
DW-02R-INF-SUMMER2021 SO4724-5	N	2-Hexanone	5.00	2.50 ULL	2.50 X		ug/l	C/I
DW-02R-INF-SUMMER2021 SO4724-5	N	4-Methyl-2-pentanone (MIBK)	5.00	2.50 UL	2.50 X		ug/l	C/I
DW-02R-INF-SUMMER2021 SO4724-5	N	Naphthalene	1.00	0.500 ULL	0.500 X		ug/l	C/I
DW-FD-SUMMER2021 SO4724-6	FD	2-Hexanone	5.00	2.50 ULL	2.50 X		ug/l	C/I
DW-FD-SUMMER2021 SO4724-6	FD	4-Methyl-2-pentanone (MIBK)	5.00	2.50 UL	2.50 X		ug/l	C/I
DW-FD-SUMMER2021 SO4724-6	FD	Naphthalene	1.00	0.500 ULL	0.500 X		ug/l	C/I
DW-TB-SUMMER2021 SO4724-7	TB	2-Hexanone	5.00	2.50 ULL	2.50 X		ug/l	C
DW-TB-SUMMER2021 SO4724-7	TB	4-Methyl-2-pentanone (MIBK)	5.00	2.50 UL	2.50 X		ug/l	C
DW-TB-SUMMER2021 SO4724-7	TB	Naphthalene	1.00	0.500 ULL	0.500 X		ug/l	C

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method E524.2, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
DW-01-INF-SUMMER2021-MS (MS)/ WG303440-6	4-Methyl-2-pentanone (MIBK)	68.00	70 - 130	70 - 130	percent	J/X	M	
DW-01-INF-SUMMER2021-MS (MS)/ WG303440-6	Chloroethane	172.0	70 - 130	70 - 130	percent	J/None	M	
DW-01-INF-SUMMER2021-MS (MS)/ WG303440-6	Dichlorodifluoromethane	132.0	70 - 130	70 - 130	percent	J/None	M	
DW-01-INF-SUMMER2021-MS (MS)/ WG303440-6	Methylene chloride	136.0	70 - 130	70 - 130	percent	J/None	M	
DW-01-INF-SUMMER2021-MS (MS)/ WG303440-6	Naphthalene	48.00	70 - 130	70 - 130	percent	J/X	M	
DW-01-INF-SUMMER2021-MSD (SD)/ WG303440-7	Acetone	146.0	70 - 130	70 - 130	percent	J/None	M	
DW-01-INF-SUMMER2021-MSD (SD)/ WG303440-7	Chloroethane	162.0	70 - 130	70 - 130	percent	J/None	M	
DW-01-INF-SUMMER2021-MSD (SD)/ WG303440-7	Methylene chloride	134.0	70 - 130	70 - 130	percent	J/None	M	
DW-01-INF-SUMMER2021-MSD (SD)/ WG303440-7	Naphthalene	52.00	70 - 130	70 - 130	percent	J/X	M	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the MS Recovery for E524.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-INF-SUMMER2021 SO4724-2	N	4-Methyl-2-pentanone (MIBK)	5.00	2.50 ULM	2.50 X		ug/l	C/M/I
DW-01-INF-SUMMER2021 SO4724-2	N	Naphthalene	1.00	0.500 ULLMM	0.500 X		ug/l	C/M/I

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method E524.2, Surrogate

Method performance for individual samples is demonstrated through spiking activities. All samples are spiked with surrogate compounds prior to sample preparation. The sample itself may produce effects due to such factors as interferences and high concentrations of analytes. Summary forms were evaluated and compared to electronic data deliverables. Surrogate results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
DW-01-EFF-SUMMER2021 (N)/ SO4724-1	1-Bromo-4-fluorobenzene (4-Bromofluorobenzene)	68.00	70 - 130	10 - 130	percent	J/UJ	I	
DW-01-INF-SUMMER2021 (N)/ SO4724-2	1-Bromo-4-fluorobenzene (4-Bromofluorobenzene)	68.00	70 - 130	10 - 130	percent	J/UJ	I	
DW-01-MID-SUMMER2021 (N)/ SO4724-3	1-Bromo-4-fluorobenzene (4-Bromofluorobenzene)	66.00	70 - 130	10 - 130	percent	J/UJ	I	
DW-02R-EFF-SUMMER2021 (N)/ SO4724-4	1-Bromo-4-fluorobenzene (4-Bromofluorobenzene)	66.00	70 - 130	10 - 130	percent	J/UJ	I	
DW-02R-INF-SUMMER2021 (N)/ SO4724-5	1-Bromo-4-fluorobenzene (4-Bromofluorobenzene)	66.00	70 - 130	10 - 130	percent	J/UJ	I	
DW-FD-SUMMER2021 (FD)/ SO4724-6	1-Bromo-4-fluorobenzene (4-Bromofluorobenzene)	65.00	70 - 130	10 - 130	percent	J/UJ	I	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Surrogate for E524.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-EFF-SUMMER2021 SO4724-1	N	1,1,1,2-Tetrachloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,1,1-Trichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,1,2,2-Tetrachloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,1,2-Trichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,1-Dichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,1-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,1-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I

Qualified Results associated with the Surrogate for E524.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-EFF-SUMMER2021 SO4724-1	N	1,2,3-Trichlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,2,3-Trichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,2,4-Trichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,2,4-Trimethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,2-Dibromo-3-chloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,2-Dibromoethane (EDB)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,2-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,2-Dichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,2-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,3,5-Trimethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,3-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,3-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,4-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	2,2-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	2-Butanone (MEK)	5.00	2.50 U	2.50 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	2-Chlorotoluene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	2-Hexanone	5.00	2.50 ULL	2.50 X		ug/l	C/I
DW-01-EFF-SUMMER2021 SO4724-1	N	4-Chlorotoluene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	4-Methyl-2-pentanone (MIBK)	5.00	2.50 UL	2.50 X		ug/l	C/I

Qualified Results associated with the Surrogate for E524.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-EFF-SUMMER2021 SO4724-1	N	Acetone	5.00	2.40 JL	2.40 J		ug/l	C/I/TR
DW-01-EFF-SUMMER2021 SO4724-1	N	Benzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Bromobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Bromochloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Bromodichloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Bromoform	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Bromomethane	1.00	0.500 U	0.500 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Carbon disulfide	1.00	0.500 U	0.500 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Carbon tetrachloride	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Chlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Chloroethane	1.00	0.500 UL	0.500 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Chloroform	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Chloromethane	1.00	0.180 J	1.00 UJ		ug/l	L/T/I
DW-01-EFF-SUMMER2021 SO4724-1	N	cis-1,2-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	cis-1,3-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Dibromochloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Dibromomethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Dichlorodifluoromethane	1.00	0.500 U	0.500 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Ethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I

Qualified Results associated with the Surrogate for E524.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-EFF-SUMMER2021 SO4724-1	N	Hexachlorobutadiene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Isopropylbenzene (Cumene)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	m,p-Xylene	1.00	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Methyl tert-butyl ether (MTBE)	1.00	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Methylene chloride	2.50	0.660 J	2.50 UJ		ug/l	T/I
DW-01-EFF-SUMMER2021 SO4724-1	N	Naphthalene	1.00	0.500 ULL	0.500 X		ug/l	C/I
DW-01-EFF-SUMMER2021 SO4724-1	N	n-Butylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	n-Propylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	o-Xylene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	p-Cymene (p-Isopropyltoluene)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	sec-Butylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Styrene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Tetrachloroethene (PCE)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Toluene	1.00	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	trans-1,2-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	trans-1,3-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Trichloroethene (TCE)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Trichlorofluoromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Vinyl chloride	1.00	0.500 U	0.500 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,1,1,2-Tetrachloroethane	0.500	0.250 U	0.250 UJ		ug/l	I

Qualified Results associated with the Surrogate for E524.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-INF-SUMMER2021 SO4724-2	N	1,1,1-Trichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,1,2,2-Tetrachloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,1,2-Trichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,1-Dichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,1-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,1-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,2,3-Trichlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,2,3-Trichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,2,4-Trichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,2,4-Trimethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,2-Dibromo-3-chloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,2-Dibromoethane (EDB)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,2-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,2-Dichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,2-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,3,5-Trimethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,3-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,3-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,4-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	2,2-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	2-Butanone (MEK)	5.00	2.50 U	2.50 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	2-Chlorotoluene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	2-Hexanone	5.00	2.50 ULL	2.50 X		ug/l	C/I
DW-01-INF-SUMMER2021 SO4724-2	N	4-Chlorotoluene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	4-Methyl-2-pentanone (MIBK)	5.00	2.50 ULM	2.50 X		ug/l	C/M/I
DW-01-INF-SUMMER2021 SO4724-2	N	Acetone	5.00	2.50 ULM	2.50 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Benzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Bromobenzene	0.500	0.250 U	0.250 UJ		ug/l	I

Qualified Results associated with the Surrogate for E524.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-INF-SUMMER2021 SO4724-2	N	Bromochloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Bromodichloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Bromoform	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Bromomethane	1.00	0.500 U	0.500 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Carbon disulfide	1.00	0.500 U	0.500 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Carbon tetrachloride	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Chlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Chloroethane	1.00	0.500 ULMM	0.500 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Chloroform	0.500	0.0530 J	0.500 UJ		ug/l	L/I
DW-01-INF-SUMMER2021 SO4724-2	N	Chloromethane	1.00	0.0960 J	1.00 UJ		ug/l	L/T/I
DW-01-INF-SUMMER2021 SO4724-2	N	cis-1,2-Dichloroethene	0.500	0.740	0.740 J	-	ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	cis-1,3-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Dibromochloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Dibromomethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Dichlorodifluoromethane	1.00	0.500 UM	0.500 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Ethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Hexachlorobutadiene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Isopropylbenzene (Cumene)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	m,p-Xylene	1.00	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Methyl tert-butyl ether (MTBE)	1.00	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Methylene chloride	2.50	1.20 UMM	1.20 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Naphthalene	1.00	0.500 ULLMM	0.500 X		ug/l	C/M/I
DW-01-INF-SUMMER2021 SO4724-2	N	n-Butylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	n-Propylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	o-Xylene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	p-Cymene (p-Isopropyltoluene)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	sec-Butylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Styrene	0.500	0.250 U	0.250 UJ		ug/l	I

Qualified Results associated with the Surrogate for E524.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-INF-SUMMER2021 SO4724-2	N	Tetrachloroethene (PCE)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Toluene	1.00	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	trans-1,2-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	trans-1,3-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Trichloroethene (TCE)	0.500	2.90	2.90 J	-	ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Trichlorofluoromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Vinyl chloride	1.00	0.500 U	0.500 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,1,1,2-Tetrachloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,1,1-Trichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,1,2,2-Tetrachloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,1,2-Trichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,1-Dichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,1-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,1-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,2,3-Trichlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,2,3-Trichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,2,4-Trichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,2,4-Trimethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,2-Dibromo-3-chloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,2-Dibromoethane (EDB)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,2-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I

Qualified Results associated with the Surrogate for E524.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-MID-SUMMER2021 SO4724-3	N	1,2-Dichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,2-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,3,5-Trimethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,3-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,3-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,4-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	2,2-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	2-Butanone (MEK)	5.00	2.50 U	2.50 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	2-Chlorotoluene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	2-Hexanone	5.00	2.50 ULL	2.50 X		ug/l	C/I
DW-01-MID-SUMMER2021 SO4724-3	N	4-Chlorotoluene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	4-Methyl-2-pentanone (MIBK)	5.00	2.50 UL	2.50 X		ug/l	C/I
DW-01-MID-SUMMER2021 SO4724-3	N	Acetone	5.00	2.50 UL	2.50 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Benzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Bromobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Bromochloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Bromodichloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Bromoform	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Bromomethane	1.00	0.500 U	0.500 UJ		ug/l	I

Qualified Results associated with the Surrogate for E524.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-MID-SUMMER2021 SO4724-3	N	Carbon disulfide	1.00	0.500 U	0.500 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Carbon tetrachloride	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Chlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Chloroethane	1.00	0.500 UL	0.500 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Chloroform	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Chloromethane	1.00	0.120 J	1.00 UJ		ug/l	L/T/I
DW-01-MID-SUMMER2021 SO4724-3	N	cis-1,2-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	cis-1,3-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Dibromochloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Dibromomethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Dichlorodifluoromethane	1.00	0.500 U	0.500 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Ethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Hexachlorobutadiene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Isopropylbenzene (Cumene)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	m,p-Xylene	1.00	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Methyl tert-butyl ether (MTBE)	1.00	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Methylene chloride	2.50	1.20 U	1.20 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Naphthalene	1.00	0.500 ULL	0.500 X		ug/l	C/I
DW-01-MID-SUMMER2021 SO4724-3	N	n-Butylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I

Qualified Results associated with the Surrogate for E524.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-MID-SUMMER2021 SO4724-3	N	n-Propylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	o-Xylene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	p-Cymene (p-Isopropyltoluene)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	sec-Butylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Styrene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Tetrachloroethene (PCE)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Toluene	1.00	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	trans-1,2-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	trans-1,3-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Trichloroethene (TCE)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Trichlorofluoromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Vinyl chloride	1.00	0.500 U	0.500 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,1,1,2-Tetrachloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,1,1-Trichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,1,2,2-Tetrachloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,1,2-Trichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,1-Dichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,1-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,1-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I

Qualified Results associated with the Surrogate for E524.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,2,3-Trichlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,2,3-Trichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,2,4-Trichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,2,4-Trimethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,2-Dibromo-3-chloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,2-Dibromoethane (EDB)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,2-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,2-Dichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,2-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,3,5-Trimethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,3-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,3-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,4-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	2,2-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	2-Butanone (MEK)	5.00	2.50 U	2.50 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	2-Chlorotoluene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	2-Hexanone	5.00	2.50 ULL	2.50 X		ug/l	C/I
DW-02R-EFF-SUMMER2021 SO4724-4	N	4-Chlorotoluene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	4-Methyl-2-pentanone (MIBK)	5.00	2.50 UL	2.50 X		ug/l	C/I

Qualified Results associated with the Surrogate for E524.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-02R-EFF-SUMMER2021 SO4724-4	N	Acetone	5.00	2.50 UL	2.50 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Benzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Bromobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Bromochloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Bromodichloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Bromoform	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Bromomethane	1.00	0.500 U	0.500 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Carbon disulfide	1.00	0.500 U	0.500 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Carbon tetrachloride	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Chlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Chloroethane	1.00	0.500 UL	0.500 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Chloroform	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Chloromethane	1.00	0.120 J	1.00 UJ		ug/l	L/T/I
DW-02R-EFF-SUMMER2021 SO4724-4	N	cis-1,2-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	cis-1,3-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Dibromochloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Dibromomethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Dichlorodifluoromethane	1.00	0.500 U	0.500 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Ethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I

Qualified Results associated with the Surrogate for E524.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-02R-EFF-SUMMER2021 SO4724-4	N	Hexachlorobutadiene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Isopropylbenzene (Cumene)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	m,p-Xylene	1.00	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Methyl tert-butyl ether (MTBE)	1.00	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Methylene chloride	2.50	0.670 J	2.50 UJ		ug/l	T/I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Naphthalene	1.00	0.500 ULL	0.500 X		ug/l	C/I
DW-02R-EFF-SUMMER2021 SO4724-4	N	n-Butylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	n-Propylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	o-Xylene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	p-Cymene (p-Isopropyltoluene)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	sec-Butylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Styrene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Tetrachloroethene (PCE)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Toluene	1.00	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	trans-1,2-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	trans-1,3-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Trichloroethene (TCE)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Trichlorofluoromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Vinyl chloride	1.00	0.500 U	0.500 UJ		ug/l	I

Qualified Results associated with the Surrogate for E524.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-02R-INF-SUMMER2021 SO4724-5	N	1,1,1,2-Tetrachloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,1,1-Trichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,1,2,2-Tetrachloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,1,2-Trichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,1-Dichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,1-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,1-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,2,3-Trichlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,2,3-Trichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,2,4-Trichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,2,4-Trimethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,2-Dibromo-3-chloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,2-Dibromoethane (EDB)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,2-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,2-Dichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,2-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,3,5-Trimethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,3-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,3-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I

Qualified Results associated with the Surrogate for E524.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-02R-INF-SUMMER2021 SO4724-5	N	1,4-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	2,2-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	2-Butanone (MEK)	5.00	2.50 U	2.50 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	2-Chlorotoluene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	2-Hexanone	5.00	2.50 ULL	2.50 X		ug/l	C/I
DW-02R-INF-SUMMER2021 SO4724-5	N	4-Chlorotoluene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	4-Methyl-2-pentanone (MIBK)	5.00	2.50 UL	2.50 X		ug/l	C/I
DW-02R-INF-SUMMER2021 SO4724-5	N	Acetone	5.00	2.50 UL	2.50 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Benzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Bromobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Bromochloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Bromodichloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Bromoform	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Bromomethane	1.00	0.500 U	0.500 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Carbon disulfide	1.00	0.500 U	0.500 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Carbon tetrachloride	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Chlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Chloroethane	1.00	0.500 UL	0.500 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Chloroform	0.500	0.250 U	0.250 UJ		ug/l	I

Qualified Results associated with the Surrogate for E524.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-02R-INF-SUMMER2021 SO4724-5	N	Chloromethane	1.00	0.120 J	1.00 UJ		ug/l	L/T/I
DW-02R-INF-SUMMER2021 SO4724-5	N	cis-1,2-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	cis-1,3-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Dibromochloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Dibromomethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Dichlorodifluoromethane	1.00	0.500 U	0.500 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Ethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Hexachlorobutadiene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Isopropylbenzene (Cumene)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	m,p-Xylene	1.00	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Methyl tert-butyl ether (MTBE)	1.00	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Methylene chloride	2.50	0.640 J	2.50 UJ		ug/l	T/I
DW-02R-INF-SUMMER2021 SO4724-5	N	Naphthalene	1.00	0.500 ULL	0.500 X		ug/l	C/I
DW-02R-INF-SUMMER2021 SO4724-5	N	n-Butylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	n-Propylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	o-Xylene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	p-Cymene (p-Isopropyltoluene)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	sec-Butylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Styrene	0.500	0.250 U	0.250 UJ		ug/l	I

Qualified Results associated with the Surrogate for E524.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-02R-INF-SUMMER2021 SO4724-5	N	Tetrachloroethene (PCE)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Toluene	1.00	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	trans-1,2-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	trans-1,3-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Trichloroethene (TCE)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Trichlorofluoromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Vinyl chloride	1.00	0.500 U	0.500 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,1,1,2-Tetrachloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,1,1-Trichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,1,2,2-Tetrachloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,1,2-Trichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,1-Dichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,1-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,1-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,2,3-Trichlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,2,3-Trichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,2,4-Trichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,2,4-Trimethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,2-Dibromo-3-chloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,2-Dibromoethane (EDB)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,2-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,2-Dichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,2-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,3,5-Trimethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,3-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I

Qualified Results associated with the Surrogate for E524.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-FD-SUMMER2021 SO4724-6	FD	1,3-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,4-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	2,2-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	2-Butanone (MEK)	5.00	2.50 U	2.50 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	2-Chlorotoluene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	2-Hexanone	5.00	2.50 ULL	2.50 X		ug/l	C/I
DW-FD-SUMMER2021 SO4724-6	FD	4-Chlorotoluene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	4-Methyl-2-pentanone (MIBK)	5.00	2.50 UL	2.50 X		ug/l	C/I
DW-FD-SUMMER2021 SO4724-6	FD	Acetone	5.00	2.50 UL	2.50 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Benzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Bromobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Bromochloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Bromodichloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Bromoform	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Bromomethane	1.00	0.500 U	0.500 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Carbon disulfide	1.00	0.500 U	0.500 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Carbon tetrachloride	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Chlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Chloroethane	1.00	0.500 UL	0.500 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Chloroform	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Chloromethane	1.00	0.290 J	1.00 UJ		ug/l	L/T/I
DW-FD-SUMMER2021 SO4724-6	FD	cis-1,2-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	cis-1,3-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Dibromochloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Dibromomethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Dichlorodifluoromethane	1.00	0.500 U	0.500 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Ethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Hexachlorobutadiene	0.500	0.250 U	0.250 UJ		ug/l	I

Qualified Results associated with the Surrogate for E524.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-FD-SUMMER2021 SO4724-6	FD	Isopropylbenzene (Cumene)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	m,p-Xylene	1.00	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Methyl tert-butyl ether (MTBE)	1.00	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Methylene chloride	2.50	1.10 J	2.50 UJ		ug/l	T/I
DW-FD-SUMMER2021 SO4724-6	FD	Naphthalene	1.00	0.500 ULL	0.500 X		ug/l	C/I
DW-FD-SUMMER2021 SO4724-6	FD	n-Butylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	n-Propylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	o-Xylene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	p-Cymene (p-Isopropyltoluene)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	sec-Butylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Styrene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Tetrachloroethene (PCE)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Toluene	1.00	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	trans-1,2-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	trans-1,3-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Trichloroethene (TCE)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Trichlorofluoromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Vinyl chloride	1.00	0.500 U	0.500 UJ		ug/l	I

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method E524.2, Trip Blank

The purpose of trip blanks is to determine the existence and magnitude of cross-contamination problems resulting from the shipping of samples. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in trip blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
DW-TB-SUMMER2021 (TB)/ SO4724-7	Chloromethane	0.1300	< 0.077	< 1	ug/l	U/None*	T	
DW-TB-SUMMER2021 (TB)/ SO4724-7	Methylene chloride	8.600	< 0.62	< 2.5	ug/l	U/None*	T	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOQ will be qualified based on the validation type such as J+ at the sample result.

Qualified Results associated with the Trip Blank for E524.2

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-EFF-SUMMER2021 SO4724-1	N	Chloromethane	1.00	0.180 J	1.00 UJ		ug/l	L/T/I
DW-01-EFF-SUMMER2021 SO4724-1	N	Methylene chloride	2.50	0.660 J	2.50 UJ		ug/l	T/I
DW-01-INF-SUMMER2021 SO4724-2	N	Chloromethane	1.00	0.0960 J	1.00 UJ		ug/l	L/T/I
DW-01-MID-SUMMER2021 SO4724-3	N	Chloromethane	1.00	0.120 J	1.00 UJ		ug/l	L/T/I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Chloromethane	1.00	0.120 J	1.00 UJ		ug/l	L/T/I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Methylene chloride	2.50	0.670 J	2.50 UJ		ug/l	T/I
DW-02R-INF-SUMMER2021 SO4724-5	N	Chloromethane	1.00	0.120 J	1.00 UJ		ug/l	L/T/I
DW-02R-INF-SUMMER2021 SO4724-5	N	Methylene chloride	2.50	0.640 J	2.50 UJ		ug/l	T/I
DW-FD-SUMMER2021 SO4724-6	FD	Chloromethane	1.00	0.290 J	1.00 UJ		ug/l	L/T/I
DW-FD-SUMMER2021 SO4724-6	FD	Methylene chloride	2.50	1.10 J	2.50 UJ		ug/l	T/I

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW6020A, Total, Field Duplicate RPD

Field duplicate analyses are performed in order to assess sample collection/laboratory precision for each sample matrix. Summary forms were evaluated and compared to electronic data deliverables. Field duplicate results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
DW-FD-SUMMER2021 (N)/ SO4724-6	Copper	6.300	< 3	< 3	ug/l	J/UJ	D3	
DW-FD-SUMMER2021 (N)/ SO4724-6	Lead	1.880	< 1	< 1	ug/l	J/UJ	D3	
DW-FD-SUMMER2021 (N)/ SO4724-6	Zinc	11.40	< 10	< 10	ug/l	J/UJ	D3	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Field Duplicate RPD for SW6020A, Total

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-02R-INF-SUMMER2021 SO4724-5	N	Copper	3.00	12.2 B	12.2 J		ug/l	D3
DW-02R-INF-SUMMER2021 SO4724-5	N	Lead	1.00	0.600 J	1.00 UJ		ug/l	L/D3
DW-02R-INF-SUMMER2021 SO4724-5	N	Zinc	10.0	7.60 J	7.60 J		ug/l	D3/TR
DW-FD-SUMMER2021 SO4724-6	FD	Copper	3.00	18.5 B	18.5 J		ug/l	D3
DW-FD-SUMMER2021 SO4724-6	FD	Lead	1.00	2.48	2.48 J		ug/l	D3
DW-FD-SUMMER2021 SO4724-6	FD	Zinc	10.0	19.0	19.0 J		ug/l	D3

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW6020A, Total, Lab Blank

The purpose of laboratory blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in laboratory blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
PBWOG29IMW2 (LB)/ PBWOG29IMW2	Antimony	0.09000	< 0.054	< 1	ug/l	U/None*	L	
PBWOG29IMW2 (LB)/ PBWOG29IMW2	Beryllium	0.07000	< 0.034	< 1	ug/l	U/None*	L	
PBWOG29IMW2 (LB)/ PBWOG29IMW2	Calcium	39.00	< 20	< 100	ug/l	U/None*	L	
PBWOG29IMW2 (LB)/ PBWOG29IMW2	Chromium	1.700	< 0.22	< 5	ug/l	U/None*	L	
PBWOG29IMW2 (LB)/ PBWOG29IMW2	Lead	0.1000	< 0.074	< 1	ug/l	U/None*	L	
PBWOG29IMW2 (LB)/ PBWOG29IMW2	Manganese	0.6900	< 0.35	< 2	ug/l	U/None*	L	
PBWOG29IMW2 (LB)/ PBWOG29IMW2	Nickel	0.6000	< 0.15	< 2	ug/l	U/None*	L	
PBWOI23IMW2 (LB)/ PBWOI23IMW2	Copper	2.890	< 0.18	< 3	ug/l	U/None*	L	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOQ will be qualified based on the validation type such as J+ at the sample result.

Qualified Results associated with the Lab Blank for SW6020A, Total

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-EFF-SUMMER2021 SO4724-1	N	Beryllium	1.00	0.0370 J	1.00 U		ug/l	L
DW-01-EFF-SUMMER2021 SO4724-1	N	Chromium	5.00	0.820 J	5.00 U		ug/l	L
DW-01-EFF-SUMMER2021 SO4724-1	N	Lead	1.00	0.720 J	1.00 U		ug/l	L
DW-01-EFF-SUMMER2021 SO4724-1	N	Manganese	2.00	0.890 J	2.00 U		ug/l	L
DW-01-INF-SUMMER2021 SO4724-2	N	Antimony	1.00	0.0630 J	1.00 U		ug/l	L
DW-01-INF-SUMMER2021 SO4724-2	N	Chromium	5.00	1.30 J	5.00 U		ug/l	L
DW-01-INF-SUMMER2021 SO4724-2	N	Lead	1.00	0.340 J	1.00 U		ug/l	L
DW-01-INF-SUMMER2021 SO4724-2	N	Manganese	2.00	0.810 J	2.00 U		ug/l	L
DW-01-INF-SUMMER2021 SO4724-2	N	Nickel	2.00	1.20 J	2.00 U		ug/l	L
DW-01-MID-SUMMER2021 SO4724-3	N	Antimony	1.00	0.170 J	1.00 U		ug/l	L

Qualified Results associated with the Lab Blank for SW6020A, Total

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-MID-SUMMER2021 SO4724-3	N	Beryllium	1.00	0.120 J	1.00 U		ug/l	L
DW-01-MID-SUMMER2021 SO4724-3	N	Chromium	5.00	0.760 J	5.00 U		ug/l	L
DW-01-MID-SUMMER2021 SO4724-3	N	Lead	1.00	0.720 J	1.00 U		ug/l	L
DW-01-MID-SUMMER2021 SO4724-3	N	Manganese	2.00	0.710 J	2.00 U		ug/l	L
DW-02R-EFF-SUMMER2021 SO4724-4	N	Antimony	1.00	0.0940 J	1.00 U		ug/l	L
DW-02R-EFF-SUMMER2021 SO4724-4	N	Chromium	5.00	0.810 J	5.00 U		ug/l	L
DW-02R-EFF-SUMMER2021 SO4724-4	N	Lead	1.00	0.430 J	1.00 U		ug/l	L
DW-02R-EFF-SUMMER2021 SO4724-4	N	Manganese	2.00	0.700 J	2.00 U		ug/l	L
DW-02R-EFF-SUMMER2021 SO4724-4	N	Nickel	2.00	0.950 J	2.00 U		ug/l	L
DW-02R-INF-SUMMER2021 SO4724-5	N	Antimony	1.00	0.0770 J	1.00 U		ug/l	L
DW-02R-INF-SUMMER2021 SO4724-5	N	Beryllium	1.00	0.0380 J	1.00 U		ug/l	L
DW-02R-INF-SUMMER2021 SO4724-5	N	Chromium	5.00	0.890 J	5.00 U		ug/l	L
DW-02R-INF-SUMMER2021 SO4724-5	N	Lead	1.00	0.600 J	1.00 UJ		ug/l	L/D3
DW-02R-INF-SUMMER2021 SO4724-5	N	Manganese	2.00	1.30 J	2.00 U		ug/l	L
DW-02R-INF-SUMMER2021 SO4724-5	N	Nickel	2.00	1.30 J	2.00 U		ug/l	L
DW-FD-SUMMER2021 SO4724-6	FD	Antimony	1.00	0.0760 J	1.00 U		ug/l	L
DW-FD-SUMMER2021 SO4724-6	FD	Beryllium	1.00	0.0530 J	1.00 U		ug/l	L
DW-FD-SUMMER2021 SO4724-6	FD	Chromium	5.00	0.880 J	5.00 U		ug/l	L
DW-FD-SUMMER2021 SO4724-6	FD	Manganese	2.00	1.00 J	2.00 U		ug/l	L

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method SW6020A, Total, MS Recovery

Data for matrix spikes/matrix spike duplicates (MS/MSD) are generated to determine long-term precision and accuracy of the analytical method on various matrices and to demonstrate acceptable compound recovery by the laboratory at the time of sample analysis. These data alone cannot be used to evaluate the precision and accuracy of individual samples. However, when exercising professional judgment, MS/MSD data can be used in conjunction with other available QC information. Reported results were evaluated to determine compliance with the required acceptance criteria, and summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and any associated qualified results, are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
DW-01-INF-SUMMER2021-MS (MS)/ SO4724-002S	Calcium	232.0	87 - 118	30 - 118	percent	J/None	M	Spike amount Insignificant
DW-01-INF-SUMMER2021-MSD (SD)/ SO4724-002P	Calcium	140.0	87 - 118	30 - 118	percent	J/None	M	Spike amount Insignificant

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

No results associated with this QC element required qualification.

Table of All Qualified Results

Test Method: E524.2		Extraction Method: METHOD						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-EFF-SUMMER2021 SO4724-1	N	1,1,1,2-Tetrachloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,1,1-Trichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,1,2,2-Tetrachloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,1,2-Trichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,1-Dichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,1-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,1-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,2,3-Trichlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,2,3-Trichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,2,4-Trichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,2,4-Trimethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,2-Dibromo-3-chloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,2-Dibromoethane (EDB)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,2-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,2-Dichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,2-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,3,5-Trimethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,3-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,3-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	1,4-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	2,2-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	2-Butanone (MEK)	5.00	2.50 U	2.50 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	2-Chlorotoluene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	2-Hexanone	5.00	2.50 ULL	2.50 X		ug/l	C/I
DW-01-EFF-SUMMER2021 SO4724-1	N	4-Chlorotoluene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	4-Methyl-2-pentanone (MIBK)	5.00	2.50 UL	2.50 X		ug/l	C/I

Table of All Qualified Results

Test Method: E524.2		Extraction Method: METHOD						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-EFF-SUMMER2021 SO4724-1	N	Acetone	5.00	2.40 JL	2.40 J		ug/l	C/I/TR
DW-01-EFF-SUMMER2021 SO4724-1	N	Benzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Bromobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Bromochloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Bromodichloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Bromoform	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Bromomethane	1.00	0.500 U	0.500 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Carbon disulfide	1.00	0.500 U	0.500 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Carbon tetrachloride	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Chlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Chloroethane	1.00	0.500 UL	0.500 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Chloroform	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Chloromethane	1.00	0.180 J	1.00 UJ		ug/l	L/T/I
DW-01-EFF-SUMMER2021 SO4724-1	N	cis-1,2-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	cis-1,3-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Dibromochloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Dibromomethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Dichlorodifluoromethane	1.00	0.500 U	0.500 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Ethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Hexachlorobutadiene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Isopropylbenzene (Cumene)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	m,p-Xylene	1.00	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Methyl tert-butyl ether (MTBE)	1.00	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Methylene chloride	2.50	0.660 J	2.50 UJ		ug/l	T/I
DW-01-EFF-SUMMER2021 SO4724-1	N	Naphthalene	1.00	0.500 ULL	0.500 X		ug/l	C/I
DW-01-EFF-SUMMER2021 SO4724-1	N	n-Butylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	n-Propylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I

Table of All Qualified Results

Test Method: E524.2		Extraction Method: METHOD						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-EFF-SUMMER2021 SO4724-1	N	o-Xylene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	p-Cymene (p-Isopropyltoluene)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	sec-Butylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Styrene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Tetrachloroethene (PCE)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Toluene	1.00	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	trans-1,2-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	trans-1,3-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Trichloroethene (TCE)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Trichlorofluoromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-EFF-SUMMER2021 SO4724-1	N	Vinyl chloride	1.00	0.500 U	0.500 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,1,1,2-Tetrachloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,1,1-Trichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,1,2,2-Tetrachloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,1,2-Trichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,1-Dichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,1-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,1-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,2,3-Trichlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,2,3-Trichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,2,4-Trichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,2,4-Trimethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,2-Dibromo-3-chloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,2-Dibromoethane (EDB)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,2-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,2-Dichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,2-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I

Table of All Qualified Results

Test Method: E524.2		Extraction Method: METHOD						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-INF-SUMMER2021 SO4724-2	N	1,3,5-Trimethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,3-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,3-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	1,4-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	2,2-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	2-Butanone (MEK)	5.00	2.50 U	2.50 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	2-Chlorotoluene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	2-Hexanone	5.00	2.50 ULL	2.50 X		ug/l	C/I
DW-01-INF-SUMMER2021 SO4724-2	N	4-Chlorotoluene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	4-Methyl-2-pentanone (MIBK)	5.00	2.50 ULM	2.50 X		ug/l	C/M/I
DW-01-INF-SUMMER2021 SO4724-2	N	Acetone	5.00	2.50 ULM	2.50 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Benzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Bromobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Bromochloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Bromodichloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Bromoform	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Bromomethane	1.00	0.500 U	0.500 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Carbon disulfide	1.00	0.500 U	0.500 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Carbon tetrachloride	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Chlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Chloroethane	1.00	0.500 ULMM	0.500 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Chloroform	0.500	0.0530 J	0.500 UJ		ug/l	L/I
DW-01-INF-SUMMER2021 SO4724-2	N	Chloromethane	1.00	0.0960 J	1.00 UJ		ug/l	L/T/I
DW-01-INF-SUMMER2021 SO4724-2	N	cis-1,2-Dichloroethene	0.500	0.740	0.740 J	-	ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	cis-1,3-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Dibromochloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Dibromomethane	0.500	0.250 U	0.250 UJ		ug/l	I

Table of All Qualified Results

Test Method: E524.2		Extraction Method: METHOD						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-INF-SUMMER2021 SO4724-2	N	Dichlorodifluoromethane	1.00	0.500 UM	0.500 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Ethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Hexachlorobutadiene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Isopropylbenzene (Cumene)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	m,p-Xylene	1.00	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Methyl tert-butyl ether (MTBE)	1.00	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Methylene chloride	2.50	1.20 UMM	1.20 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Naphthalene	1.00	0.500 ULLMM	0.500 X		ug/l	C/M/I
DW-01-INF-SUMMER2021 SO4724-2	N	n-Butylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	n-Propylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	o-Xylene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	p-Cymene (p-Isopropyltoluene)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	sec-Butylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Styrene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Tetrachloroethene (PCE)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Toluene	1.00	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	trans-1,2-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	trans-1,3-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Trichloroethene (TCE)	0.500	2.90	2.90 J	-	ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Trichlorofluoromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-INF-SUMMER2021 SO4724-2	N	Vinyl chloride	1.00	0.500 U	0.500 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,1,1,2-Tetrachloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,1,1-Trichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,1,2,2-Tetrachloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,1,2-Trichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,1-Dichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,1-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I

Table of All Qualified Results

Test Method: E524.2		Extraction Method: METHOD						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-MID-SUMMER2021 SO4724-3	N	1,1-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,2,3-Trichlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,2,3-Trichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,2,4-Trichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,2,4-Trimethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,2-Dibromo-3-chloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,2-Dibromoethane (EDB)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,2-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,2-Dichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,2-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,3,5-Trimethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,3-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,3-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	1,4-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	2,2-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	2-Butanone (MEK)	5.00	2.50 U	2.50 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	2-Chlorotoluene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	2-Hexanone	5.00	2.50 ULL	2.50 X		ug/l	C/I
DW-01-MID-SUMMER2021 SO4724-3	N	4-Chlorotoluene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	4-Methyl-2-pentanone (MIBK)	5.00	2.50 UL	2.50 X		ug/l	C/I
DW-01-MID-SUMMER2021 SO4724-3	N	Acetone	5.00	2.50 UL	2.50 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Benzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Bromobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Bromochloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Bromodichloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Bromoform	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Bromomethane	1.00	0.500 U	0.500 UJ		ug/l	I

Table of All Qualified Results

Test Method: E524.2		Extraction Method: METHOD						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-MID-SUMMER2021 SO4724-3	N	Carbon disulfide	1.00	0.500 U	0.500 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Carbon tetrachloride	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Chlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Chloroethane	1.00	0.500 UL	0.500 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Chloroform	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Chloromethane	1.00	0.120 J	1.00 UJ		ug/l	L/T/I
DW-01-MID-SUMMER2021 SO4724-3	N	cis-1,2-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	cis-1,3-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Dibromochloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Dibromomethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Dichlorodifluoromethane	1.00	0.500 U	0.500 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Ethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Hexachlorobutadiene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Isopropylbenzene (Cumene)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	m,p-Xylene	1.00	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Methyl tert-butyl ether (MTBE)	1.00	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Methylene chloride	2.50	1.20 U	1.20 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Naphthalene	1.00	0.500 ULL	0.500 X		ug/l	C/I
DW-01-MID-SUMMER2021 SO4724-3	N	n-Butylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	n-Propylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	o-Xylene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	p-Cymene (p-Isopropyltoluene)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	sec-Butylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Styrene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Tetrachloroethene (PCE)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Toluene	1.00	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	trans-1,2-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I

Table of All Qualified Results

Test Method: E524.2		Extraction Method: METHOD						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-MID-SUMMER2021 SO4724-3	N	trans-1,3-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Trichloroethene (TCE)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Trichlorofluoromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-01-MID-SUMMER2021 SO4724-3	N	Vinyl chloride	1.00	0.500 U	0.500 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,1,1,2-Tetrachloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,1,1-Trichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,1,2,2-Tetrachloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,1,2-Trichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,1-Dichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,1-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,1-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,2,3-Trichlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,2,3-Trichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,2,4-Trichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,2,4-Trimethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,2-Dibromo-3-chloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,2-Dibromoethane (EDB)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,2-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,2-Dichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,2-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I

Table of All Qualified Results

Test Method: E524.2		Extraction Method: METHOD						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,3,5-Trimethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,3-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,3-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	1,4-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	2,2-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	2-Butanone (MEK)	5.00	2.50 U	2.50 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	2-Chlorotoluene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	2-Hexanone	5.00	2.50 ULL	2.50 X		ug/l	C/I
DW-02R-EFF-SUMMER2021 SO4724-4	N	4-Chlorotoluene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	4-Methyl-2-pentanone (MIBK)	5.00	2.50 UL	2.50 X		ug/l	C/I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Acetone	5.00	2.50 UL	2.50 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Benzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Bromobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Bromochloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Bromodichloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Bromoform	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Bromomethane	1.00	0.500 U	0.500 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Carbon disulfide	1.00	0.500 U	0.500 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Carbon tetrachloride	0.500	0.250 U	0.250 UJ		ug/l	I

Table of All Qualified Results

Test Method: E524.2		Extraction Method: METHOD						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-02R-EFF-SUMMER2021 SO4724-4	N	Chlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Chloroethane	1.00	0.500 UL	0.500 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Chloroform	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Chloromethane	1.00	0.120 J	1.00 UJ		ug/l	L/T/I
DW-02R-EFF-SUMMER2021 SO4724-4	N	cis-1,2-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	cis-1,3-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Dibromochloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Dibromomethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Dichlorodifluoromethane	1.00	0.500 U	0.500 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Ethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Hexachlorobutadiene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Isopropylbenzene (Cumene)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	m,p-Xylene	1.00	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Methyl tert-butyl ether (MTBE)	1.00	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Methylene chloride	2.50	0.670 J	2.50 UJ		ug/l	T/I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Naphthalene	1.00	0.500 ULL	0.500 X		ug/l	C/I
DW-02R-EFF-SUMMER2021 SO4724-4	N	n-Butylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	n-Propylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	o-Xylene	0.500	0.250 U	0.250 UJ		ug/l	I

Table of All Qualified Results

Test Method: E524.2		Extraction Method: METHOD						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-02R-EFF-SUMMER2021 SO4724-4	N	p-Cymene (p-Isopropyltoluene)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	sec-Butylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Styrene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Tetrachloroethene (PCE)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Toluene	1.00	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	trans-1,2-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	trans-1,3-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Trichloroethene (TCE)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Trichlorofluoromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-EFF-SUMMER2021 SO4724-4	N	Vinyl chloride	1.00	0.500 U	0.500 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,1,1,2-Tetrachloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,1,1-Trichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,1,2,2-Tetrachloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,1,2-Trichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,1-Dichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,1-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,1-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,2,3-Trichlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,2,3-Trichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I

Table of All Qualified Results

Test Method: E524.2		Extraction Method: METHOD						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-02R-INF-SUMMER2021 SO4724-5	N	1,2,4-Trichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,2,4-Trimethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,2-Dibromo-3-chloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,2-Dibromoethane (EDB)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,2-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,2-Dichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,2-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,3,5-Trimethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,3-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,3-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	1,4-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	2,2-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	2-Butanone (MEK)	5.00	2.50 U	2.50 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	2-Chlorotoluene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	2-Hexanone	5.00	2.50 ULL	2.50 X		ug/l	C/I
DW-02R-INF-SUMMER2021 SO4724-5	N	4-Chlorotoluene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	4-Methyl-2-pentanone (MIBK)	5.00	2.50 UL	2.50 X		ug/l	C/I
DW-02R-INF-SUMMER2021 SO4724-5	N	Acetone	5.00	2.50 UL	2.50 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Benzene	0.500	0.250 U	0.250 UJ		ug/l	I

Table of All Qualified Results

Test Method: E524.2		Extraction Method: METHOD						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-02R-INF-SUMMER2021 SO4724-5	N	Bromobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Bromochloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Bromodichloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Bromoform	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Bromomethane	1.00	0.500 U	0.500 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Carbon disulfide	1.00	0.500 U	0.500 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Carbon tetrachloride	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Chlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Chloroethane	1.00	0.500 UL	0.500 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Chloroform	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Chloromethane	1.00	0.120 J	1.00 UJ		ug/l	L/T/I
DW-02R-INF-SUMMER2021 SO4724-5	N	cis-1,2-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	cis-1,3-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Dibromochloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Dibromomethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Dichlorodifluoromethane	1.00	0.500 U	0.500 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Ethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Hexachlorobutadiene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Isopropylbenzene (Cumene)	0.500	0.250 U	0.250 UJ		ug/l	I

Table of All Qualified Results

Test Method: E524.2		Extraction Method: METHOD						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-02R-INF-SUMMER2021 SO4724-5	N	m,p-Xylene	1.00	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Methyl tert-butyl ether (MTBE)	1.00	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Methylene chloride	2.50	0.640 J	2.50 UJ		ug/l	T/I
DW-02R-INF-SUMMER2021 SO4724-5	N	Naphthalene	1.00	0.500 ULL	0.500 X		ug/l	C/I
DW-02R-INF-SUMMER2021 SO4724-5	N	n-Butylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	n-Propylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	o-Xylene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	p-Cymene (p-Isopropyltoluene)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	sec-Butylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Styrene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Tetrachloroethene (PCE)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Toluene	1.00	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	trans-1,2-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	trans-1,3-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Trichloroethene (TCE)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Trichlorofluoromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-02R-INF-SUMMER2021 SO4724-5	N	Vinyl chloride	1.00	0.500 U	0.500 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,1,1,2-Tetrachloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,1,1-Trichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,1,2,2-Tetrachloroethane	0.500	0.250 U	0.250 UJ		ug/l	I

Table of All Qualified Results

Test Method: E524.2		Extraction Method: METHOD						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-FD-SUMMER2021 SO4724-6	FD	1,1,2-Trichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,1-Dichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,1-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,1-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,2,3-Trichlorobenzene	1.00	0.500 U	0.500 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,2,3-Trichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,2,4-Trichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,2,4-Trimethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,2-Dibromo-3-chloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,2-Dibromoethane (EDB)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,2-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,2-Dichloroethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,2-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,3,5-Trimethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,3-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,3-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	1,4-Dichlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	2,2-Dichloropropane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	2-Butanone (MEK)	5.00	2.50 U	2.50 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	2-Chlorotoluene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	2-Hexanone	5.00	2.50 ULL	2.50 X		ug/l	C/I
DW-FD-SUMMER2021 SO4724-6	FD	4-Chlorotoluene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	4-Methyl-2-pentanone (MIBK)	5.00	2.50 UL	2.50 X		ug/l	C/I
DW-FD-SUMMER2021 SO4724-6	FD	Acetone	5.00	2.50 UL	2.50 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Benzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Bromobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Bromochloromethane	0.500	0.250 U	0.250 UJ		ug/l	I

Table of All Qualified Results

Test Method: E524.2		Extraction Method: METHOD						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-FD-SUMMER2021 SO4724-6	FD	Bromodichloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Bromoform	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Bromomethane	1.00	0.500 U	0.500 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Carbon disulfide	1.00	0.500 U	0.500 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Carbon tetrachloride	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Chlorobenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Chloroethane	1.00	0.500 UL	0.500 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Chloroform	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Chloromethane	1.00	0.290 J	1.00 UJ		ug/l	L/T/I
DW-FD-SUMMER2021 SO4724-6	FD	cis-1,2-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	cis-1,3-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Dibromochloromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Dibromomethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Dichlorodifluoromethane	1.00	0.500 U	0.500 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Ethylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Hexachlorobutadiene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Isopropylbenzene (Cumene)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	m,p-Xylene	1.00	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Methyl tert-butyl ether (MTBE)	1.00	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Methylene chloride	2.50	1.10 J	2.50 UJ		ug/l	T/I
DW-FD-SUMMER2021 SO4724-6	FD	Naphthalene	1.00	0.500 ULL	0.500 X		ug/l	C/I
DW-FD-SUMMER2021 SO4724-6	FD	n-Butylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	n-Propylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	o-Xylene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	p-Cymene (p-Isopropyltoluene)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	sec-Butylbenzene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Styrene	0.500	0.250 U	0.250 UJ		ug/l	I

Table of All Qualified Results

Test Method: E524.2		Extraction Method: METHOD						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-FD-SUMMER2021 SO4724-6	FD	Tetrachloroethene (PCE)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Toluene	1.00	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	trans-1,2-Dichloroethene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	trans-1,3-Dichloropropene	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Trichloroethene (TCE)	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Trichlorofluoromethane	0.500	0.250 U	0.250 UJ		ug/l	I
DW-FD-SUMMER2021 SO4724-6	FD	Vinyl chloride	1.00	0.500 U	0.500 UJ		ug/l	I
DW-TB-SUMMER2021 SO4724-7	TB	2-Hexanone	5.00	2.50 ULL	2.50 X		ug/l	C
DW-TB-SUMMER2021 SO4724-7	TB	4-Methyl-2-pentanone (MIBK)	5.00	2.50 UL	2.50 X		ug/l	C
DW-TB-SUMMER2021 SO4724-7	TB	Chloromethane	1.00	0.130 J	1.00 U		ug/l	L
DW-TB-SUMMER2021 SO4724-7	TB	Naphthalene	1.00	0.500 ULL	0.500 X		ug/l	C

Test Method: SW6020A		Extraction Method: TOTAL						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-EFF-SUMMER2021 SO4724-1	N	Beryllium	1.00	0.0370 J	1.00 U		ug/l	L
DW-01-EFF-SUMMER2021 SO4724-1	N	Chromium	5.00	0.820 J	5.00 U		ug/l	L
DW-01-EFF-SUMMER2021 SO4724-1	N	Lead	1.00	0.720 J	1.00 U		ug/l	L
DW-01-EFF-SUMMER2021 SO4724-1	N	Manganese	2.00	0.890 J	2.00 U		ug/l	L
DW-01-INF-SUMMER2021 SO4724-2	N	Antimony	1.00	0.0630 J	1.00 U		ug/l	L
DW-01-INF-SUMMER2021 SO4724-2	N	Chromium	5.00	1.30 J	5.00 U		ug/l	L
DW-01-INF-SUMMER2021 SO4724-2	N	Lead	1.00	0.340 J	1.00 U		ug/l	L
DW-01-INF-SUMMER2021 SO4724-2	N	Manganese	2.00	0.810 J	2.00 U		ug/l	L
DW-01-INF-SUMMER2021 SO4724-2	N	Nickel	2.00	1.20 J	2.00 U		ug/l	L
DW-01-MID-SUMMER2021 SO4724-3	N	Antimony	1.00	0.170 J	1.00 U		ug/l	L
DW-01-MID-SUMMER2021 SO4724-3	N	Beryllium	1.00	0.120 J	1.00 U		ug/l	L
DW-01-MID-SUMMER2021 SO4724-3	N	Chromium	5.00	0.760 J	5.00 U		ug/l	L
DW-01-MID-SUMMER2021 SO4724-3	N	Lead	1.00	0.720 J	1.00 U		ug/l	L
DW-01-MID-SUMMER2021 SO4724-3	N	Manganese	2.00	0.710 J	2.00 U		ug/l	L

Table of All Qualified Results

Test Method: SW6020A		Extraction Method: TOTAL						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-02R-EFF-SUMMER2021 SO4724-4	N	Antimony	1.00	0.0940 J	1.00 U		ug/l	L
DW-02R-EFF-SUMMER2021 SO4724-4	N	Chromium	5.00	0.810 J	5.00 U		ug/l	L
DW-02R-EFF-SUMMER2021 SO4724-4	N	Lead	1.00	0.430 J	1.00 U		ug/l	L
DW-02R-EFF-SUMMER2021 SO4724-4	N	Manganese	2.00	0.700 J	2.00 U		ug/l	L
DW-02R-EFF-SUMMER2021 SO4724-4	N	Nickel	2.00	0.950 J	2.00 U		ug/l	L
DW-02R-INF-SUMMER2021 SO4724-5	N	Antimony	1.00	0.0770 J	1.00 U		ug/l	L
DW-02R-INF-SUMMER2021 SO4724-5	N	Beryllium	1.00	0.0380 J	1.00 U		ug/l	L
DW-02R-INF-SUMMER2021 SO4724-5	N	Chromium	5.00	0.890 J	5.00 U		ug/l	L
DW-02R-INF-SUMMER2021 SO4724-5	N	Copper	3.00	12.2 B	12.2 J		ug/l	D3
DW-02R-INF-SUMMER2021 SO4724-5	N	Lead	1.00	0.600 J	1.00 UJ		ug/l	L/D3
DW-02R-INF-SUMMER2021 SO4724-5	N	Manganese	2.00	1.30 J	2.00 U		ug/l	L
DW-02R-INF-SUMMER2021 SO4724-5	N	Nickel	2.00	1.30 J	2.00 U		ug/l	L
DW-02R-INF-SUMMER2021 SO4724-5	N	Zinc	10.0	7.60 J	7.60 J		ug/l	D3/TR
DW-FD-SUMMER2021 SO4724-6	FD	Antimony	1.00	0.0760 J	1.00 U		ug/l	L
DW-FD-SUMMER2021 SO4724-6	FD	Beryllium	1.00	0.0530 J	1.00 U		ug/l	L
DW-FD-SUMMER2021 SO4724-6	FD	Chromium	5.00	0.880 J	5.00 U		ug/l	L
DW-FD-SUMMER2021 SO4724-6	FD	Copper	3.00	18.5 B	18.5 J		ug/l	D3
DW-FD-SUMMER2021 SO4724-6	FD	Lead	1.00	2.48	2.48 J		ug/l	D3
DW-FD-SUMMER2021 SO4724-6	FD	Manganese	2.00	1.00 J	2.00 U		ug/l	L

Table of All Qualified Results

Test Method: SW6020A		Extraction Method: TOTAL						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-FD-SUMMER2021 SO4724-6	FD	Zinc	10.0	19.0	19.0 J		ug/l	D3

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Table of All Trace Results

Test Method: E524.2 Extraction Method: METHOD

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-EFF-SUMMER2021	N	Acetone	5.00	2.40 JL	2.40 J		ug/L	C/I/TR
DW-01-INF-SUMMER2021-MS	MS	2-Hexanone	5.00	3.50	3.50 J		ug/L	TR
DW-01-INF-SUMMER2021-MS	MS	4-Methyl-2-pentanone (MIBK)	5.00	3.40 *	3.40 J		ug/L	TR
DW-01-INF-SUMMER2021-MSD	SD	2-Hexanone	5.00	3.70	3.70 J		ug/L	TR
DW-01-INF-SUMMER2021-MSD	SD	4-Methyl-2-pentanone (MIBK)	5.00	3.90	3.90 J		ug/L	TR

Test Method: MADEPVP Extraction Method: METHOD

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-INF-SUMMER2021-MS	MS	C9-C10 Volatile Petroleum Hydrocarbons, Aromatic	100	87.1	87.1 J		ug/L	TR
DW-01-INF-SUMMER2021-MSD	SD	C9-C10 Volatile Petroleum Hydrocarbons, Aromatic	100	80.0	80.0 J		ug/L	TR

Test Method: SW6020A Extraction Method: Total

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
DW-01-EFF-SUMMER2021	N	Cadmium	1.00	0.0390 J	0.0390 J		ug/L	TR
DW-01-INF-SUMMER2021	N	Zinc	10.0	6.00 J	6.00 J		ug/L	TR
DW-01-MID-SUMMER2021	N	Cadmium	1.00	0.0830 J	0.0830 J		ug/L	TR
DW-01-MID-SUMMER2021	N	Selenium	5.00	0.300 J	0.300 J		ug/L	TR
DW-01-MID-SUMMER2021	N	Thallium	1.00	0.140 J	0.140 J		ug/L	TR
DW-02R-INF-SUMMER2021	N	Cadmium	1.00	0.0370 J	0.0370 J		ug/L	TR
DW-02R-INF-SUMMER2021	N	Zinc	10.0	7.60 J	7.60 J		ug/L	D3/TR
DW-FD-SUMMER2021	FD	Cadmium	1.00	0.0460 J	0.0460 J		ug/L	TR
DW-FD-SUMMER2021	FD	Selenium	5.00	0.220 J	0.220 J		ug/L	TR

Table of Results with Modified Qualifiers

Modified Qualifiers for test method BNASIM							
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
DW-01-INF-SUMMER2021 SO4724-2	N	Benzo(k)fluoranthene	0.190	0.0930 U	0.0930 UJ	0.0930 U	

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOQ) based on the sample concentration.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Reason Code Definitions

Code	Definition
C	LCS Recovery
D3	Field Duplicate RPD
I	Surrogate recovery outside project limits.
L	Lab Blank
M	MS Recovery
T	Trip Blank
TR	Trace Level Detect

Flag Code and Definitions

Flag	Definition
J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
X	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Acceptance or rejection of the data should be decided by the project team (which should include a project chemist), but exclusion of the data is recommended.

Bias

-	The result may be biased low
+	The result may be biased high

Note - The bias field is a separate field; however, it is an integral part of the final flag (qualifier) on the sample result

Review Questions

Method: BNASIM (GC/MS-SIM Analysis by SW8270)

Review Questions	Yes	No	NA	Comment
Were all samples documented correctly on the chain-of-custody (COC)?	•			
Did samples listed on COCs match the sample labels?	•			
Were samples relinquished properly on the COC?	•			
Were all samples properly preserved?	•			
Were sampling dates/times, date and time of laboratory receipt of samples, and sample conditions upon receipt at the laboratory (including preservattion, pH, and temperature) are documented?	•			
Were sample results reported with percent moisture correction if required?			•	
Were analytical methods performed and analysis dates present?	•			
Were all requested target analytes reported?	•			
Were QAPP specified laboratory PQLs achieved?	•			Lab LOQs match LOQs on WS#15. Some LOQs do not meet PQL goals as noted on WS#15.
Were holding times met?	•			
Were trip blanks analyzed at the proper frequency and in control?			•	
Were field blanks analyzed at the proper frequency and in control?			•	
Were equipment blanks analyzed at the proper frequency and in control?			•	
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than DL?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			LCS only
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?			•	
Was a MS/MSD pair prepared with each batch?	•			DW-01-INF-SUMMER2021
Were MS/MSD recoveries within project acceptance limits?	•			Based on lab report, %R for Benzo (k)fluoranthene is within criteria. ADR qualified results for low %R - qualification manually removed by validator.
Was the MS/MSD RPD within project acceptance limits?	•			
If ISM was used for sample collection, were laboratory triplicates analyzed and within project acceptance limits?			•	
Were surrogate recoveries within project acceptance limits?	•			
Were field replicates (duplicates, triplicates, etc.) analyzed at the proper frequency and in control?	•			DW-02R-INF-SUMMER2021 / DW-FD-SUMMER2021
Were reported sample concentrations within calibration range?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?		•		ICV nonconformances noted for benzo(a)pyrene (low) - exceeds scope of S2AVEM validation.
Were DoD QSM corrective actions followed if deviations were noted?			•	ICV nonconformance noted - corrective action exceeds scope of S2AVEM validation.
Were any data recommended for exclusion in the data validation process?		•		

Review Questions

Method: E524.2 (Volatile Organic Compounds by Purge & Trap Capillary Column GC/MS)				
Review Questions	Yes	No	NA	Comment
Were all samples documented correctly on the chain-of-custody (COC)?	•			
Did samples listed on COCs match the sample labels?	•			
Were samples relinquished properly on the COC?	•			
Were all samples properly preserved?	•			
Were sampling dates/times, date and time of laboratory receipt of samples, and sample conditions upon receipt at the laboratory (including preservattion, pH, and temperature) are documented?	•			
Were sample results reported with percent moisture correction if required?			•	
Were analytical methods performed and analysis dates present?	•			
Were all requested target analytes reported?	•			
Were QAPP specified laboratory PQLs achieved?		•		Several compounds do not match lab LOQ on WS#15 and are above the PQL goal. Samples were analyzed undiluted. Lab LOQs may not meet project objectives.
Were holding times met?	•			
Were trip blanks analyzed at the proper frequency and in control?		•		DW-TB-SUMMER2021 Chloromethane (0.13 J ug/L), Methylene Chloride (8.6 ug/L). See outlier report for qualifications.
Were field blanks analyzed at the proper frequency and in control?			•	
Were equipment blanks analyzed at the proper frequency and in control?			•	
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than DL?		•		WG303440-2 Chloromethane (0.10 J ug/L), Chloroform (0.16 J ug/L). See outlier report for qualifications.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?		•		%Rs outside criteria for 5 compounds. See outlier report for qualifications. %Rs <70% were automatically qualified (X). Based on professional judgment, since lowest %R (naphthalene 48%) is >10%R (lower limit for MS %R rejection per DoD Mod 1), recommend qualifying (J-/UJ) as estimated.
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			DW-01-INF-SUMMER2021
Were MS/MSD recoveries within project acceptance limits?		•		%Rs outside criteria for 6 compounds. See outlier report for qualifications. %Rs <70% were automatically qualified (X) (naphthalene, MIBK). Based on professional judgment, since lowest %R (naphthalene 48%) is >10%R (lower limit for MS %R rejection per DoD Mod 1), recommend qualifying (J-/UJ) as estimated.
Was the MS/MSD RPD within project acceptance limits?	•			
If ISM was used for sample collection, were laboratory triplicates analyzed and within project acceptance limits?			•	

Review Questions

Method: E524.2 (Volatile Organic Compounds by Purge & Trap Capillary Column GC/MS)				
Review Questions	Yes	No	NA	Comment
Were surrogate recoveries within project acceptance limits?		•		Some surrogate %Rs <70% (low limit in eQAPP). See outlier report for qualifications. Note lab report uses lab limits, not 70-130% as in eQAPP.
Were field replicates (duplicates, triplicates, etc.) analyzed at the proper frequency and in control?	•			DW-02R-INF-SUMMER2021 / DW-FD-SUMMER2021
Were reported sample concentrations within calibration range?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?		•		ICV, CCV nonconformances noted but exceed scope of S2AVEM validation: ICV high for chloroethane, acetone, low for MIBK, 2-hexanone, dibromochloromethane, 124TCBz, naphthalene, 123TCBz. CCV %D high for chloroethane, low for 2-hexanone and naphthalene.
Were DoD QSM corrective actions followed if deviations were noted?			•	Corrective actions for calibration nonconformances are outside scope of S2AVEM validation.
Were any data recommended for exclusion in the data validation process?		•		Some results were qualified X by ADR for low LCS and MS %R. Recommend qualifying (J-/UJ) estimated.

Review Questions

Method: MADEPVP (Method for the Determination of Volatile Petroleum Hydrocarbons (VPH))				
Review Questions	Yes	No	NA	Comment
Were all samples documented correctly on the chain-of-custody (COC)?	•			
Did samples listed on COCs match the sample labels?	•			
Were samples relinquished properly on the COC?	•			
Were all samples properly preserved?	•			
Were sampling dates/times, date and time of laboratory receipt of samples, and sample conditions upon receipt at the laboratory (including preservattion, pH, and temperature) are documented?	•			
Were sample results reported with percent moisture correction if required?			•	
Were analytical methods performed and analysis dates present?	•			
Were all requested target analytes reported?	•			
Were QAPP specified laboratory PQLs achieved?	•			Lab LOQs match WS#15 LOQs.
Were holding times met?	•			
Were trip blanks analyzed at the proper frequency and in control?	•			DW-TB-SUMMER2021
Were field blanks analyzed at the proper frequency and in control?			•	
Were equipment blanks analyzed at the proper frequency and in control?			•	
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than DL?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?	•			
Was a MS/MSD pair prepared with each batch?	•			DW-01-INF-SUMMER2021
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If ISM was used for sample collection, were laboratory triplicates analyzed and within project acceptance limits?			•	
Were surrogate recoveries within project acceptance limits?	•			
Were field replicates (duplicates, triplicates, etc.) analyzed at the proper frequency and in control?	•			
Were reported sample concentrations within calibration range?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were DoD QSM corrective actions followed if deviations were noted?			•	
Were any data recommended for exclusion in the data validation process?		•		

Review Questions

Method: SW6020A (Trace Metals by Inductively Coupled Plasma/Mass Spectrometry)				
Review Questions	Yes	No	NA	Comment
Were all samples documented correctly on the chain-of-custody (COC)?	•			
Did samples listed on COCs match the sample labels?	•			
Were samples relinquished properly on the COC?	•			
Were all samples properly preserved?	•			
Were sampling dates/times, date and time of laboratory receipt of samples, and sample conditions upon receipt at the laboratory (including preservattion, pH, and temperature) are documented?	•			
Were sample results reported with percent moisture correction if required?			•	
Were analytical methods performed and analysis dates present?	•			
Were all requested target analytes reported?	•			
Were QAPP specified laboratory PQLs achieved?		•		Cr lab LOQ 5.0 ug/L, WS#15 LOQ 4.0 ug/L
Were holding times met?	•			
Were trip blanks analyzed at the proper frequency and in control?			•	
Were field blanks analyzed at the proper frequency and in control?			•	
Were equipment blanks analyzed at the proper frequency and in control?			•	
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than DL?		•		PBWOI23IMW2: Cu <LOQ. PBWOG29IMW2: Sb, Be, Ca, Cr, Pb, Mn, Ni <LOQ.
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			LCS only
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?			•	
Was a MS/MSD pair prepared with each batch?	•			DW-01-INF-SUMMER2021
Were MS/MSD recoveries within project acceptance limits?		•		Ca %R above criteria. No actions since sample conc >4X spiked amount.
Was the MS/MSD RPD within project acceptance limits?	•			
Were Post Spike (PS) recoveries within project acceptance limits?		•		Ca %R above criteria. No actions since sample conc >4X spiked amount.
Was a Dilution Test/Serial Dilution performed and within project acceptance critiera?	•			Criteria met for results >50X LOQ
If ISM was used for sample collection, were laboratory triplicates analyzed and within project acceptance limits?			•	
Were field replicates (duplicates, triplicates, etc.) analyzed at the proper frequency and in control?		•		DW-02R-INF-SUMMER2021 / DW-FD-SUMMER2021 precision outside criteria for Cu, Pb, Zn. See outlier report for qualifications.
Were reported sample concentrations within calibration range?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?		•		ICSA outside criteria, not assessed in S2AVEM.
Were DoD QSM corrective actions followed if deviations were noted?			•	ICSA corrective action outside scope of S2AVEM.

Review Questions

Method: SW6020A (Trace Metals by Inductively Coupled Plasma/Mass Spectrometry)				
Review Questions	Yes	No	NA	Comment
Were any data recommended for exclusion in the data validation process?		•		

Review Questions

Method: SW7470A (Mercury in Water (Manual Cold-Vapor Technique))				
Review Questions	Yes	No	NA	Comment
Were all samples documented correctly on the chain-of-custody (COC)?	•			
Did samples listed on COCs match the sample labels?	•			
Were samples relinquished properly on the COC?	•			
Were all samples properly preserved?	•			
Were sampling dates/times, date and time of laboratory receipt of samples, and sample conditions upon receipt at the laboratory (including preservattion, pH, and temperature) are documented?	•			
Were sample results reported with percent moisture correction if required?			•	
Were analytical methods performed and analysis dates present?	•			
Were all requested target analytes reported?	•			
Were QAPP specified laboratory PQLs achieved?	•			
Were holding times met?	•			
Were trip blanks analyzed at the proper frequency and in control?			•	
Were field blanks analyzed at the proper frequency and in control?			•	
Were equipment blanks analyzed at the proper frequency and in control?			•	
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than DL?	•			
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			LCS only
Were LCS/LCSD recoveries within project acceptance limits?	•			
Was the LCS/LCSD RPD within project acceptance limits?			•	
Was a MS/MSD pair prepared with each batch?	•			DW-01-INF-SUMMER2021P
Were MS/MSD recoveries within project acceptance limits?	•			
Was the MS/MSD RPD within project acceptance limits?	•			
If ISM was used for sample collection, were laboratory triplicates analyzed and within project acceptance limits?			•	
Were field replicates (duplicates, triplicates, etc.) analyzed at the proper frequency and in control?	•			DW-02R-INF-SUMMER2021 / DW-FD-SUMMER2021
Were reported sample concentrations within calibration range?	•			
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?	•			
Were DoD QSM corrective actions followed if deviations were noted?			•	
Were any data recommended for exclusion in the data validation process?		•		

US Army Corps of Engineers ®

Facility:	D01ME0077-02, Nike 58 - SI in Launch Area
Event:	Nike 58 Summer VI 2021
SDG:	L2140444_2a
Guidance Document:	Quality Assurance Project Plan Former LO-58 Nike Missile Launch Site, Caribou, Maine
Prime Contractor:	Verina Consulting Group, LLC, Bridgewater, NJ
Project Manager:	Robert Gan
Contract Laboratory(ies):	Alpha Analytical, Inc., Mansfield, MA
Data Review Contractor:	NOBIS
Data Review Level:	S2AVEM
Primary Data Reviewer:	Kristi Rutherford, Environmental Chemist
Second Reviewer:	Gary Glennon, Lead Chemist
Date Submitted:	August 30, 2021

Field Sample ID	Lab Sample ID	Matrix	Type/Type Code	TO15SIM
AA-01-SUMMER2021	L2140444-01	Air	Field Sample/N	X
IA-01-SUMMER2021	L2140444-02	Air	Field Sample/N	X
IA-02-SUMMER2021	L2140444-03	Air	Field Sample/N	X
IA-FD-SUMMER2021	L2140444-04	Air	Field Duplicate/FD	X
SV-01-SUMMER2021	L2140444-05	Gas	Field Sample/N	X
SV-02-SUMMER2021	L2140444-06	Gas	Field Sample/N	X
SV-03-SUMMER2021	L2140444-07	Gas	Field Sample/N	X
SV-04-SUMMER2021	L2140444-08	Gas	Field Sample/N	X
SV-FD-SUMMER2021	L2140444-09	Gas	Field Duplicate/FD	X

This report assesses the analytical data quality associated with the analyses listed on the preceding cover page at S2AVEM data validation level. This assessment has been made through a combination of automated data review (ADR) and supplemental manual review, the details of which are described below. The approach taken in the review of this data set is consistent with the requirements contained in the Quality Assurance Project Plan Former LO-58 Nike Missile Launch Site, Caribou, Maine and the additional guidance documents incorporated by reference to the extent possible. Where definitive guidance is not provided, results have been evaluated in a conservative manner using professional judgment.

Sample collection was managed and directed by Verina Consulting Group, LLC, Bridgewater, NJ; analyses were performed by Alpha Analytical, Inc., Mansfield, MA and were reported under sample delivery group (SDG) L2140444_2a. Data have been evaluated electronically based on electronic data deliverables (EDDs) provided by the laboratory, and hard copy data summary forms have also been reviewed during this effort and compared to the automated review output by the reviewers whose signatures appear on the following page. Findings based on the automated data submission and manual data verification processes are detailed in the ADR narrative and throughout this report.

All quality control (QC) elements associated with this SDG have been reviewed by a project chemist in accordance with the requirements defined for the project. This review is documented in the attached Data Review Checklists. The QC elements listed below were supported by the electronic deliverable and were evaluated using ADR processes.

- Blank - Negative
- Field Duplicate RPD
- Lab Blank
- LCS Recovery
- LCS RPD
- Prep Hold Time
- Test Hold Time

Results of the ADR process were subsequently reviewed and updated as applicable by the data review chemists identified on the signature page. Quality control elements that were not included in the electronic deliverable were reviewed manually and findings are documented within this report. Summaries of findings and associated qualified results are documented throughout this report.

A total of 41 results (7.12%) out of the 576 results (sample and field QC samples) reported are qualified based on review and 0 results (0.00%) have been rejected or deemed a serious deficiency (X qualifier). Trace values, defined as results that are qualified as estimated because they fall between the detection limit and the reporting limit/limit of quantitation, are not counted as qualified results in the above count. The qualified results are detailed throughout this report and discussed in the narrative below, where appropriate.

Narrative Comments

Analytical Method	Data Reviewer Comment
TO15SIM	No additional comments; see Checklist for detail.

Kristi Rutherford

August 27, 2021

Reviewed by Kristi Rutherford, Environmental Chemist, NOBIS

As the First Reviewer, I certify that I have performed a data review process in accordance with the requirements of the project guidance document, and have compared the electronic data to the laboratory's hard copy report and have verified the consistency of the reported sample results and method quality control data between the two deliverables.

Gary J. Glennon

Reviewed by Gary Glennon, Lead Chemist, NOBIS

August 30, 2021

As the Second Reviewer, I certify that I have performed a quality assurance review of the report generated by the First Reviewer.

Quality Control Outliers for test method TO15SIM, Field Duplicate RPD

Field duplicate analyses are performed in order to assess sample collection/laboratory precision for each sample matrix. Summary forms were evaluated and compared to electronic data deliverables. Field duplicate results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
SV-FD-SUMMER2021 (N)/ L2140444-09	Styrene	0.2470	< 0.085	< 0.085	ug/m3	J/UJ	D3	
SV-FD-SUMMER2021 (N)/ L2140444-09	1,2,4-Trimethylbenzene	0.6100	< 0.098	< 0.098	ug/m3	J/UJ	D3	
SV-FD-SUMMER2021 (N)/ L2140444-09	Chloroform	13.66	< 0.098	< 0.098	ug/m3	J/UJ	D3	
SV-FD-SUMMER2021 (N)/ L2140444-09	1,3-Dichlorobenzene	0.4440	< 0.12	< 0.12	ug/m3	J/UJ	D3	
SV-FD-SUMMER2021 (N)/ L2140444-09	Bromodichloromethane	0.2810	< 0.134	< 0.134	ug/m3	J/UJ	D3	
SV-FD-SUMMER2021 (N)/ L2140444-09	Ethanol	56.58	< 50	< 50	rpd	J/UJ	D3	
SV-FD-SUMMER2021 (N)/ L2140444-09	Trichloroethene (TCE)	100.7	< 50	< 50	rpd	J/UJ	D3	
SV-FD-SUMMER2021 (N)/ L2140444-09	Trichlorofluoromethane	80.73	< 50	< 50	rpd	J/UJ	D3	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Field Duplicate RPD for TO15SIM

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
SV-02-SUMMER2021	N	1,2,4-Trimethylbenzene	0.0980	0.826	0.826 J		ug/m3	D3
SV-02-SUMMER2021	N	1,3-Dichlorobenzene	0.120	0.721	0.721 J		ug/m3	D3
SV-02-SUMMER2021	N	Bromodichloromethane	0.134	0.281	0.281 J		ug/m3	D3
SV-02-SUMMER2021	N	Chloroform	0.0980	14.0	14.0 J		ug/m3	D3
SV-02-SUMMER2021	N	Ethanol	9.42	117	117 J		ug/m3	D3/Z
SV-02-SUMMER2021	N	Styrene	0.0850	0.379	0.379 J		ug/m3	D3
SV-02-SUMMER2021	N	Trichloroethene (TCE)	0.107	8.33	8.33 J		ug/m3	D3
SV-02-SUMMER2021	N	Trichlorofluoromethane	0.281	83.7	83.7 J		ug/m3	D3
SV-FD-SUMMER2021	FD	1,2,4-Trimethylbenzene	0.0980	0.216	0.216 J		ug/m3	D3
SV-FD-SUMMER2021	FD	1,3-Dichlorobenzene	0.120	0.277	0.277 J		ug/m3	D3
SV-FD-SUMMER2021	FD	Bromodichloromethane	0.134	0.134 U	0.134 UJ		ug/m3	D3
SV-FD-SUMMER2021	FD	Chloroform	0.0980	0.337	0.337 J		ug/m3	D3
SV-FD-SUMMER2021	FD	Ethanol	9.42	65.4	65.4 J		ug/m3	D3/Z
SV-FD-SUMMER2021	FD	Styrene	0.0850	0.132	0.132 J		ug/m3	D3
SV-FD-SUMMER2021	FD	Trichloroethene (TCE)	0.107	2.75	2.75 J		ug/m3	D3
SV-FD-SUMMER2021	FD	Trichlorofluoromethane	0.281	197	197 J		ug/m3	D3

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the inital sample concentration or validation guideance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method TO15SIM, Lab Blank

The purpose of laboratory blanks is to determine the existence and magnitude of cross-contamination problems resulting from laboratory activities. Reported results were evaluated to determine compliance with the required acceptance criteria. Summary forms were evaluated and compared to electronic data deliverables. Findings of this review, and contaminants found in laboratory blanks are listed below along with any associated qualified results.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
WG1531091-7 (LB)/ WG1531091-7	Propylene	0.09800	< 0.08	< 0.861	ug/m3	U/None*	L	
WG1531091-7 (LB)/ WG1531091-7	Methylene chloride	0.07300	< 0.046	< 1.74	ug/m3	U/None*	L	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

*Blank flags displayed in the above table identify qualification of the sample result when it is less than or equal to the LOQ/RL. Sample results above the LOQ will be qualified based on the validation type such as J+ at the sample result.

Qualified Results associated with the Lab Blank for TO15SIM

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AA-01-SUMMER2021	N	Methylene chloride	1.74	1.56 J	1.74 U		ug/m3	L
AA-01-SUMMER2021	N	Propylene	0.861	0.301 J	0.861 U		ug/m3	L
IA-01-SUMMER2021	N	Methylene chloride	1.74	0.598 J	1.74 U		ug/m3	L
IA-01-SUMMER2021	N	Propylene	0.861	0.649 J	0.861 U		ug/m3	L
IA-02-SUMMER2021	N	Methylene chloride	1.74	0.448 J	1.74 U		ug/m3	L
IA-02-SUMMER2021	N	Propylene	0.861	0.649 J	0.861 U		ug/m3	L
IA-FD-SUMMER2021	FD	Methylene chloride	1.74	0.441 J	1.74 U		ug/m3	L
IA-FD-SUMMER2021	FD	Propylene	0.861	0.559 J	0.861 U		ug/m3	L
SV-01-SUMMER2021	N	Methylene chloride	1.74	1.27 J	1.74 U		ug/m3	L
SV-01-SUMMER2021	N	Propylene	0.861	0.260 J	0.861 U		ug/m3	L
SV-02-SUMMER2021	N	Methylene chloride	1.74	1.00 J	1.74 U		ug/m3	L
SV-02-SUMMER2021	N	Propylene	0.861	0.718 J	0.861 U		ug/m3	L
SV-03-SUMMER2021	N	Propylene	1.23	0.351 J	1.23 U		ug/m3	L
SV-04-SUMMER2021	N	Methylene chloride	2.17	0.295 J	2.17 U		ug/m3	L
SV-04-SUMMER2021	N	Propylene	1.08	0.618 J	1.08 U		ug/m3	L
SV-FD-SUMMER2021	FD	Methylene chloride	1.74	0.320 J	1.74 U		ug/m3	L
SV-FD-SUMMER2021	FD	Propylene	0.861	0.281 J	0.861 U		ug/m3	L

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the inital sample concentration or validation guideance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method TO15SIM, Lab Replicate RPD

The objective of duplicate sample (LR) analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. Duplicate analyses are also performed to generate data that determines the long-term precision of the analytical method on various matrices. Non-homogenous samples can impact the apparent method precision. Summary forms were evaluated and compared to electronic data deliverables. Laboratory duplicate results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
SV-02-SUMMER2021 (LR)/ L2140444-06	4-Ethyltoluene	33.00	< 25	< 25	rpd	J/UJ	D1	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the Lab Replicate RPD for TO15SIM

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
SV-02-SUMMER2021	N	4-Ethyltoluene	0.0980	0.0980	0.0980 J		ug/m3	D1

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the inital sample concentration or validation guideance. In instances where no LOD is provided, results are reported down to the LOQ.

Quality Control Outliers for test method TO15SIM, LCS RPD

The objective of laboratory control sample/laboratory control sample duplicate (LCS/LCSD) RPD analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. LCS/LCSD analyses are also performed to generate data that determines the long-term precision of the analytical method on various matrices. Non-homogenous samples can impact the apparent method precision. Summary forms were evaluated and compared to electronic data deliverables. Laboratory control sample/laboratory control sample duplicate RPD results that were outside of the acceptance criteria are listed below.

Sample ID/ Lab Sample ID	Analyte	Result	Warning Limits	Control Limits	Units	Qualifier	Reason Code	Comment
WG1531091-4 (BD)/ WG1531091-4	Ethanol	34.61	< 25	< 25	rpd	J/None	Z	

Where two qualifiers are listed, such as 'J/UJ', the first applies to positive results, and the second to non-detect results.
Upper and Lower Warning and Control Limits are abbreviated UWL, LWL, UCL, and LCL in the Comment field.

Qualified Results associated with the LCS RPD for TO15SIM

FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AA-01-SUMMER2021	N	Ethanol	9.42	22.6	22.6 J		ug/m3	Z
IA-01-SUMMER2021	N	Ethanol	690	7990	7990 J		ug/m3	Z
IA-02-SUMMER2021	N	Ethanol	708	8740	8740 J		ug/m3	Z
IA-FD-SUMMER2021	FD	Ethanol	716	10400	10400 J		ug/m3	Z
SV-01-SUMMER2021	N	Ethanol	9.42	78.4	78.4 J		ug/m3	Z
SV-02-SUMMER2021	N	Ethanol	9.42	117	117 J		ug/m3	D3/Z
SV-03-SUMMER2021	N	Ethanol	13.5	580	580 J		ug/m3	Z
SV-04-SUMMER2021	N	Ethanol	11.8	520	520 J		ug/m3	Z
SV-FD-SUMMER2021	FD	Ethanol	9.42	65.4	65.4 J		ug/m3	D3/Z

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the inital sample concentration or validation guideance. In instances where no LOD is provided, results are reported down to the LOQ.

Table of All Qualified Results

Test Method: TO15SIM		**Extraction Method: METHOD**						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AA-01-SUMMER2021 L2140444-01	N	1,2-Dichlorotetrafluoroethane	0.349	0.0910 J	0.0910 J		ug/m3	TR
AA-01-SUMMER2021 L2140444-01	N	2,2,4-Trimethylpentane	0.934	0.0650 J	0.0650 J		ug/m3	TR
AA-01-SUMMER2021 L2140444-01	N	2-Butanone (MEK)	1.47	0.271 J	0.271 J		ug/m3	TR
AA-01-SUMMER2021 L2140444-01	N	Benzene	0.319	0.163 J	0.163 J		ug/m3	TR
AA-01-SUMMER2021 L2140444-01	N	Bromomethane	0.0780	0.0580 J	0.0580 J		ug/m3	TR
AA-01-SUMMER2021 L2140444-01	N	Carbon disulfide	0.623	0.178 J	0.178 J		ug/m3	TR
AA-01-SUMMER2021 L2140444-01	N	Cyclohexane	0.688	0.0480 J	0.0480 J		ug/m3	TR
AA-01-SUMMER2021 L2140444-01	N	Ethanol	9.42	22.6	22.6 J		ug/m3	Z
AA-01-SUMMER2021 L2140444-01	N	m,p-Xylene	0.174	0.104 J	0.104 J		ug/m3	TR
AA-01-SUMMER2021 L2140444-01	N	Methylene chloride	1.74	1.56 J	1.74 U		ug/m3	L
AA-01-SUMMER2021 L2140444-01	N	o-Xylene	0.0870	0.0520 J	0.0520 J		ug/m3	TR
AA-01-SUMMER2021 L2140444-01	N	Propylene	0.861	0.301 J	0.861 U		ug/m3	L
AA-01-SUMMER2021 L2140444-01	N	Styrene	0.0850	0.0810 J	0.0810 J		ug/m3	TR
AA-01-SUMMER2021 L2140444-01	N	tert-Butyl alcohol	1.52	0.0640 J	0.0640 J		ug/m3	TR
AA-01-SUMMER2021 L2140444-01	N	Tetrahydrofuran	1.47	0.242 J	0.242 J		ug/m3	TR
IA-01-SUMMER2021 L2140444-02	N	1,2-Dichlorotetrafluoroethane	0.349	0.105 J	0.105 J		ug/m3	TR
IA-01-SUMMER2021 L2140444-02	N	1,3-Butadiene	0.0440	0.0240 J	0.0240 J		ug/m3	TR
IA-01-SUMMER2021 L2140444-02	N	2-Hexanone	0.820	0.352 J	0.352 J		ug/m3	TR
IA-01-SUMMER2021 L2140444-02	N	4-Ethyltoluene	0.0980	0.0840 J	0.0840 J		ug/m3	TR
IA-01-SUMMER2021 L2140444-02	N	4-Methyl-2-pentanone (MIBK)	2.05	0.352 J	0.352 J		ug/m3	TR
IA-01-SUMMER2021 L2140444-02	N	Bromomethane	0.0780	0.0390 J	0.0390 J		ug/m3	TR
IA-01-SUMMER2021 L2140444-02	N	Carbon disulfide	0.623	0.181 J	0.181 J		ug/m3	TR
IA-01-SUMMER2021 L2140444-02	N	Cyclohexane	0.688	0.189 J	0.189 J		ug/m3	TR
IA-01-SUMMER2021 L2140444-02	N	Ethanol	690	7990	7990 J		ug/m3	Z
IA-01-SUMMER2021 L2140444-02	N	Isopropylbenzene (Cumene)	0.983	0.216 J	0.216 J		ug/m3	TR
IA-01-SUMMER2021 L2140444-02	N	Methylene chloride	1.74	0.598 J	1.74 U		ug/m3	L

Table of All Qualified Results

Test Method: TO15SIM		Extraction Method: METHOD						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
IA-01-SUMMER2021 L2140444-02	N	n-Heptane	0.820	0.369 J	0.369 J		ug/m3	TR
IA-01-SUMMER2021 L2140444-02	N	Propylene	0.861	0.649 J	0.861 U		ug/m3	L
IA-01-SUMMER2021 L2140444-02	N	Tetrachloroethene (PCE)	0.136	0.0810 J	0.0810 J		ug/m3	TR
IA-01-SUMMER2021 L2140444-02	N	Tetrahydrofuran	1.47	1.13 J	1.13 J		ug/m3	TR
IA-02-SUMMER2021 L2140444-03	N	1,1,1-Trichloroethane	0.109	0.0980 J	0.0980 J		ug/m3	TR
IA-02-SUMMER2021 L2140444-03	N	1,2-Dichlorotetrafluoroethane	0.349	0.0980 J	0.0980 J		ug/m3	TR
IA-02-SUMMER2021 L2140444-03	N	1,3-Butadiene	0.0440	0.0290 J	0.0290 J		ug/m3	TR
IA-02-SUMMER2021 L2140444-03	N	1,4-Dichlorobenzene	0.120	0.0600 J	0.0600 J		ug/m3	TR
IA-02-SUMMER2021 L2140444-03	N	2-Hexanone	0.820	0.389 J	0.389 J		ug/m3	TR
IA-02-SUMMER2021 L2140444-03	N	4-Ethyltoluene	0.0980	0.0930 J	0.0930 J		ug/m3	TR
IA-02-SUMMER2021 L2140444-03	N	4-Methyl-2-pentanone (MIBK)	2.05	0.283 J	0.283 J		ug/m3	TR
IA-02-SUMMER2021 L2140444-03	N	Benzene	0.319	0.310 J	0.310 J		ug/m3	TR
IA-02-SUMMER2021 L2140444-03	N	Bromomethane	0.0780	0.0470 J	0.0470 J		ug/m3	TR
IA-02-SUMMER2021 L2140444-03	N	Carbon disulfide	0.623	0.178 J	0.178 J		ug/m3	TR
IA-02-SUMMER2021 L2140444-03	N	Chloroethane	0.264	0.0420 J	0.0420 J		ug/m3	TR
IA-02-SUMMER2021 L2140444-03	N	Cyclohexane	0.688	0.244 J	0.244 J		ug/m3	TR
IA-02-SUMMER2021 L2140444-03	N	Ethanol	708	8740	8740 J		ug/m3	Z
IA-02-SUMMER2021 L2140444-03	N	Isopropylbenzene (Cumene)	0.983	0.202 J	0.202 J		ug/m3	TR
IA-02-SUMMER2021 L2140444-03	N	Methylene chloride	1.74	0.448 J	1.74 U		ug/m3	L
IA-02-SUMMER2021 L2140444-03	N	n-Heptane	0.820	0.418 J	0.418 J		ug/m3	TR
IA-02-SUMMER2021 L2140444-03	N	Propylene	0.861	0.649 J	0.861 U		ug/m3	L
IA-02-SUMMER2021 L2140444-03	N	Tetrahydrofuran	1.47	0.702 J	0.702 J		ug/m3	TR
IA-FD-SUMMER2021 L2140444-04	FD	1,2-Dichlorotetrafluoroethane	0.349	0.0840 J	0.0840 J		ug/m3	TR
IA-FD-SUMMER2021 L2140444-04	FD	1,3-Dichlorobenzene	0.120	0.0960 J	0.0960 J		ug/m3	TR
IA-FD-SUMMER2021 L2140444-04	FD	2-Hexanone	0.820	0.385 J	0.385 J		ug/m3	TR
IA-FD-SUMMER2021 L2140444-04	FD	4-Ethyltoluene	0.0980	0.0890 J	0.0890 J		ug/m3	TR
IA-FD-SUMMER2021 L2140444-04	FD	4-Methyl-2-pentanone (MIBK)	2.05	0.303 J	0.303 J		ug/m3	TR

Table of All Qualified Results

Test Method: TO15SIM		**Extraction Method: METHOD**						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
IA-FD-SUMMER2021 L2140444-04	FD	Benzene	0.319	0.294 J	0.294 J		ug/m3	TR
IA-FD-SUMMER2021 L2140444-04	FD	Carbon disulfide	0.623	0.153 J	0.153 J		ug/m3	TR
IA-FD-SUMMER2021 L2140444-04	FD	Chloroethane	0.264	0.0530 J	0.0530 J		ug/m3	TR
IA-FD-SUMMER2021 L2140444-04	FD	Cyclohexane	0.688	0.203 J	0.203 J		ug/m3	TR
IA-FD-SUMMER2021 L2140444-04	FD	Ethanol	716	10400	10400 J		ug/m3	Z
IA-FD-SUMMER2021 L2140444-04	FD	Isopropylbenzene (Cumene)	0.983	0.216 J	0.216 J		ug/m3	TR
IA-FD-SUMMER2021 L2140444-04	FD	Methylene chloride	1.74	0.441 J	1.74 U		ug/m3	L
IA-FD-SUMMER2021 L2140444-04	FD	n-Heptane	0.820	0.393 J	0.393 J		ug/m3	TR
IA-FD-SUMMER2021 L2140444-04	FD	Propylene	0.861	0.559 J	0.861 U		ug/m3	L
IA-FD-SUMMER2021 L2140444-04	FD	Tetrachloroethene (PCE)	0.136	0.0950 J	0.0950 J		ug/m3	TR
IA-FD-SUMMER2021 L2140444-04	FD	Tetrahydrofuran	1.47	1.04 J	1.04 J		ug/m3	TR
SV-01-SUMMER2021 L2140444-05	N	1,2-Dichlorotetrafluoroethane	0.349	0.0770 J	0.0770 J		ug/m3	TR
SV-01-SUMMER2021 L2140444-05	N	2-Butanone (MEK)	1.47	0.363 J	0.363 J		ug/m3	TR
SV-01-SUMMER2021 L2140444-05	N	4-Methyl-2-pentanone (MIBK)	2.05	0.115 J	0.115 J		ug/m3	TR
SV-01-SUMMER2021 L2140444-05	N	Acetone	2.38	1.99 J	1.99 J		ug/m3	TR
SV-01-SUMMER2021 L2140444-05	N	Benzene	0.319	0.115 J	0.115 J		ug/m3	TR
SV-01-SUMMER2021 L2140444-05	N	Carbon disulfide	0.623	0.0780 J	0.0780 J		ug/m3	TR
SV-01-SUMMER2021 L2140444-05	N	Cyclohexane	0.688	0.537 J	0.537 J		ug/m3	TR
SV-01-SUMMER2021 L2140444-05	N	Ethanol	9.42	78.4	78.4 J		ug/m3	Z
SV-01-SUMMER2021 L2140444-05	N	Ethylbenzene	0.0870	0.0570 J	0.0570 J		ug/m3	TR
SV-01-SUMMER2021 L2140444-05	N	Methylene chloride	1.74	1.27 J	1.74 U		ug/m3	L
SV-01-SUMMER2021 L2140444-05	N	n-Heptane	0.820	0.0780 J	0.0780 J		ug/m3	TR
SV-01-SUMMER2021 L2140444-05	N	o-Xylene	0.0870	0.0830 J	0.0830 J		ug/m3	TR
SV-01-SUMMER2021 L2140444-05	N	Propylene	0.861	0.260 J	0.861 U		ug/m3	L
SV-01-SUMMER2021 L2140444-05	N	tert-Butyl alcohol	1.52	0.203 J	0.203 J		ug/m3	TR
SV-01-SUMMER2021 L2140444-05	N	Tetrahydrofuran	1.47	0.849 J	0.849 J		ug/m3	TR
SV-02-SUMMER2021 L2140444-06	N	1,2,4-Trimethylbenzene	0.0980	0.826	0.826 J		ug/m3	D3

Table of All Qualified Results

Test Method: TO15SIM		Extraction Method: METHOD						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
SV-02-SUMMER2021 L2140444-06	N	1,2-Dichlorotetrafluoroethane	0.349	0.0910 J	0.0910 J		ug/m3	TR
SV-02-SUMMER2021 L2140444-06	N	1,3-Butadiene	0.0440	0.0330 J	0.0330 J		ug/m3	TR
SV-02-SUMMER2021 L2140444-06	N	1,3-Dichlorobenzene	0.120	0.721	0.721 J		ug/m3	D3
SV-02-SUMMER2021 L2140444-06	N	2-Butanone (MEK)	1.47	0.563 J	0.563 J		ug/m3	TR
SV-02-SUMMER2021 L2140444-06	N	2-Hexanone	0.820	0.0820 J	0.0820 J		ug/m3	TR
SV-02-SUMMER2021 L2140444-06	N	4-Ethyltoluene	0.0980	0.0980	0.0980 J		ug/m3	D1
SV-02-SUMMER2021 L2140444-06	N	4-Methyl-2-pentanone (MIBK)	2.05	0.123 J	0.123 J		ug/m3	TR
SV-02-SUMMER2021 L2140444-06	N	Benzene	0.319	0.102 J	0.102 J		ug/m3	TR
SV-02-SUMMER2021 L2140444-06	N	Bromodichloromethane	0.134	0.281	0.281 J		ug/m3	D3
SV-02-SUMMER2021 L2140444-06	N	Carbon disulfide	0.623	0.0590 J	0.0590 J		ug/m3	TR
SV-02-SUMMER2021 L2140444-06	N	Chloroform	0.0980	14.0	14.0 J		ug/m3	D3
SV-02-SUMMER2021 L2140444-06	N	Chloromethane	0.413	0.254 J	0.254 J		ug/m3	TR
SV-02-SUMMER2021 L2140444-06	N	Cyclohexane	0.688	0.461 J	0.461 J		ug/m3	TR
SV-02-SUMMER2021 L2140444-06	N	Ethanol	9.42	117	117 J		ug/m3	D3/Z
SV-02-SUMMER2021 L2140444-06	N	Isopropylbenzene (Cumene)	0.983	0.0590 J	0.0590 J		ug/m3	TR
SV-02-SUMMER2021 L2140444-06	N	Methylene chloride	1.74	1.00 J	1.74 U		ug/m3	L
SV-02-SUMMER2021 L2140444-06	N	Naphthalene	0.262	0.199 J	0.199 J		ug/m3	TR
SV-02-SUMMER2021 L2140444-06	N	n-Heptane	0.820	0.131 J	0.131 J		ug/m3	TR
SV-02-SUMMER2021 L2140444-06	N	Propylene	0.861	0.718 J	0.861 U		ug/m3	L
SV-02-SUMMER2021 L2140444-06	N	Styrene	0.0850	0.379	0.379 J		ug/m3	D3
SV-02-SUMMER2021 L2140444-06	N	tert-Butyl alcohol	1.52	0.406 J	0.406 J		ug/m3	TR
SV-02-SUMMER2021 L2140444-06	N	Tetrahydrofuran	1.47	0.737 J	0.737 J		ug/m3	TR
SV-02-SUMMER2021 L2140444-06	N	Trichloroethene (TCE)	0.107	8.33	8.33 J		ug/m3	D3
SV-02-SUMMER2021 L2140444-06	N	Trichlorofluoromethane	0.281	83.7	83.7 J		ug/m3	D3
SV-03-SUMMER2021 L2140444-07	N	1,2-Dichlorotetrafluoroethane	0.499	0.140 J	0.140 J		ug/m3	TR
SV-03-SUMMER2021 L2140444-07	N	1,4-Dioxane (p-Dioxane)	0.515	0.237 J	0.237 J		ug/m3	TR
SV-03-SUMMER2021 L2140444-07	N	2-Hexanone	1.17	0.545 J	0.545 J		ug/m3	TR

Table of All Qualified Results

Test Method: TO15SIM		**Extraction Method: METHOD**						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
SV-03-SUMMER2021 L2140444-07	N	4-Methyl-2-pentanone (MIBK)	2.93	0.257 J	0.257 J		ug/m3	TR
SV-03-SUMMER2021 L2140444-07	N	Carbon disulfide	0.891	0.0930 J	0.0930 J		ug/m3	TR
SV-03-SUMMER2021 L2140444-07	N	Cyclohexane	0.984	0.358 J	0.358 J		ug/m3	TR
SV-03-SUMMER2021 L2140444-07	N	Ethanol	13.5	580	580 J		ug/m3	Z
SV-03-SUMMER2021 L2140444-07	N	n-Heptane	1.17	0.287 J	0.287 J		ug/m3	TR
SV-03-SUMMER2021 L2140444-07	N	Propylene	1.23	0.351 J	1.23 U		ug/m3	L
SV-04-SUMMER2021 L2140444-08	N	1,4-Dioxane (p-Dioxane)	0.450	0.378 J	0.378 J		ug/m3	TR
SV-04-SUMMER2021 L2140444-08	N	2-Hexanone	1.02	1.00 J	1.00 J		ug/m3	TR
SV-04-SUMMER2021 L2140444-08	N	4-Methyl-2-pentanone (MIBK)	2.56	0.688 J	0.688 J		ug/m3	TR
SV-04-SUMMER2021 L2140444-08	N	Bromodichloromethane	0.167	0.100 J	0.100 J		ug/m3	TR
SV-04-SUMMER2021 L2140444-08	N	Carbon disulfide	0.779	0.187 J	0.187 J		ug/m3	TR
SV-04-SUMMER2021 L2140444-08	N	Cyclohexane	0.861	0.310 J	0.310 J		ug/m3	TR
SV-04-SUMMER2021 L2140444-08	N	Ethanol	11.8	520	520 J		ug/m3	Z
SV-04-SUMMER2021 L2140444-08	N	Isopropylbenzene (Cumene)	1.23	0.215 J	0.215 J		ug/m3	TR
SV-04-SUMMER2021 L2140444-08	N	Methylene chloride	2.17	0.295 J	2.17 U		ug/m3	L
SV-04-SUMMER2021 L2140444-08	N	n-Heptane	1.02	0.418 J	0.418 J		ug/m3	TR
SV-04-SUMMER2021 L2140444-08	N	Propylene	1.08	0.618 J	1.08 U		ug/m3	L
SV-FD-SUMMER2021 L2140444-09	FD	1,1,1-Trichloroethane	0.109	0.0550 J	0.0550 J		ug/m3	TR
SV-FD-SUMMER2021 L2140444-09	FD	1,2,4-Trimethylbenzene	0.0980	0.216	0.216 J		ug/m3	D3
SV-FD-SUMMER2021 L2140444-09	FD	1,2-Dichlorotetrafluoroethane	0.349	0.0770 J	0.0770 J		ug/m3	TR
SV-FD-SUMMER2021 L2140444-09	FD	1,3-Dichlorobenzene	0.120	0.277	0.277 J		ug/m3	D3
SV-FD-SUMMER2021 L2140444-09	FD	2-Butanone (MEK)	1.47	0.316 J	0.316 J		ug/m3	TR
SV-FD-SUMMER2021 L2140444-09	FD	Acetone	2.38	1.07 J	1.07 J		ug/m3	TR
SV-FD-SUMMER2021 L2140444-09	FD	Benzene	0.319	0.0930 J	0.0930 J		ug/m3	TR
SV-FD-SUMMER2021 L2140444-09	FD	Bromodichloromethane	0.134	0.134 U	0.134 UJ		ug/m3	D3
SV-FD-SUMMER2021 L2140444-09	FD	Carbon disulfide	0.623	0.0840 J	0.0840 J		ug/m3	TR
SV-FD-SUMMER2021 L2140444-09	FD	Chloroform	0.0980	0.337	0.337 J		ug/m3	D3

Table of All Qualified Results

Test Method: TO15SIM		Extraction Method: METHOD						
FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
SV-FD-SUMMER2021 L2140444-09	FD	Cyclohexane	0.688	0.647 J	0.647 J		ug/m3	TR
SV-FD-SUMMER2021 L2140444-09	FD	Ethanol	9.42	65.4	65.4 J		ug/m3	D3/Z
SV-FD-SUMMER2021 L2140444-09	FD	Ethylbenzene	0.0870	0.0650 J	0.0650 J		ug/m3	TR
SV-FD-SUMMER2021 L2140444-09	FD	Methylene chloride	1.74	0.320 J	1.74 U		ug/m3	L
SV-FD-SUMMER2021 L2140444-09	FD	n-Heptane	0.820	0.0620 J	0.0620 J		ug/m3	TR
SV-FD-SUMMER2021 L2140444-09	FD	Propylene	0.861	0.281 J	0.861 U		ug/m3	L
SV-FD-SUMMER2021 L2140444-09	FD	Styrene	0.0850	0.132	0.132 J		ug/m3	D3
SV-FD-SUMMER2021 L2140444-09	FD	tert-Butyl alcohol	1.52	0.146 J	0.146 J		ug/m3	TR
SV-FD-SUMMER2021 L2140444-09	FD	Tetrahydrofuran	1.47	0.289 J	0.289 J		ug/m3	TR
SV-FD-SUMMER2021 L2140444-09	FD	Toluene	0.188	0.173 J	0.173 J		ug/m3	TR
SV-FD-SUMMER2021 L2140444-09	FD	Trichloroethene (TCE)	0.107	2.75	2.75 J		ug/m3	D3
SV-FD-SUMMER2021 L2140444-09	FD	Trichlorofluoromethane	0.281	197	197 J		ug/m3	D3

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the inital sample concentration or validation guideance.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Table of All Trace Results

Test Method: TO15SIM	**Extraction Method: METHOD**							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
AA-01-SUMMER2021	N	1,2-Dichlorotetrafluoroethane	0.349	0.0910 J	0.0910 J		ug/m3	TR
AA-01-SUMMER2021	N	2,2,4-Trimethylpentane	0.934	0.0650 J	0.0650 J		ug/m3	TR
AA-01-SUMMER2021	N	2-Butanone (MEK)	1.47	0.271 J	0.271 J		ug/m3	TR
AA-01-SUMMER2021	N	Benzene	0.319	0.163 J	0.163 J		ug/m3	TR
AA-01-SUMMER2021	N	Bromomethane	0.0780	0.0580 J	0.0580 J		ug/m3	TR
AA-01-SUMMER2021	N	Carbon disulfide	0.623	0.178 J	0.178 J		ug/m3	TR
AA-01-SUMMER2021	N	Cyclohexane	0.688	0.0480 J	0.0480 J		ug/m3	TR
AA-01-SUMMER2021	N	m,p-Xylene	0.174	0.104 J	0.104 J		ug/m3	TR
AA-01-SUMMER2021	N	o-Xylene	0.0870	0.0520 J	0.0520 J		ug/m3	TR
AA-01-SUMMER2021	N	Styrene	0.0850	0.0810 J	0.0810 J		ug/m3	TR
AA-01-SUMMER2021	N	tert-Butyl alcohol	1.52	0.0640 J	0.0640 J		ug/m3	TR
AA-01-SUMMER2021	N	Tetrahydrofuran	1.47	0.242 J	0.242 J		ug/m3	TR
IA-01-SUMMER2021	N	1,2-Dichlorotetrafluoroethane	0.349	0.105 J	0.105 J		ug/m3	TR
IA-01-SUMMER2021	N	1,3-Butadiene	0.0440	0.0240 J	0.0240 J		ug/m3	TR
IA-01-SUMMER2021	N	2-Hexanone	0.820	0.352 J	0.352 J		ug/m3	TR
IA-01-SUMMER2021	N	4-Ethyltoluene	0.0980	0.0840 J	0.0840 J		ug/m3	TR
IA-01-SUMMER2021	N	4-Methyl-2-pentanone (MIBK)	2.05	0.352 J	0.352 J		ug/m3	TR
IA-01-SUMMER2021	N	Bromomethane	0.0780	0.0390 J	0.0390 J		ug/m3	TR
IA-01-SUMMER2021	N	Carbon disulfide	0.623	0.181 J	0.181 J		ug/m3	TR
IA-01-SUMMER2021	N	Cyclohexane	0.688	0.189 J	0.189 J		ug/m3	TR
IA-01-SUMMER2021	N	Isopropylbenzene (Cumene)	0.983	0.216 J	0.216 J		ug/m3	TR
IA-01-SUMMER2021	N	n-Heptane	0.820	0.369 J	0.369 J		ug/m3	TR
IA-01-SUMMER2021	N	Tetrachloroethene (PCE)	0.136	0.0810 J	0.0810 J		ug/m3	TR
IA-01-SUMMER2021	N	Tetrahydrofuran	1.47	1.13 J	1.13 J		ug/m3	TR
IA-02-SUMMER2021	N	1,1,1-Trichloroethane	0.109	0.0980 J	0.0980 J		ug/m3	TR
IA-02-SUMMER2021	N	1,2-Dichlorotetrafluoroethane	0.349	0.0980 J	0.0980 J		ug/m3	TR
IA-02-SUMMER2021	N	1,3-Butadiene	0.0440	0.0290 J	0.0290 J		ug/m3	TR
IA-02-SUMMER2021	N	1,4-Dichlorobenzene	0.120	0.0600 J	0.0600 J		ug/m3	TR
IA-02-SUMMER2021	N	2-Hexanone	0.820	0.389 J	0.389 J		ug/m3	TR
IA-02-SUMMER2021	N	4-Ethyltoluene	0.0980	0.0930 J	0.0930 J		ug/m3	TR
IA-02-SUMMER2021	N	4-Methyl-2-pentanone (MIBK)	2.05	0.283 J	0.283 J		ug/m3	TR
IA-02-SUMMER2021	N	Benzene	0.319	0.310 J	0.310 J		ug/m3	TR
IA-02-SUMMER2021	N	Bromomethane	0.0780	0.0470 J	0.0470 J		ug/m3	TR
IA-02-SUMMER2021	N	Carbon disulfide	0.623	0.178 J	0.178 J		ug/m3	TR
IA-02-SUMMER2021	N	Chloroethane	0.264	0.0420 J	0.0420 J		ug/m3	TR
IA-02-SUMMER2021	N	Cyclohexane	0.688	0.244 J	0.244 J		ug/m3	TR
IA-02-SUMMER2021	N	Isopropylbenzene (Cumene)	0.983	0.202 J	0.202 J		ug/m3	TR
IA-02-SUMMER2021	N	n-Heptane	0.820	0.418 J	0.418 J		ug/m3	TR
IA-02-SUMMER2021	N	Tetrahydrofuran	1.47	0.702 J	0.702 J		ug/m3	TR

Table of All Trace Results

Test Method: TO15SIM	Extraction Method: METHOD							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
IA-FD-SUMMER2021	FD	1,2-Dichlorotetrafluoroethane	0.349	0.0840 J	0.0840 J		ug/m3	TR
IA-FD-SUMMER2021	FD	1,3-Dichlorobenzene	0.120	0.0960 J	0.0960 J		ug/m3	TR
IA-FD-SUMMER2021	FD	2-Hexanone	0.820	0.385 J	0.385 J		ug/m3	TR
IA-FD-SUMMER2021	FD	4-Ethyltoluene	0.0980	0.0890 J	0.0890 J		ug/m3	TR
IA-FD-SUMMER2021	FD	4-Methyl-2-pentanone (MIBK)	2.05	0.303 J	0.303 J		ug/m3	TR
IA-FD-SUMMER2021	FD	Benzene	0.319	0.294 J	0.294 J		ug/m3	TR
IA-FD-SUMMER2021	FD	Carbon disulfide	0.623	0.153 J	0.153 J		ug/m3	TR
IA-FD-SUMMER2021	FD	Chloroethane	0.264	0.0530 J	0.0530 J		ug/m3	TR
IA-FD-SUMMER2021	FD	Cyclohexane	0.688	0.203 J	0.203 J		ug/m3	TR
IA-FD-SUMMER2021	FD	Isopropylbenzene (Cumene)	0.983	0.216 J	0.216 J		ug/m3	TR
IA-FD-SUMMER2021	FD	n-Heptane	0.820	0.393 J	0.393 J		ug/m3	TR
IA-FD-SUMMER2021	FD	Tetrachloroethene (PCE)	0.136	0.0950 J	0.0950 J		ug/m3	TR
IA-FD-SUMMER2021	FD	Tetrahydrofuran	1.47	1.04 J	1.04 J		ug/m3	TR
SV-01-SUMMER2021	N	1,2-Dichlorotetrafluoroethane	0.349	0.0770 J	0.0770 J		ug/m3	TR
SV-01-SUMMER2021	N	2-Butanone (MEK)	1.47	0.363 J	0.363 J		ug/m3	TR
SV-01-SUMMER2021	N	4-Methyl-2-pentanone (MIBK)	2.05	0.115 J	0.115 J		ug/m3	TR
SV-01-SUMMER2021	N	Acetone	2.38	1.99 J	1.99 J		ug/m3	TR
SV-01-SUMMER2021	N	Benzene	0.319	0.115 J	0.115 J		ug/m3	TR
SV-01-SUMMER2021	N	Carbon disulfide	0.623	0.0780 J	0.0780 J		ug/m3	TR
SV-01-SUMMER2021	N	Cyclohexane	0.688	0.537 J	0.537 J		ug/m3	TR
SV-01-SUMMER2021	N	Ethylbenzene	0.0870	0.0570 J	0.0570 J		ug/m3	TR
SV-01-SUMMER2021	N	n-Heptane	0.820	0.0780 J	0.0780 J		ug/m3	TR
SV-01-SUMMER2021	N	o-Xylene	0.0870	0.0830 J	0.0830 J		ug/m3	TR
SV-01-SUMMER2021	N	tert-Butyl alcohol	1.52	0.203 J	0.203 J		ug/m3	TR
SV-01-SUMMER2021	N	Tetrahydrofuran	1.47	0.849 J	0.849 J		ug/m3	TR
SV-02-SUMMER2021	N	1,2-Dichlorotetrafluoroethane	0.349	0.0910 J	0.0910 J		ug/m3	TR
SV-02-SUMMER2021	N	1,3-Butadiene	0.0440	0.0330 J	0.0330 J		ug/m3	TR
SV-02-SUMMER2021	N	2-Butanone (MEK)	1.47	0.563 J	0.563 J		ug/m3	TR
SV-02-SUMMER2021	N	2-Hexanone	0.820	0.0820 J	0.0820 J		ug/m3	TR
SV-02-SUMMER2021	N	4-Methyl-2-pentanone (MIBK)	2.05	0.123 J	0.123 J		ug/m3	TR
SV-02-SUMMER2021	N	Benzene	0.319	0.102 J	0.102 J		ug/m3	TR
SV-02-SUMMER2021	N	Carbon disulfide	0.623	0.0590 J	0.0590 J		ug/m3	TR
SV-02-SUMMER2021	N	Chloromethane	0.413	0.254 J	0.254 J		ug/m3	TR
SV-02-SUMMER2021	N	Cyclohexane	0.688	0.461 J	0.461 J		ug/m3	TR
SV-02-SUMMER2021	N	Isopropylbenzene (Cumene)	0.983	0.0590 J	0.0590 J		ug/m3	TR
SV-02-SUMMER2021	N	Naphthalene	0.262	0.199 J	0.199 J		ug/m3	TR
SV-02-SUMMER2021	N	n-Heptane	0.820	0.131 J	0.131 J		ug/m3	TR
SV-02-SUMMER2021	N	tert-Butyl alcohol	1.52	0.406 J	0.406 J		ug/m3	TR
SV-02-SUMMER2021	N	Tetrahydrofuran	1.47	0.737 J	0.737 J		ug/m3	TR

Table of All Trace Results

Test Method: TO15SIM	**Extraction Method: METHOD**							
FieldSample ID	Type	Analyte	LOQ	Lab Result	Qualified Result	Bias	Units	Reason
SV-03-SUMMER2021	N	1,2-Dichlorotetrafluoroethane	0.499	0.140 J	0.140 J		ug/m3	TR
SV-03-SUMMER2021	N	1,4-Dioxane (p-Dioxane)	0.515	0.237 J	0.237 J		ug/m3	TR
SV-03-SUMMER2021	N	2-Hexanone	1.17	0.545 J	0.545 J		ug/m3	TR
SV-03-SUMMER2021	N	4-Methyl-2-pentanone (MIBK)	2.93	0.257 J	0.257 J		ug/m3	TR
SV-03-SUMMER2021	N	Carbon disulfide	0.891	0.0930 J	0.0930 J		ug/m3	TR
SV-03-SUMMER2021	N	Cyclohexane	0.984	0.358 J	0.358 J		ug/m3	TR
SV-03-SUMMER2021	N	n-Heptane	1.17	0.287 J	0.287 J		ug/m3	TR
SV-04-SUMMER2021	N	1,4-Dioxane (p-Dioxane)	0.450	0.378 J	0.378 J		ug/m3	TR
SV-04-SUMMER2021	N	2-Hexanone	1.02	1.00 J	1.00 J		ug/m3	TR
SV-04-SUMMER2021	N	4-Methyl-2-pentanone (MIBK)	2.56	0.688 J	0.688 J		ug/m3	TR
SV-04-SUMMER2021	N	Bromodichloromethane	0.167	0.100 J	0.100 J		ug/m3	TR
SV-04-SUMMER2021	N	Carbon disulfide	0.779	0.187 J	0.187 J		ug/m3	TR
SV-04-SUMMER2021	N	Cyclohexane	0.861	0.310 J	0.310 J		ug/m3	TR
SV-04-SUMMER2021	N	Isopropylbenzene (Cumene)	1.23	0.215 J	0.215 J		ug/m3	TR
SV-04-SUMMER2021	N	n-Heptane	1.02	0.418 J	0.418 J		ug/m3	TR
SV-FD-SUMMER2021	FD	1,1,1-Trichloroethane	0.109	0.0550 J	0.0550 J		ug/m3	TR
SV-FD-SUMMER2021	FD	1,2-Dichlorotetrafluoroethane	0.349	0.0770 J	0.0770 J		ug/m3	TR
SV-FD-SUMMER2021	FD	2-Butanone (MEK)	1.47	0.316 J	0.316 J		ug/m3	TR
SV-FD-SUMMER2021	FD	Acetone	2.38	1.07 J	1.07 J		ug/m3	TR
SV-FD-SUMMER2021	FD	Benzene	0.319	0.0930 J	0.0930 J		ug/m3	TR
SV-FD-SUMMER2021	FD	Carbon disulfide	0.623	0.0840 J	0.0840 J		ug/m3	TR
SV-FD-SUMMER2021	FD	Cyclohexane	0.688	0.647 J	0.647 J		ug/m3	TR
SV-FD-SUMMER2021	FD	Ethylbenzene	0.0870	0.0650 J	0.0650 J		ug/m3	TR
SV-FD-SUMMER2021	FD	n-Heptane	0.820	0.0620 J	0.0620 J		ug/m3	TR
SV-FD-SUMMER2021	FD	tert-Butyl alcohol	1.52	0.146 J	0.146 J		ug/m3	TR
SV-FD-SUMMER2021	FD	Tetrahydrofuran	1.47	0.289 J	0.289 J		ug/m3	TR
SV-FD-SUMMER2021	FD	Toluene	0.188	0.173 J	0.173 J		ug/m3	TR

Table of Results with Modified Qualifiers

Modified Qualifiers for test method TO15SIM

FieldSample ID / LabSample ID	Type	Analyte	LOQ	Lab Result	ADR Result	Modified Result	Reason
AA-01-SUMMER2021 L2140444-01	N	1,2-Dichlorotetrafluoroethane	0.349	0.0910 J	0.0910 J	0.0910 J	TR
IA-01-SUMMER2021 L2140444-02	N	1,2-Dichloropropane	0.0920	0.0920 U	0.0920 UJ	0.0920 U	
IA-01-SUMMER2021 L2140444-02	N	1,2-Dichlorotetrafluoroethane	0.349	0.105 J	0.105 J	0.105 J	TR
IA-02-SUMMER2021 L2140444-03	N	1,2-Dichlorotetrafluoroethane	0.349	0.0980 J	0.0980 J	0.0980 J	TR
IA-FD-SUMMER2021 L2140444-04	FD	1,2-Dichloropropane	0.0920	0.102	0.102 J	0.102	
IA-FD-SUMMER2021 L2140444-04	FD	1,2-Dichlorotetrafluoroethane	0.349	0.0840 J	0.0840 J	0.0840 J	TR
SV-01-SUMMER2021 L2140444-05	N	1,2-Dichlorotetrafluoroethane	0.349	0.0770 J	0.0770 J	0.0770 J	TR
SV-02-SUMMER2021 L2140444-06	N	1,1,1-Trichloroethane	0.109	0.186	0.186 J	0.186	
SV-02-SUMMER2021 L2140444-06	N	1,2-Dichlorotetrafluoroethane	0.349	0.0910 J	0.0910 J	0.0910 J	TR
SV-02-SUMMER2021 L2140444-06	N	1,3,5-Trimethylbenzene	0.0980	0.143	0.143 J	0.143	
SV-02-SUMMER2021 L2140444-06	N	4-Ethyltoluene	0.0980	0.0980	0.0980	0.0980 J	D1
SV-02-SUMMER2021 L2140444-06	N	Dichlorodifluoromethane	0.989	2.23	2.23 J	2.23	
SV-02-SUMMER2021 L2140444-06	N	m,p-Xylene	0.174	0.504	0.504 J	0.504	
SV-02-SUMMER2021 L2140444-06	N	o-Xylene	0.0870	0.243	0.243 J	0.243	
SV-02-SUMMER2021 L2140444-06	N	Toluene	0.188	0.369	0.369 J	0.369	
SV-03-SUMMER2021 L2140444-07	N	1,2-Dichlorotetrafluoroethane	0.499	0.140 J	0.140 J	0.140 J	TR
SV-FD-SUMMER2021 L2140444-09	FD	1,1,1-Trichloroethane	0.109	0.0550 J	0.0550 J	0.0550 J	TR
SV-FD-SUMMER2021 L2140444-09	FD	1,2-Dichlorotetrafluoroethane	0.349	0.0770 J	0.0770 J	0.0770 J	TR
SV-FD-SUMMER2021 L2140444-09	FD	1,3,5-Trimethylbenzene	0.0980	0.0980 U	0.0980 UJ	0.0980 U	
SV-FD-SUMMER2021 L2140444-09	FD	Dichlorodifluoromethane	0.989	3.48	3.48 J	3.48	
SV-FD-SUMMER2021 L2140444-09	FD	m,p-Xylene	0.174	0.217	0.217 J	0.217	
SV-FD-SUMMER2021 L2140444-09	FD	o-Xylene	0.0870	0.100	0.100 J	0.100	
SV-FD-SUMMER2021 L2140444-09	FD	Toluene	0.188	0.173 J	0.173 J	0.173 J	TR

Analytes not found in project samples are reported as not detected at the limit of detection (LOD) unless blank contamination occurs and then the sample may be reported as not detected at the (LOD) or (LOQ) based on the inital sample concentration or validation guideance.
In instances where no LOD is provided, results are reported down to the LOQ.
Trace values are not included in the qualified results table unless additional reason codes are associated.

Reason Code Definitions

Code	Definition
D1	Lab Replicate RPD
D3	Field Duplicate RPD
L	Lab Blank
TR	Trace Level Detect
Z	LCS RPD

Flag Code and Definitions

Flag	Definition
J	Estimated: The analyte was positively identified, the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
U	Undetected: The analyte was analyzed for, but not detected.
UJ	The analyte was not detected; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.

Bias

-	The result may be biased low
+	The result may be biased high

Note - The bias field is a separate field; however, it is an integral part of the final flag (qualifier) on the sample result

Review Questions

Method: TO15SIM (Determination of Volatile Organic Compounds in Air Collected in Specially-Prepared Canisters and Analyzed by GC/MS)				
Review Questions	Yes	No	NA	Comment
Did Chain-of-Custody information agree with laboratory report and EDD for requested field samples and tests?	•			
Were samples preserved properly and received in good condition?	•			
Were holding times met?	•			
Were all requested target analytes reported?	•			
Were surrogate recoveries within project acceptance limits?			•	NA for TO15
Was a method blank prepared and analyzed with each batch?	•			
Were target analytes in the method blank less than MDL?		•		WG1531091-7: methylene chloride (0.073 J ug/m3), propylene (0.098 J ug/m3). Several results negated (U), see outlier report.
Were target analytes in the field blank less than MDL?			•	field blank not submitted
Was an LCS/LCSD pair prepared and analyzed with each batch?	•			
Were LCS/LCSD recoveries within project acceptance limits?	•			LCS %Rs within eQAPP limits of 70-130%R (70-128%R for cis-1,3-Dichloropropene, 60-140% for acetone and ethanol). ADR noted propylene %R was outside criteria but %R was within QAPP limits (130%). Propylene outlier was manually removed by validator.
Was the LCS/LCSD RPD within project acceptance limits?		•		Ethanol RPD above criteria. Positive results in all samples qualified (J, reason code Z). See outlier report. Note ADR qualified results for 1,2-Dichlorotetrafluoroethane (Freon 114) but RPD criteria met (25%). Based on prof judgment, outlier was manually removed by validator.
Was a MS/MSD pair prepared with each batch?			•	NA for TO15
Were MS/MSD recoveries within project acceptance limits?			•	
Was the MS/MSD RPD within project acceptance limits?			•	
If a field duplicate was analyzed, were the RPDs within QAPP acceptance limits?		•		Based on professional judgment, if results were <5X QL, absolute difference of <2X QL criteria was used for FD pair. Based on this, no quals were requred for IA-01-SUMMER2021 / IA-FD-SUMMER2021. Qualifications and outlier were manually removed by validator. SV-02-SUMMER2021 / SV-FD-SUMMER2021: precision criteria not met; see outlier report. Results for 8 compounds were qualified (J) in FD pair (reason code D3). Abs Diff precision criteria were met for 1,1,1-Trichloroethane, 1,3,5-Trimethylbenzene, Dichlorodifluoromethane, m,p-Xylene, o-Xylene, Toluene; therefore, qualifications and outliers were manually removed by validator.
Were QAPP specified laboratory PQLs achieved?	•			Lab LOQs meet PQL goals on WS#15. Some samples analyzed at dilutions for ethanol due to high concentrations; no ND ethanol results reported from dilutions. Samples SV-03-SUMMER2021 (1.429X) and SV-04-SUMMER2021 (1.25X) were analyzed at the dilutions shown in parentheses. ND results may not meet PQL goals. Lab LOQs adjusted for sample volumes may not meet PQL goals.

Review Questions

Method: TO15SIM (Determination of Volatile Organic Compounds in Air Collected in Specially-Prepared Canisters and Analyzed by GC/MS)				
Review Questions	Yes	No	NA	Comment
Have all Laboratory Case Narrative comments/findings been addressed in the data review process?		•		Sample SV-02-SUMMER2021 analyzed as lab dup. RPD for 4-Ethyltoluene outside criteria. Based on prof judgment, result in parent sample qualified as estimated (J), reason code D1).
Were DoD QSM corrective actions followed if deviations were noted?	•			
Were any data recommended for rejection (exclusion) in the data validation process?		•		